

THE FUTURE

Are *You* Ready For What is Coming?



STEPHEN CRONIN

TERMS TO THINK ABOUT

PERSPECTIVE

INTERPRETATION, OPINION

*“This text, this program, are not fact, rather the view of one person. Consequently, they should not automatically be accepted as ‘truth’. Two time Pulitzer Prize winning historian and author, Barbara Tuchman, stated ‘there is no such thing as a neutral or purely objective historian....without an opinion, a historian would simply be a ticking clock.’ Likewise, the statements of any person in a position of influence and power should bring some level of scrutiny and, if warranted, **questions** to the conversation. Life’s mission should be determining ‘truth’. The challenge is to explain why anyone should believe it.”*

CREDIBILITY

BELIEVABILITY

*“It’s not a given, we acquiesce too quickly. Be respectfully skeptical. Do your homework; check the record and the resume. Ask the **question** – ‘should I trust this person as a credible source for ‘truth’? Make it a prerequisite before embracing the claims of anyone who professes to have ‘it.’ ”*

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*Are you **ready** for what's coming?*

QUANTUM PHYSICS

is already changing your world—and will shape even more of your future.

Quantum physics is the study of the universe's tiniest particles, such as atoms and electrons.

Quantum physics is different from normal (classical) physics which explains how larger things like basketballs, cars, and planets behave. Classical physics tells us that a basketball can only be in one place at one time. But **quantum physics** shows that extremely tiny particles can behave differently and exist in more than one place at the same time. For example: If a basketball were as small as one of the universe's tiniest particles, classical physics would say it is either in the player's hands on the court or on the bench. **Quantum physics suggests** that at the smallest level of nature, something like that particle could exist in both places at the same time until it is observed. That idea sounds strange—but it is real science.

Quantum technology uses the principles of **quantum physics** to solve problems that are too complex for today's computers. A **quantum computer** can solve some problems much faster than even the world's best supercomputers. Scientists believe that some **problems that would take today's computers trillions of years to solve** might take **quantum computers only minutes**.

Quantum physics is already inside things you use every day -

- Your **smartphone** - the microchips inside your phone work because scientists understand how electrons behave using quantum physics
- **LED screens** your phone, laptop, and TV screens glow because of quantum energy changes inside atoms
- **Bluetooth earbuds** wireless communication depends on electronic components designed using quantum principles
- **GPS navigation your phone's maps** work because satellites rely on extremely precise atomic clocks built using quantum physics
- **Digital cameras** the camera sensor in your phone detects light using quantum effects
- **Solar panels** sunlight turning into electricity depends on quantum interactions between light and electrons

Even though your phone is not a quantum computer, it would not exist without discoveries from quantum physics.

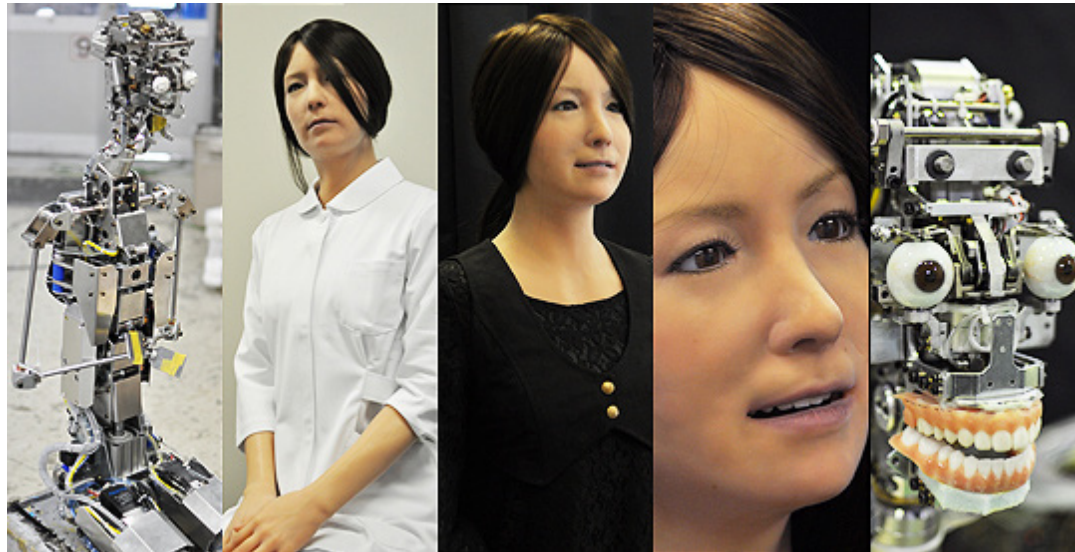
'AI' (Artificial Intelligence) Pets



They have all the features of real animals

- they **run, jump, fly, and swim** like real dogs, cats, parrots and fish.
- they even **feel** like them; soft fur, feathers or slimy scales.
- **NO KITTY LITTER, no plastic bag pick up, no cage, bowl or tank to clean** because these pets never need to relieve themselves!
- While they can **sound** like the real animals, you can adjust their bark, purr and chirp to a sound most pleasing to you with a simple change of the **algorithm** you created for them
- Like tires on a hybrid auto, your animal's **movement** generates the power for their **running, jumping, flying and swimming**. This power is stored in a **lithium-ion, micro battery pac** located in their bodies.
- they're **always pleased to be with you**. They **won't bite or scratch or peck or squirt water at you**. They always act they way you want them to according to the instructions in the **algorithm** you've created for their behavior!
- **NO EXPIRATION DATE; they live forever.**

'AI' Maids, House cleaners, Gardeners, etc



ROBOTS and ANDROIDS!
MAIDS, HOUSEKEEPERS, FACTORY WORKERS—
THEY'LL BE **EVERYWHERE!**

In the future, robots will be all around us—and **many will look and act a lot like people**. You might see them doing things like driving cars on their own, helping predict the weather, or working in stores. **Imagine a store dummy that knows your fashion style and helps you find the perfect outfit!**

Stores will use smart **robots and AI to talk to customers and answer questions—kind of like a super helpful employee who never gets tired or grumpy**. Robots will also be used for space missions, cleaning homes (*like vacuuming and dusting*), and driving delivery trucks, **Ubers, or mail vans**.

A robotics expert named Hans Moravec from Carnegie Mellon University says that **by 2050, robots could be as smart and fast-thinking as humans**. He's already working on robots that can lift heavy stuff and organize warehouses. In the future, these machines could have stronger arms, better sensors, and smarter brains so they can do things like clean up messes, protect your house, mow the lawn, or even play games with you!

One article in Wired Magazine said that by 2040, robots might finally be able to do all the things we've imagined—making our lives easier and giving us more time to enjoy the things we love.

SINGULARITY!

'AI' Clothes with Micro Chips That Respond To The Clothes Wearer's Needs!



Google



Here's something else to ponder about futuristic clothing. Please try to push your imagination out of its familiar boundaries for this idea. How about **clothing which changes its fabric capabilities based on the temperature of the day?** For instance, you could change the "capabilities" of your jacket from being light and cool for a warm, summer day to warm and "toasty" for a cold day. It just so happens this is exactly what **Google** computer scientists and **Levi Strauss** clothing designers are **collaborating** to do right now. And, they assure us you can still put these Levi clothes in your washer and dryer.

And, what if clothing could be **made with microscopic, conductive, sensor threads woven into the fabric which could detect the moods circulating in your mind?** **Then, clothes change colors and patterns to express your moods.** Changing your clothes colors could lift your spirits to make you feel better with your favorite colors and patterns when you're feeling sad. Scientists are working on this right now! **The concept is similar to the way light-sensitive eyeglass lenses darken when exposed to sunlight.** **Dr Liu Xuqing** of the University of Manchester, England, is also experimenting with ways to create antibacterial coatings for fabrics used to make clothes. Dr Liu is testing the process with cotton and polyester. "*One of his thoughts*" according to an article in The Economist Magazine (June 30, 2018), "*is to make conductive threads that could form part of an electric circuit in a person's clothes which would link to sensors that monitor a person's body.*"

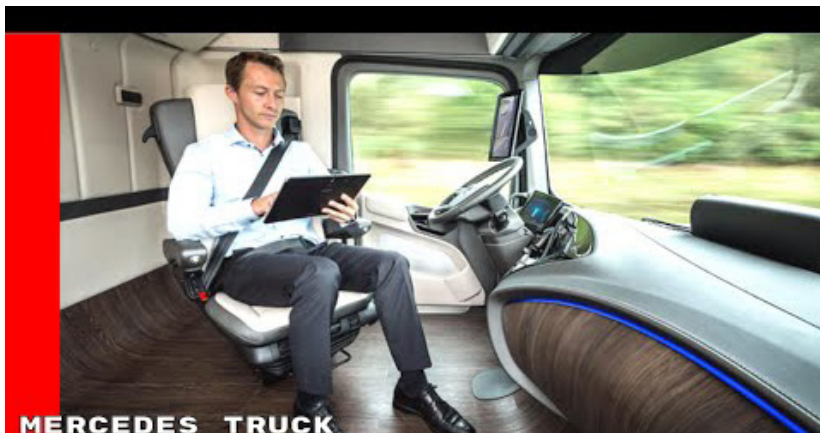
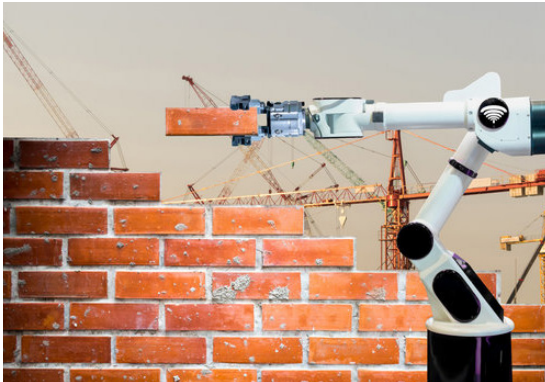
And, what **if your clothing could, by its very nature, repel mosquitoes** when you're with friends at a cookout? And, what if the clothes patients wear in the hospital could protect them from contracting a staff infection? What do you think? Is this a possibility too?

'AI' Robots to Build Houses and Drive Trucks / Taxis / UBER

BEFORE



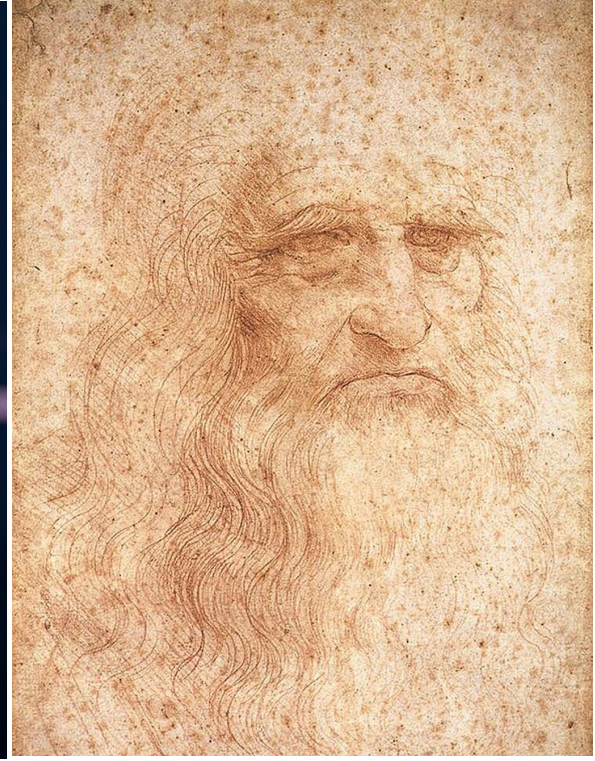
NOW



MERCEDES TRUCK

Autonomous / Self Driving Vehicles

Move Over Taylor Swift, Leonardo daVinci
and other renowned artists for
The '**AI Robot Ai-Da**



Top photos: 2022 photo of **Taylor Swift**; a presumed self-portrait of **Leonardo da Vinci** (c. 1510) NOW at the Royal Library of Turin, Italy;
Bottom photo - The robot, known as **Ai-Da**, created the painting in the background with its own hydraulically powered hands of renowned mathematician and computer scientist Alan Turing entitled "AI God". Ai-Da's paintings were the first art painted by humanoid robot
One of **Ai-Da's painting** sold for **\$1.8 MILLION**.

'AI' Robots Who Are Citizens of Countries



https://youtu.be/78-1MkxyqI?si=RZQvpcek_3qbNxHy

click on the link above
TO WATCH A REPORTER
INTERVIEW SOPHIA

series of photos featuring Sophia, a realistic *humanoid robot* capable of displaying humanlike expressions and interactions (including conversations) with people. CLOCKWISE - Sophia discussed a book, is interviewed by reporters at an AI Conference in 2017, and a photo of the back of her head. Sophia is designed for research, education, and entertainment and helps promote public discussion about AI ethics and the future of robotics. Sophia is described as a 'social humanoid' robot developed by the Hong Kong-based company **Hanson Robotics**. Sophia was activated on February 14, 2016, and made its first public appearance in mid-March 2016 at South by Southwest (SXSW) in Austin, Texas, United States. Sophia is marketed as a "*social robot*" that can mimic social behavior and induce feelings of love in humans.

Sophia has been covered by media around the globe, and has participated in many high-profile interviews. In *October 2017, Sophia was granted Saudi Arabian citizenship, becoming the first robot to receive legal personhood in any country.* (wikipedia)

*Do you have the "**COMPETENCIES**" (1)
to take advantage of all the opportunities the FUTURE
will offer you?*

*Do you have the "**COMPETENCIES**"
to avoid losing a job
that is being replaced by technology?*

(1) - "**Competencies**" are the skills, attitudes and behaviors fundamental to **success**. "Competency learning" should be the primary focus of Education, **according to Paul LeBlanc**, former President of Southern New Hampshire University (SNHU). The Chronicle of Higher Education describes LeBlanc as a leading advocate of **competency-based learning**. For his leadership at SNHU, LeBlanc was named one of America's Ten Most Innovative College Presidents by Washington Monthly. Forbes has listed him as one of its fifteen "Classroom Revolutionaries" and most influential people in higher education. In 2018, he received the TIAA Institute Theodore M. Hesburgh Award for Leadership Excellence in Higher Education.

Here's what a Technology News Reporter Says About Your Future

5 'MUSTS' FOR A SUCCESSFUL FUTURE



Joanna Stern [Follow](#)

Senior Personal Technology Columnist, The Wall Street Journal

MS STERN delivered the 2025 commencement speech at Union College in Schenectady, N.Y. THIS IS WHAT SHE SAID:

*"Here are my five rules for living and thriving in an **AI-driven world**.*

1. **Be a creative human.**- I played a song made entirely by AI. No humans involved except me, typing "create an indie folk song about graduating Union College in *the age of AI*" into a music generator called Suno.

It sounded impressive...until you heard the lyrics. Clearly, the bot never pulled an all-nighter, made lifelong friends or felt the sheer anxiety of not knowing what comes next. My AI song had melody, but no soul. No nuance. No truth. When Ashley Sofia played, people teared up. What sets us apart from the artificial is our creativity and ability to relate to others. Lean into that at work and all parts of your life.

2. **Be a lifelong learner.** - I reminded graduates: Over the past four years, you've learned how to learn. You don't have to know exactly what's next—you just have to be willing to learn new skills and tools, and to try new things.

3. **Be a truth seeker.** - We live in a time of deepfakes, AI-generated video, misleading yet confident

bots and leaders who yell “*fake news*” anytime they don’t like something. It’s just as bad when misleading news is being disseminated by major media platforms or by influential leaders of government and business.

Whether it’s an article, a chatbot answer or a TikTok or a speech or press release from an influential person, ask yourself: *What’s true here? Who benefits if I believe this?* Think critically. Ask questions. Be the person who scrutinizes and analyzes the information as well as interrogating the person releasing the information; *please, don’t just accept what you see or hear.* .

4. **Be a hard worker.**- It’s easy to assume we won’t work as hard when AI can do the work for us. And companies are already trying to do more with less of us since AI agents don’t complain or take coffee breaks. But don’t be fooled: The jobs that are available will go to the people doing the real work.

5. **Be a collaborator.** - The greatest lessons I learned in college weren’t in the classroom but in the newspaper office, working late with other editors putting issues to bed, or in a dorm room, *collaborating on group projects.*

AI can be a collaborator, sure. But your greatest teammates will still be other humans. My best, most creative work—the stuff that has won awards and accolades—happened because of people who challenged, inspired and supported me.

Speaking of teammates, a bonus rule: Don’t fall in love with a robot or chatbot. Seriously. It’s happening more than you think. Find yourself an amazing partner—a human one.

It’s not the machines that will define your future.

It’s the relationships you build,

the values you carry

and

the curiosity and creativity you bring to everything you do."

“Soft skills are MORE IMPORTANT than hard skills!”

New York Times, columnist Thomas Friedman – (2/22/2014)

“How To Get A Job At Google”

<ul style="list-style-type: none"> • Empathy • Curiosity • Humility • Collaboration • Creativity • Perseverance: Grit! • Reliability: • Dependability • Respect • Courage: <small>pushing out of your comfort zone!</small> • Humor • Passion for learning • Honesty • Kindness • Networking • Time Management • Communication - Storytelling 	<ul style="list-style-type: none"> • Accounting • Engineering • Coding: Computer Programming • Pharmacy • Doctor: surgery, dermatology, etc • Electrician • Design: web, graphic, fashion, etc • Law Enforcement: FBI, Police • Attorney: • Pilot • Astronaut • Soldier • Teaching • Nursing • Carpentry • Lawn Care • Wealth Manager: Investments • Psychologist
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"We can teach accounting skills, coding skills, electrical skills and so on.

What we've found is more difficult to teach are soft skills like empathy, collaboration, adaptability, and dependability.

This is the reason companies place

a premium on soft skills."

Primary 21st century skills!

1. **CREATIVITY** - ability to innovate and **problem solve**; use your **imagination**; think and then **create new ideas & solve problems**; ability to **ADAPT** to changes in your life.
2. **COMMUNICATION** - **observation and listening skills**; awareness of powerful messages sent by **body language**; reading, writing, **storytelling & presentation skills**; **how do the people in your network affect the perception others have of your brand?**
3. **CRITICAL THINKING** - ability to **identify reliable source for 'facts'**; ability to organize, segment, make sense of 'data' and then **use the data to make logical decisions**.
4. **COLLABORATION** - ability to **work with machines (especially AI) AND people**



Hope Life Skills teaches **general purpose skills** like **networking**, the ability to **tell your story**, being **curious**, and a **desire to constantly learn**. Above all, we try to teach students **the need and how to re-invent themselves, to adapt to the changes taking place in the 21st century driven by technology and world events** (Harari)

Are you -

- ♦ **DEPENDABLE** - **fulfilling your responsibilities; always show up on time, all the time!**
- ♦ **ORGANIZED** - ability to **prioritize**; to focus on the most important tasks before moving on to tasks of less importance; **time management** ability.
- ♦ **NETWORKER** - **constantly meeting new people from different backgrounds and with different interests** as yours; the **ability to 'tell your story'** especially **in networking opportunities**; and having a very good **personal brand which others like and respect**.
- ♦ **WILLING TO GO OUT OF YOUR COMFORT ZONE** - healthy attitude for **'risk'** and **'failure'**; **don't fear mistakes (growth mindset)**; realize failure provides lessons to get better!
- ♦ **EMPATHETIC** - **appreciating and understanding how others feel**

from "[There Is Life After College: What Parents and Students Should Know About Navigating School to Prepare for the Jobs of Tomorrow](#)" by Jeff J. Selingo; AND - "[21 Lessons for the 21st Century](#)", by Yuval Noah Harari.

CREATIVE THINKING - a 21st Century PREMIUM SKILL

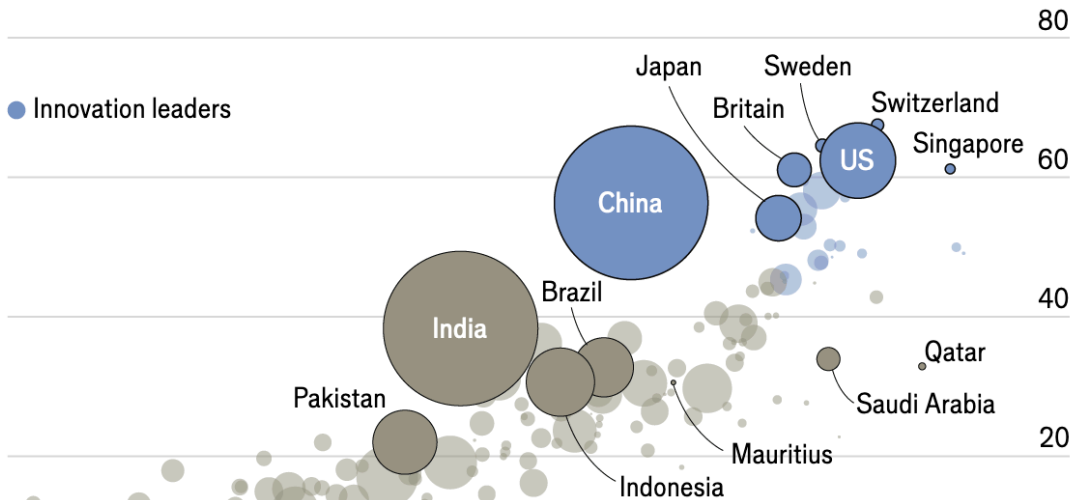
Creativity is more than graphic or performance art. *Creativity* is also imagining and creating opportunities and new ways to solve problems or overcome adversity. Furthermore, **YOU most certainly have creative talent.** And, *you are encouraged to fearlessly express it in this class.* Companies look to hire creative thinkers. *Creative thinking* enables YOU to maximize your talents, successfully market your personal brand, network with influential people, solve personal and job challenges, adapt to new situations, and create fulfilling career opportunities.



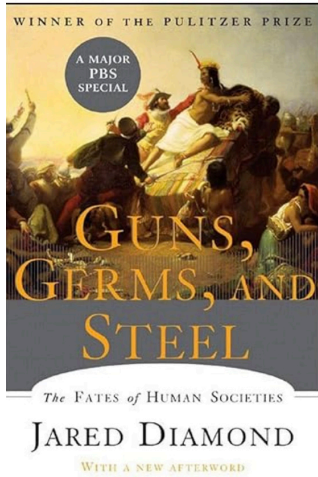
RANKING OF THE MOST CREATIVE COUNTRIES IN THE WORLD

Global Innovation Index score, 2024

Circle size=population



COUNTRIES which lead the world in INVENTING 'STUFF': #1 - Switzerland #2 Sweden #3 USA #4.Singapore #5 England #6 South Korea #7 Finland #8 Netherlands #9 Germany #10 Denmark #11. China #12 France #13 Japan #14 Canada #15 Israel. **Country with the MOST, the highest number, of new inventions (stuff) is the United States of America .** **Please note,** the number of people living in a country (population) affected the ranking of innovation, i.e. the number of people living in a country divided by the total number of applications submitted to the country's government for new products created, the number of scientific books and articles written by engineers / scientists AND the number of high-tech 'stuff' (products) a country exports to other countries like rockets, autos and satellites, computer products, pharmaceuticals (drugs), scientific instruments, and electrical machinery. This ranking also looked at "inputs", i.e. how much money a country spends on research and development (R&D), the number of engineering college graduates, and venture-capital (investment) deals. The ranking takes into consideration a country's willingness to use new technology, as well as a country's ability to produce new technology 'stuff' like robots, apps, etc. Switzerland filed 5,430 international patent applications in 2022. That is much less than the number of patents filed by the United States of America. Because Switzerland's GDP and population is less than a tenth of America's size, Switzerland outranks the United States in this metric. The ranking was done by the Global Innovation Index, WIPO, 2024. **ASK CHAT-GPT - WHY are some countries like USA, Sweden, Singapore, etc more innovative than other countries? Please share the bot's answer.**



In his Pulitzer Prize winning book, "**GUNS, GERMS, AND STEEL - The Fates of Human Societies**", AUTHOR JARED DIAMOND seeks to answer the question

WHY some people

from different "environments" all over the world and throughout the history of mankind have BEEN

SMARTER THAN OTHERS.

FACT - All people possess a level of intelligence.

FACT - **YOU ARE INTELLIGENT.** Now, use your *intelligence* to be *smart*!

There is a difference between 'intelligence' and being 'smart'. Successful people use their natural *intelligence* to become *smart*. Having '*intelligence*' doesn't automatically mean someone is '*smart*'. **'Smart'** means learning the things that must be done to achieve the goals you have set for yourself. Being '*smart*' enables a person to achieve the '*success*' they aspire to. **It takes learning how to be 'smart' to be 'successful'.** There are millions of '*successful*' people who prove that, regardless of the "*environment*" you grew up in, you can become '*smart*' and then achieve the '*success*' you desire. **Marta Aparicio, Oprah Winfrey, Hafzat Akanni, Ursula Burns, Jason Roias, Raymond Perez, Paul Robeson, Elon Musk, Steve Jobs and some person living around 4200 to 4000 BC in the ancient land of Mesopotamia, now the country of IRAQ, who invented the first wheel all prove that being 'smart!' precedes being 'successful', i.e. you must be 'smart' to be 'successful'.**

How does someone become '**SMART**'? Here's one opinion

- "make the most of the **ENVIRONMENT** (communities) you live in. *Be curious. Push out of your comfort zone and go to new places, meet new people, and ask questions.* **Smart people keep learning:** they learn new things AS WELL AS better ways to do the thing they already know! **Smart people persevere** in the face of adversity and mistakes. **They know failure / adversity makes them stronger and wiser.** **Smart people move forward** by **making changes from the lessons learned** from failure to achieve a refined image of the success they aspire to. **Smart people offer no excuses! They don't blame anyone or anything else for their misfortune or hardship.** They know excuses and alibis project weakness and foster doubt. **Smart people are responsible:** they do what they're expected to do! **Smart people promote and protect their positive personal brand** by ALWAYS presenting themselves maturely and respectfully **in-person** and **on social media!** Then, they use their brand to build AND nurture a **network** of successful, influential, trustworthy people who help them **create new opportunities** as well as provide advice and support. And finally, and arguably most importantly, smart people **work harder than most.**"

YOU CAN BE SMART!

You can achieve the SUCCESS you hope for!

SKILLS COMPANIES LOOK FOR IN EMPLOYEES

1 Complex Problem Solving

The skill to see relationships between industries and craft creative solutions to problems that are yet to appear is a must to keep up with AI machines.



2 Critical Thinking

People who can turn data into insightful interpretations will be sought after due to the complexity and interconnectedness of various fields like computer science, engineering, and biology.



3 Creativity

The quality of randomness and the ability to build something out of ideas is a skill that will pay off now and in the future.



4 People Management

Robots may acquire analytical and mathematical skills, but they can't replace humans in leadership and managerial roles that require people skills.



5 Coordinating with Others

Effective communication and team collaboration skills will be a top demand among job candidates in any industry.



6 Emotional Intelligence

Qualities that relate to emotional intelligence such as empathy and curiosity will be a big consideration factor for hiring managers of the future.



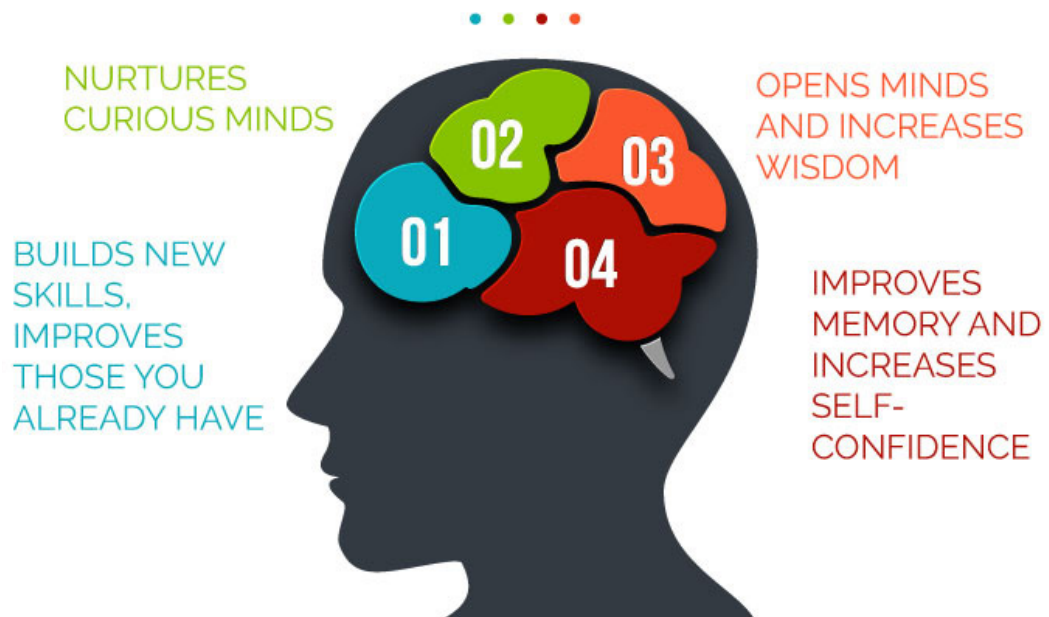
EDUCATION CAN NEVER STOP

"The days of a steady, stable career are over. The rapid pace of technology makes many jobs and skills go out of date in a few years. You need to be aware of how jobs, careers, and skills are rapidly changing....."

Skills

The new workforce requires employees to learn, unlearn and relearn skills

BENEFITS OF LIFELONG LEARNING



.IT'S ALL ABOUT- ' DATA'

Why Data is a Big Deal

You've probably heard that oil used to be super valuable—like, it made countries rich and powerful. Today, data is kind of the new oil... but honestly, it's more like gold during the Gold Rush or even lithium (the stuff in electric car batteries). Why? Because **data is what fuels technology today.**

Think about it: technology gets smarter the more data it has. Data helps machines learn what to do and how to do it better. The more data a country has, the more powerful its technology becomes—which can mean a stronger economy, better healthcare, smarter schools, **even better sports teams!**

What is Data?

DATA is just a fancy word for *information*. DATA can be stuff like:



- What you watch on YouTube
- Where you go with your phone
- What you buy online
- How fast you drive
- What songs you listen to

Most companies and countries like **China** and *the United States* collect DATA from apps, cameras, websites, GPS, and even your smartwatch. Companies and governments then analyze that DATA to make decisions. **For example:**

- Netflix suggests what show to watch
- Doctors figure out which medicine to give you
- A soccer coach might use data to pick who should start the championship game.



amazon

How Do Machines Use Data?

Here's where **Artificial Intelligence (AI)** and *Machine Learning* come in.

MACHINES (ROBOTS, CARS, APPLIANCES, BUILDINGS, STREET LIGHTS, COMPUTERS, etc)
USE DATA TO ...

- **think and act.**
- **make predictions** on what might happen next
- **Make decisions without a human** telling the machines what to do; machines making decisions on their own

Example: Amazon uses data to suggest what book you might want to read next. Tesla cars learn from millions of miles of driving to figure out how to avoid accidents. Google's Waymo cars collect driving data to become better at getting around without a driver. AI helps all of that happen.



photo above is an Elon Musk **OPTIMUS ROBOT**

Which Country(s) is the best at Data collection?

Countries like **China** and **Singapore** collect huge amounts of data. They say it helps them run safer, healthier, and more efficient societies. A guy named Kai-Fu Lee, who worked at Apple, Microsoft, and Google, believes that China might become the most powerful tech country—mainly because it has more data than anyone else.

data = power!



Where Is Data Collection Going?

With more DATA, AI is starting to:

- Drive cars **WITHOUT HUMAN DRIVERS**
- Recommend **CLOTHES** or **MOVIES** to people
- Clean houses (**ROBOT** vacuums!)
- **FIGHT WARS** (robot soldiers might be a thing)



photo above the interior of a **TESLA** car with autonomous capabilities

DATA is shaping the FUTURE—your future. .

Should We Be Worried about Data Collection?

Privacy: Can **companies and governments keep their customer AND citizen DATA SAFE?**
AND, *what if a government or company is using your DATA in ways you don't know about?*

Surveillance: *What if a country or another person is always spying on you, i.e. watching what you do?*

It's important to ask: *"What kind of DATA are you okay with the government or companies collecting about you?"*

AI DATA CENTERS

An AI data center is a large building full of powerful computers working together to run artificial intelligence systems like ChatGPT, voice assistants, translation tools, recommendation systems, and medical-research programs.

Inside an AI data center are:

- thousands of **computers**
- special **AI chips (called GPUs)**
- massive **storage systems**
- **cooling equipment** requiring water, special air conditioners and cooling technology, to prevent overheating
- **high-speed internet** connections
- **smart, skilled workers** who understand cyber security, engineering, software, and electricity systems,



These centers are becoming as important today as railroads were in the 1800s or highways were in the 1900s. They are part of the world's infrastructure of the future. **DATA CENTERS HELP** the world -

1. They help doctors save lives. AI data centers help analyze medical images faster and detect diseases earlier, including cancer. They also help design new medicines.
2. They help students learn faster. AI tutoring tools can: explain homework, translate languages, help with writing, support career exploration. This gives students extra support anytime, anywhere.
3. They help businesses create jobs. Companies use AI data centers to design products, improve logistics, reduce costs, build new industries and enable workers to be more efficient - get things done faster.
4. AI DATA CENTERS help cities run with better traffic flow, faster emergency response, accurate weather prediction, efficient electric power use - fewer blackouts - and grid stability.

AI data centers also face real **CHALLENGES**:

1. **They need lots of electricity** because AI computers use enormous power. Some large data centers use as much electricity as an entire city. **Solutions:** generate more electricity for DATA CENTERS and, at the same time, for every other home, factory, office building, church, school, etc that rely on electricity. Options include; nuclear power, solar, wind, and natural gas
2. **They need AI chips which are made of rare minerals** like silicon, copper, lithium, and other rare earth elements. These materials must be mined and processed carefully. **Only a few places around the world** like China, Malaysia and the United States (Texas and Oklahoma) have these minerals. Unfortunately, the United States needs more factories to make AI chips from these minerals.) **Solution:** more chip factories in America. **See page 80 in this FUTURE book for information on rare earth minerals.**
3. **America needs skilled DATA CENTER WORKERS.** **Solution:** **better schools, especially better public schools with well paid, great teachers** to teach / train people for AI Data Center jobs.

Artificial Intelligence *Must Have* DATA

"NO DATA means NO AI"



> EVERYTHING YOU NEED TO KNOW ABOUT

ARTIFICIAL INTELLIGENCE

- Driverless Cars
- Medical Marvels
- Music Generators
- Cybersecurity
- Virtual Partners
- Drone Swarms
- Non-Human Assistants
- Personalized Learning

THE EXCITING TECHNOLOGY THAT'S CHANGING EVERYTHING

ARE WE REALLY READY FOR WHAT'S COMING?
The jobs AI is coming for next // The scramble to avoid disaster >

If It's Data, Machine Learning & Artificial Intelligence, IT's ABOUT 'CHIPS'

*Potato Chips. Chocolate Chips. Poker Chips
Fish & Chips. Tortilla Chips.
Computer Chips!*

**In the 21st century, the only chip that matters are the ones you
find in computers!**

A computer chip is like a
tiny, super-smart brain
made of metal and other materials.

It's really small—about the size of your fingernail—but it can do
millions of things every second!

Inside the chip, there are tiny parts
called **transistors**,
which are like little switches
which turn on and off really fast to do math,
remember things, and make decisions.

The chip is what helps your computer, phone, or even your game
console work. Chips are the center of the Artificial Intelligence /
machine learning universe of today, the future and all the prod-
ucts connected to 'chips': autonomous cars, robots, medical
research, finance / investments, and more. **Jensen Huang**, the
computer scientist, billionaire owner, co-founder, & CEO of the
world's most valuable company, NVIDIA, recently predicted

*"in 10 or 20 years, there will be tens,
if not,
hundreds of BILLIONS
of ROBOTS."*

NVIDIA has developed the chips,
i.e. the computer brain,
to put inside computers / Robots.

Things like robots, mobile phones, automobiles, hot tubs, shoes,
web sites, food packaging, a person's heart, home and city security
systems, buildings, airports, UBER and taxis, train stations, and
school buses have, if not now then in the near future, computer
chips in them processing the data collected from cameras, sen-



The World's Most Valuable Company -
1/7/2025 **NVIDIA** - An American Chip Making Company



JENSEN HUANG - the president, co-founder, and chief executive officer (CEO) of Nvidia, the world's largest semiconductor company

CHIPS (continued)

sors, and actuators. Data, collected by governments and companies, are processed through computer chips and the algorithms, and artificial intelligence connected to them to identify problems and predict opportunities. **More data** means **more information and, potentially, wiser decisions**. For instance, **cows** with embedded computer **chips inside them** will collect, in 'real time', data to keep cows healthier and, as a result, produce more milk. The chips in cows will collect data from inside the animal to predict when a cow will give birth up to 15 hours beforehand or predict when a cow will be sick so the farmer can take action to prevent the sickness from affecting the animal. An Australian company has created a sensor cows swallow and remain inside the animal for the rest of its life.

Nanotechnology (*tiny computer chips*)
**in a person's t-shirt will send
 your smartphone or watch
 real-time information about
 the health of your heart**

and how well hydrated you are and, then, passing that data to your home robot to prepare a dinner menu and beverage based on your nutritional needs and the food, beverages, and ingredients available in your ambient refrigerator. Computer scientists are speaking about a smartphone app that will scan food packaging the scan into the oven or microwave to start cooking your dinner. Your home robot will also fill your hot tube with warm water and bubbles just as you walk in the door.

Ambient Intelligence

There is a system of collecting DATA from everything around you (your clothes, house, phone, your location in the town, etc) and sending the data through the internet has been called an ambient system but better known as

the internet of things (IOT).

**This system collects DATA from
 everything connected to EVERYTHING -
 t-shirts you're wearing, the web sites you visit,
 your phone, your refrigerators and watches,
 people walking on city sidewalks, traffic on the
 highways. EVEN COWS!!**

The IOT is a connection of all physical things that have sensors and computer chips embedded in them that then sends the collected data through the internet to government agencies and businesses.



the Internet of Things (IOT)



Smart Home

[ˈsmɑrt ˈhōm]

A home equipped with appliances that can be controlled remotely using a device connected to the internet.

IN THE CITY, computer chips in so many devices located in so many places - smart traffic lights change based on how many cars are coming, so there are fewer traffic jams. sensors in the ground tell garbage trucks when bins are full so they only pick up trash where needed; streetlights turn on only when someone is nearby, saving energy. Apps on your phone will help you find parking availability to where you can park your car; other apps connect you to sensors that tell you when the next bus is coming and sensors are monitoring police and safety radio messages to make sure where you are or plan to be is safe. It's like giving the city a brain to help it run better, cleaner, and safer.

IN YOUR HOME, sensors are located everywhere and in every thing - every room in your home is detecting temperatures; in your refrigerator detecting the expiration dates on food as well as in your pantry; your clothes monitor your blood pressure; your bathroom mirrors monitor your skin for signs of melanoma, and your toilet detecting levels of disease in your personal waste, etc. - to make sure the temperature in the home is always the way you like it as you return from work, to make sure your foods are safe, your physical health is good, etc

Internet of Things' (IOT):

Chips are processing DATA that is collected From Your Surroundings

An American insurance company announced it will soon

only sell health insurance after analyzing health DATA from a person's smartphone and wearable exercise devices like FITBITs, T-SHIRTS which collect data from a person's exercise workout.



There's even a company that is weaving a thread like computer chip' into clothing that will alert the person wearing the clothing when they need to take a shower!!! There's a chip in smart toothbrushes that tracks how often a person brushes their teeth and offers a discount on dental insurance to those who diligently brush their teeth multiple times each day. **A Chinese insurance company is using facial recognition technology to examine a person's face, body fat, etc to determine what a person will pay for their life insurance policy.** Automobile insurance companies are offering discounts on car insurance if drivers will permit black boxes in their cars containing sensors that will collect data on a driver's driving habits like speed, cornering, and braking. The data is then analyzed by algorithms the insurance company creates to determine a person's driving ability and how much they should be charged for their car insurance.

The **ambient** system will enable people to easily turn 'on' or 'off' all the devices in their home through voice commands. You can even schedule a meeting or buy a plane ticket with an app. You won't need to carry your cell phone with you because every glass surface in your home, from your bathroom mirror to your kitchen counter top, could be ambient for checking your calendar, answering e-mail, watching videos, getting the news and weather and anything else we do today now through our phones and tablets! Traffic light sensors will collect data to predict busy traffic times of the day so traffic can be managed more effectively during busy time to reduce traffic jams and congestion. Street cameras will also help police track down and arrest criminals.

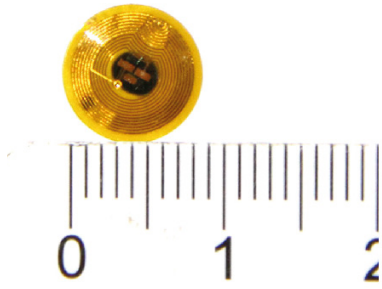
***"Chips are solving problems before they become problems"* according to Mr Huang.**

New buildings are incorporating smart chip technology into their design and engineering. Buildings will use sensors to create better environments for renting tenants and workers and, at the same time, monitor their daily activities. An app called Comfy will allow tenants workers to adjust temperatures and light levels in their offices with their smart phones. Furthermore, supervisors can monitor what their workers are doing each day, how much they get done, where they go, and who they hang out with.

So, what about security and privacy? There are serious concerns about protecting all the data being collected and then transmitted to companies and governments. The *Economist magazine*, in their September 2019 issue, cited a 2015 story about a pair of TWITTER security researchers who staged a cyber attack on a car being driven in which they were able to turn the stereo and windshield wipers 'on' and 'off', turn off the engine, apply the brakes, and even control the steering wheel. Other security researchers have demonstrated an ability to hack into medical devices like heart pacemakers and insulin pumps. There is even a story about hackers getting access to finger print readers that controlled access to a factory that made expensive, luxury goods and products. The IOT will make 'security' even more important as more and more products are operated and produced by computers which then transfers valuable, personal data through the internet.

Cyber security is now a well paid career in high demand. Stay tuned!!!

RFID Computer Chips



contactless symbol using RFID at store payment terminals

Radio-frequency identification (RFID) uses electromagnetic fields to automatically identify and track computer chips / tags attached to objects. An RFID system consists of a tiny radio transponder, a radio receiver and transmitter. When triggered by an electromagnetic interrogation pulse from a nearby RFID reader device, the tag transmits digital data, usually an identifying inventory number, back to the reader. This number can be used to track inventory goods. RFID computer chips / tags **can be attached to physical money, clothing, and personal possessions, or implanted in animals and people.**

RFID can be used in a variety of applications -

- Access management
- Tracking of goods
- Tracking of persons and animals
- Toll collection and contactless payment
- Machine readable travel documents
- Smartdust (for massively distributed sensor networks)
- Locating lost airport baggage
- Timing sporting events
- Tracking and billing processes
- Monitoring the physical state of perishable goods
- Share business card information, i.e. email address, mobile / business phone #, address, company web site, aspirational quotes, etc.

RFID chips can communicate information; they do so in response to a signal from an RFID reader. They don't actively broadcast or disseminate information independently. The data on an RFID chip is usually fixed and doesn't change unless the chip is reprogrammed or replaced.

Walmart is testing RFID chips in stores. Walmart stores have their customers install Walmart robot cashier apps on their smart phones, scan each item as they take them off the shelf, and simply walk out of the store. The RFID scanner shows a picture of everything purchase, the price of each item, and if I want a receipt of my purchases which are connected to my payment method of payment.

And **what about THEFT?** "Every check out model tried by Walmart has proven better at reducing theft that a live employee standing at the checkout register. All high resolution cameras capable of reading barcodes from 100 feet away and invisible RFID scanners make sure any item leaving the store is paid for by the customer". Similar tests are taking place at Amazon's Whole Foods Stores writes Paul Zane Pilzer.



COMPUTER CHIPS in YOUR Blood



Q- *"Just relax, James.
You may feel a little..... prick."*

James Bond - *"OUCH!!... What is it?"*



Q- *"Cutting edge technology.
Smart blood.
I'm putting **microchips** into your blood
stream.
Allows us to track your movements in
the field.....
You see those readouts on the screen?
We can monitor your vital signs from
anywhere on the planet."*

James Bond - *"Well that sounds marvelous!"*

FIXING **BODIES AND AUTOS WITH COMPUTER CHIPS**

The **Tesla Model 3** was having brake problems in 2017 which created critical reviews in *Consumer Reports Magazine*. The car was taking too long to stop! Consequently, this problem diminished interest in the car and hurt sales for Musk's relatively new car company. That was until Tesla fixed the braking problem by sending an electronic update to the car's computer system that solved the problem! Hit **'send'** and problem solved. **A software fix was sent electronically to improve a car's stopping distance by 20 feet!**

**Imagine,
sending an e-mail or text message to a car
to fix a mechanical problem
rather than
having to bring the car to the dealership
or
your favorite mechanic.**

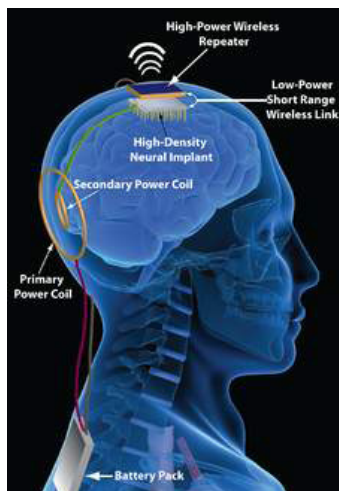
Upon hearing the news of the Tesla computer fix, *Consumer Reports* columnist, Jake Fisher, commented

***"I've been at Consumer Reports for 19 years and
tested more than 1,000 cars.***

***I've never seen a car that could improve its performance or fix a problem with an
over the air update"***

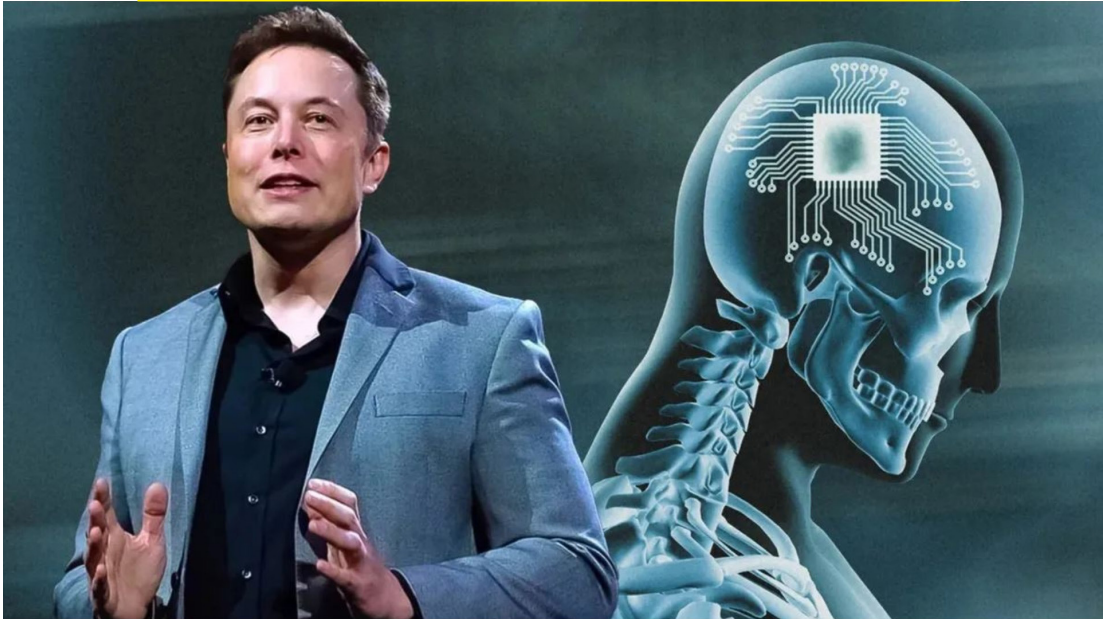
In the past, car companies required their car owners to bring their vehicles to their service centers to fix car problems. In fact, the car company Fiat Chrysler did just that in May of 2018. Fiat recalled more than 5 million of its cars in the United States and Canada to fix a problem that prevented drivers from cancelling cruise control. To fix this problem, Fiat required Fiat car owners to go to their dealerships to leave their recalled Fiats to fix the cruise control malfunction.

***If we can fix a machine by sending an e-mail or text message,
what else can we fix
when 'it' has a problem?"***



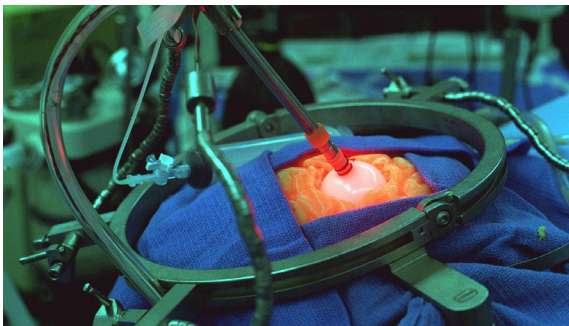
'Why Not' neural implants for treating a person's disease and easing their physical or mental pain the same way Tesla fixes car malfunctions? **Elon Musk has. In 2016, Musk co-founded Neuralink with an investment of \$100 million dollars.** The company creates a brain-computer interface through electronic implants into a person's brain that would decode brain activity and communicate it to computers. This computer interface has access to the unlimited data of the world wide web that would help a person's brain restore function to conditions like amyotrophic lateral sclerosis (ALS better known as **Lou Gehrig's disease**), **alzheimer's disease, dementia, and spinal cord injuries.** Musk also hopes the implanted devices will soon cure **paralysis, deafness, blindness, autism, obesity and other disabilities.** One of the company's brain - computer interface devices would work like a sewing machine that could embed threads into a human brain. (wikipedia and WashingtonPost)

NEURALINK - Computer Chips in Human Brains

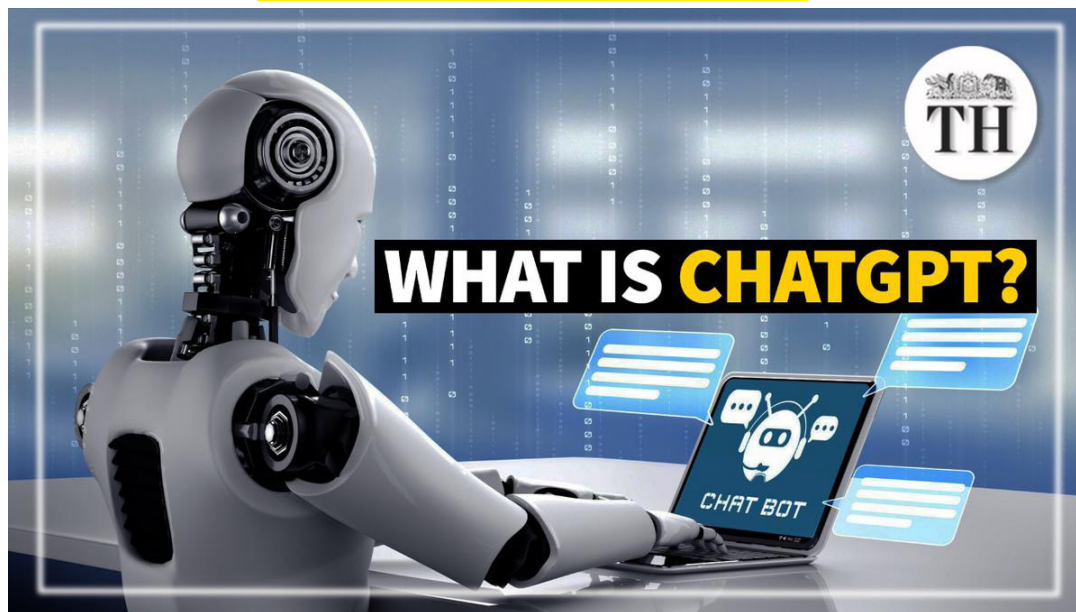


Neuralink is a neuro-technology company founded by Elon Musk which connects the human brain to artificial intelligence (AI) through **computer chips** placed in the brain to facilitate brain communication with AI learning computers.

This technology attempts to improve a person's memory or allow brain functions to communicate with software. Musk adds "we had monkeys implanted with Neuralink chips in their brains and they were playing video games just by thinking about interacting with the game. In February of 2024, the first human patient implanted with a brain-chip from Neuralink appears to have fully recovered and is able to control a computer mouse using their thoughts, the startup's founder Elon Musk said. Neuralink will help mankind." The company also hopes Neuralink devices to treat neurological disorders like **Alzheimer, dementia, and other neurological disorders.**



Conversational AI - ChatGPT



“I think it (ChatGPT) will be more important to doctors than the stethoscope was in the past.

No physician who practices high-quality medicine will do so without accessing ChatGPT or

some other form of generative AI.”

(Doctor Robert Pearl, Stanford University medical school)

ChatGPT is like sitting next to the smartest person in the world for "human like conversations which can answer ANY QUESTION or complete most tasks. **This CHATBOT is** the artist composing human sounding poems and songs or the class valedictorian to write an A+ essay or the brilliant programmer who writes intricate computer code or explain complex problems, and even pass final exams and tests. This bot can answer anything you'd like answered or write something perfectly like a marketing plan to sell a new product, solving a complex physics problem, and writing a term paper or English composition assignment. ChatGPT is the **go-to' source for anything you need answered or composed".**

(The Economist Magazine- 2/15/2023)

ChatGPT (Chat Generative Pre-trained Transformer) is a **bot**, more specifically, a chatbot. **A chatbot or LLM (large language model) is a computer program, a software application, that is used to conduct an online conversation** via text or text-to-speech, **as if a person is speaking in a direct conversation with a SUPERSMART, live, human being.** A person asks a question and **ChatGPT responds WITHIN SECONDS!** Chatbots are capable of maintaining a conversation with a user in a natural language. The chatbot understands a person's question and intent and then replies based on rules and data written into the computer software of the chatbot. (wikipedia)

ChatGPT was developed by a startup company called OpenAI and launched in **November 2022.** It quickly attracted attention all over

the world for its detailed responses and well expressed answers across many different fields of knowledge. OpenAI's market value was estimated at \$29 billion dollars at the time it launched.

Chatbots also help employees refine, improve their written correspondence (e-mails, etc) and, in the process, making them easier to read and understand. Companies are saving millions of dollars by using **chatbots** in some jobs rather than human beings. "Several studies report significant reduction in the cost of customer services, **expected to lead to billions of dollars of economic savings**" according to the Wikipedia profile. Many banks, insurers, telecommunication companies, e-commerce companies, airlines, hotel chains, retailers, health care providers, government agencies and restaurant chains use chatbots to answer simple questions. **Chatbots are not perfect; they get things wrong sometimes.** Users understand LLMs can have bias and prejudice in their answers as they scan the internet for answers to a person's prompt. **Some of the answers the bots find have been written by people with bias and prejudice.**

Chatbots are also helping humans be more effective and productive in their jobs. So much so, many

companies look for people who have experience using AI and **avoid hiring people without AI skills!**

The consulting company Forrester has predicted in 2023 **25% of all jobs and soon much more will be affected by AI technology.**

"Many teachers believe ChatGPT could actually help make education better"

reports **Will Douglas Heaven in the April 6, 2023 edition of MIT Technology Review.** Douglas continues in his report that "advanced chatbots could be used as powerful classroom aids that make lessons more interactive, teach students media literacy, generate personalized lesson plans, save teachers time on admin, and more. **ARIZONA STATE UNIVERSITY (ASU) PRESIDENT, MICHAEL CROW, IS MORE EMPHATIC ON THE VALUE OF AI IN SCHOOL CLASSROOMS.** "Let's say you're at **ASU now.** You decided to take Biology 100. So in Biology 100, which is science for non-science majors, you take your labs **in a virtual reality environment.** You're in this thing where you become an avatar. You're learning biology not by listening to lectures, **you learn biology by engaging in this AI virtual reality.** We're building an AI tool with OpenAI in which you're flying your little robot and now you're next to a messenger ribonucleic acid (MRNA). MRNA is crucial to good health because MRNA cells know what proteins to make, which are essential for everything in your body, from growing muscles to fighting off germs. MRNA is what the COVID vaccine was made of. So you're sitting in class and you're looking at all this in virtual reality and you're flying around it, and you're studying it and you ask your AI bot, 'why are the spikes so long? What are the chemicals on the end of the spikes? And how do they attach? It's going to answer all those questions for you. With all this information, you're going to probably become a master biologist, just by asking this machine (AI BOT) all these questions."



DeepSeek - is a Chinese artificial intelligence company which develops open-source **large language models** (LLMs) like ChatGPT. In January of 2025, DeepSeek's AI Assistant surpassed ChatGPT as the highest-rated free app on the U.S. App Store. The DeepSeek-V3 model uses Nvidia's H800 chips. DeepSeek is gaining recognition for its performance when compared to other LLMs like ChatGPT and is challenging the global dominance of AMERICAN AI models. Pictured in the photo above is **Liang Wenfeng**, the Founder and Chief Operating Officer of DeepSeek. (*wikipedia and Wall Street Journal*)

THE WALL STREET JOURNAL.

TECHNOLOGY | ARTIFICIAL INTELLIGENCE

The Boss Has a Message: Use AI or You're Fired

At companies big and small, employees have feared being replaced by AI. The new threat: Being replaced by someone who knows AI.

By Lindsay Ellis = Nov. 7, 2025 7:00 pm ET

Companies like IgniteTech are cutting staff who resist AI adoption.

An artificial-intelligence tool created this summary, which was based on the text of the article and checked by an editor.

Read more about how we use artificial intelligence in our journalism.

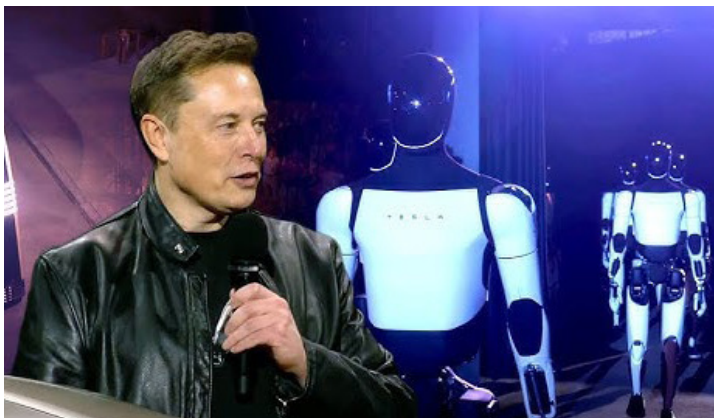
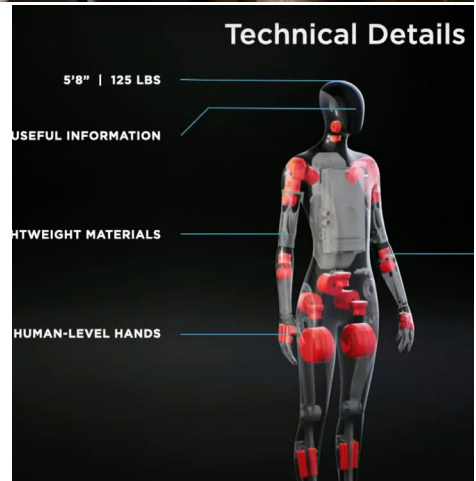
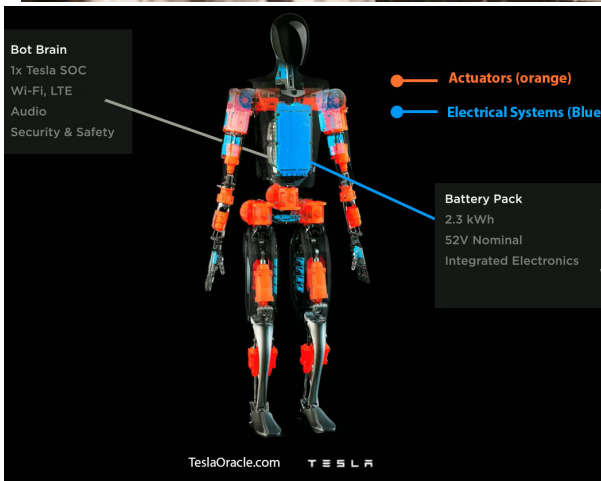
Julie Sweet, the chief executive of consulting giant [Accenture](#) [ACN 1.83% ▲](#), recently delivered some tough news: Accenture is “exiting” employees who aren’t getting the hang of using AI at work.

The firm has trained about 70% of its roughly 779,000 employees in generative artificial-intelligence fundamentals, she told investors. But employees for whom “reskilling, based on our experience, is not a viable path” will be shown the door, Sweet said.

Rank-and-file employees across corporate America have grown worried over the past few years about being replaced by AI. Something else is happening now: AI is costing workers their jobs if their bosses believe they aren’t embracing the technology fast enough.

From professional-services firms to technology companies, employers are pushing their staffs to learn generative AI and integrate programs like ChatGPT, Gemini or customized company-specific tools into their work. They’re sometimes using sticks rather than carrots. Anyone deemed untrainable or seen as dragging their feet risks being weeded out of hiring processes, marked down in performance reviews or laid off.

Companies are putting their workers on notice about their AI skills amid a [wave of white-collar job cuts](#). [Amazon.com](#) announced layoffs last week that affected roughly [14,000 jobs](#), while [Target](#) recently shed [1,800 corporate roles](#). [International Business Machines](#) has also disclosed thousands of cuts. Executives at Amazon and IBM have tied [workforce cuts](#) to the technology in [statements this year](#).



"Optimus is something that anyone can own. People can own one for less than you pay for a car. It will do anything you want - it can be teacher and baby sit your kids, walk your dog, mow your lawn, get your groceries and be your friend, serve you drinks; really anything you can think of. Optimus will be the biggest consumer product of all time" said MUSK .

AI Robots & Drones to Fight Wars and Help Police



Top Photo - a drone / robot used by police in the country of Dubai. Visitors to Dubai and Dubai citizens can ask the robot questions, pay fines and access a variety of police information via purpose-built software. Its **facial recognition technology** is only 80% accurate but the robot's camera eyes will send live feeds to a command control center for **instant background analysis of suspicious people**. **Middle 2 photos** are US Army drones used on the battlefield to detect buried bombs, investigate areas occupied by the enemy or launch missiles against enemies. **Bottom photos** are American police officers using drones / robots for surveillance of dangerous places. (CNN Business)

AI TO CURE DISEASES

Super DATA CENTER in Abilene, Texas

This is the future reality of medicine.



left to right - *President Donald Trump*; Oracle Corporation Founder and President *Larry Ellison*, American businessman and entrepreneur who co-founded software company Oracle Corporation and, as of January 20, 2025, the fourth-wealthiest person in the world, according to Bloomberg Billionaires Index, with an estimated net worth of **\$188 billion**. Ellison is also known for his ownership of 98% of Lāna i, the sixth-largest island in the Hawaiian Islands. *Masayoshi Son*, Japanese billionaire technology entrepreneur, investor and philanthropist, a third-generation Zainichi Korean who became a naturalized Japanese citizen in 1990 and the founder, representative director, corporate officer, chairman and CEO of SoftBank Group, and *Sam Altman*, AND American entrepreneur and investor, Sam Altman, best known as the chief executive officer of OpenAI; Altman is considered to be one of the leading figures of the AI boom.

The Stargate Project: America's Big AI Plan

The Stargate Project is a **huge artificial intelligence (AI) project** created by some of the biggest companies in the world—OpenAI, SoftBank, Oracle, and an investment group called MGX. The leaders behind it are Sam Altman (OpenAI), Larry Ellison (Oracle), and Masayoshi Son (SoftBank).

They've promised to **invest \$500 billion** (yes, billion with a B) to **build super-powerful AI data centers** in the United States by the year 2029. These data centers will help power all kinds of AI technologies.

The project started planning in 2022 and was officially announced on January 21, 2025, at the White House by former President Donald Trump, Sam Altman, Larry Ellison, and Masayoshi Son. Masayoshi Son will lead the project as Stargate's Chairman.

Right now, the team is building 10 massive data centers in Abilene, Texas, with more planned in other U.S. states. This project is expected to **create over 100,000 new jobs** for Americans.

Larry Ellison said that Stargate might even help scientists **create mRNA vaccines—like the ones used for COVID-19—to cure diseases like cancer**. With the help of AI, these life-saving vaccines could be designed in **just 48 hours!**

see page 50 for more information about RNA medicine.

Will AI Keep Eliminating Jobs?

" YES!

*This is what technology has been doing since a Sumerian from Mesopotamia invented **the wheel** in 3500 BCE."*

HOWEVER, history has revealed that, far from making 'working humans' obsolete, technology has been a great job-creator for humans.

*Switchboard operators, elevator operators, street lamp lighters, people at gas stations filling customer gas tanks, movie projectionists at theatres, typesetters at printing companies, and BLOCKBUSTER video store clerks DID IN FACT **disappear** because of technological advances.*

But, technology has also created a host of **new jobs:** computing specialists, data analysts, social media managers, ChatGPT Prompt consultants, digital marketers, energy engineers, software and app developers, cyber security analysts, drone operators, drone maintenance technicians, YouTube content creators, entrepreneurs exploiting new technology.....

*A report by the Institute for the Future estimated that less than **85 percent of the jobs that will exist in 2030 haven't been invented yet".***

(Source - FEE - Foundation of Economic Education)

THIS IS **WHY**

**YOU CONTINUOUSLY LOOK TO THE FUTURE
TO **ANTICIPATE** THE SKILLS YOU'LL NEED TO BE SUCCESSFUL.**

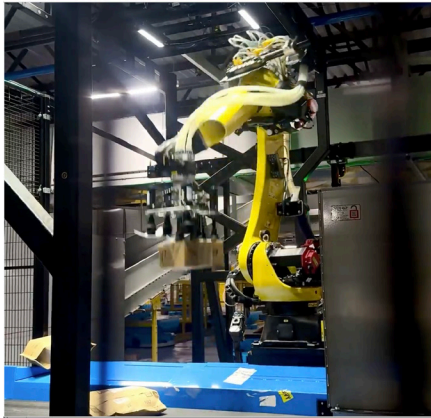
THE WALL STREET JOURNAL.

EXCLUSIVE TECHNOLOGY

Amazon Is on the Cusp of Using More Robots Than Humans in Its Warehouses

July 1, 2025

AMAZON is the second-largest private employer in the United States. **Amazon is a forecaster for how businesses are using AI and Robots around the country.** Amazon's rollout of robots shows how technological advances are accelerating, transforming factory floors and changing how people work. Early on, robots moved large amounts of unpackaged items in Amazon warehouses, a physically



difficult task for a human to do. Over time, machines began taking on even more challenging assignments, such as packaging, sorting products and lifting heavy items. **Robots perform several tasks working with humans.** The robotic system that helps sort inventory moves products to an employee, who then picks the items that fill an order. Another reaches for hard-to-grab items inside shelves, with the supervision of a human worker.

Products move 25% faster through the robot facility than other sites.

Amazon has trained more than 700,000 workers across the world for higher-paying jobs that can include working with robotics, the company said. **You have completely new jobs being created," such as robot technicians,** said Yesh Dattatreya, senior applied scientist at Amazon Robotics. **Warehouse workers are being trained in mechatronics and robotics apprenticeships.**

The goal, he said, is to turn future warehouse robots into assistants that can respond to verbal commands from human employees, such as to unload a trailer. **Amazon has been testing a humanoid robot. The robots, which have legs, arms and a head** and have been tested with tasks such as recycling containers at Amazon, are still in research and development according to Amazon.

"I thought I was going to be doing heavy lifting, I thought I was going to be walking like crazy," said **Neisha Cruz, who spent five years picking items at an Amazon warehouse** in Windsor, Conn., **before she was trained to oversee robotic systems.** Today she sits in front of a computer screen in a Tempe, Ariz., office making sure mobile robots inside Amazon facilities across the U.S. are working properly.

Neisha now earns about 2.5 times more pay overseeing robot systems than she did picking items off shelves in the Amazon warehouse.

Robots are also supplanting some employees and, as a result, helping the company to slow hiring. Amazon employs about 1.56 million people overall, with the majority of Amazon employees working in warehouses.

WHAT'S NEXT?? Autonomous delivery trucks with humanoids taking your package from the truck to your door.

Jobs MOST In Demand



Fast Company is a monthly American business magazine published in print and online that focuses on technology, business, and design. The **New York Post** is a daily New York city newspaper. Both publications published articles in **September 2018** anticipating the future's most sought after jobs in the global economy. Many of the jobs mentioned involve **Technology, Analytics, Marketing, Data Security, & Traditional Trades**. Here are a few::

1. **Cyber Security:** from 'Good' Hackers whose job is to find weaknesses in the fire walls protecting a company's data to **Cyber Security Analysts** who analyze threats and attacks on a company data base, these jobs will continue to be some of the most sought after with the highest paying salaries.
2. **Data Analysts** - using scientific methods, processes, algorithms and systems to extract knowledge, answers, and insights from '**data**'.
3. **Marketing** - collaborating with teams of analysts using AI to collect and analyze '**data**' to identify

customer profiles, to determine the products they want to buy, designing and creating an advertising messages, determining the right channel (social media, television, etc) to advertise on, and, finally, analyzing the results of marketing campaigns to make the next advertising / sales / campaign better.

4. **Sales Representative** - simply put, a sales person. Sales people are very important people in most organizations and, as a result, often paid very well. A sales person's job is to **listen, collect data, and offer advice or a service that can help other** companies and organizations be more successful. Salespeople are good at meeting people, listening to their needs and challenges, and then suggesting data based solutions for the people, companies, and organizations they speak with for their success.
5. **Brand Manager** - What do *Nike, Apple* and the *Kardashians* have in common? They're all huge brands that leave consumers wanting more of whatever they're selling. A brand manager has a lot to do with that. **Good writing**, managing relationships, and **creative skills** are important. (per **MediaBistro**)
6. **Engineer** - especially, software and **full stack** developer. Engineers handle all the work of databases, servers, and computer system engineering as well as design rockets, space suits, buildings and bridges. The "full stack" engineer needs to be proficient in multiple programming languages. Design skills are very important too; as well as, global thinking, communication skills (reading, writing, observation, etc), creativity, curiosity and time management skills. **Software, data, AND cloud engineers** are in high demand too.
7. **Registered Nurses and Home Health Care:** whether it's working in hospitals or visiting nurses to homes and nursing homes, the medical and empathy skills of nurses makes their services invaluable according to Forbes Magazine.
8. **Electricians. Plumbers. Carpenters. HVAC (air conditioning) Technicians**
9. **Financial Services Advisors** - bankers, investment advisors, etc who give advice to people on the best ways to budget, spend and invest their \$ / income to give them the lifestyle they aspire to.
10. **Knowing HOW to USE 'AI' (artificial intelligence / Generative AI / LLMs / Chatbots, etc) in all types of jobs** - warehousing, law enforcement, health care, marketing, law, construction, etc.



Sales people will always be in demand and will prosper in the 21st century. **Guy Kawasaki**, former Chief Evangelist at **Apple**, present Chief Evangelist of **Canva**, an online graphic design tool, and the author of 15 books including "*Wise Guy: Lessons From A Life*", proclaims the

most valuable skill "I ever learned was how to sell.

I encourage everyone to learn how to sell". Whether you realize it or not, the ability to sell will increase your ability to be successful in life. **You will always be required to sell something, starting with why the company you want to work for should hire you!!!** Another word for '

'selling' is a form of 'storytelling'.

The ability to tell your story, honestly, humbly, and with purpose, and value, is exactly what good sales people do.

A job interview or a networking opportunity requires you to tell your story in a way so people become interested in you.

People who can sell can step out of their comfort zone to network, meet new people, listen and observe as well as willingly offer help

to a person in need without demanding something in return.

People tell their stories not only through their words, but through their body language, with a smile, good eye contact, as well as the ability to listen, showing interest in what the other person has to say, and, saying 'thank you'.

Projecting a **'personal brand'** of good values and experience in something that has economic value accompanied by unselfishness will always help a person's career and their network . A **'personal brand'** of helping someone in need will always pay long term rewards in life, in relationships, and for jobs. . Make sure your brand projects **empathy and kindness along with knowledge and value for the company which hires you.**

This is all part of telling your story, of selling the value of YOU!

FINANCIAL SERVICE JOBS - ADVISING PEOPLE ABOUT MONEY

*The opportunities for MEN and WOMEN
of all ethnicities, persuasions, and races
in HIGH PAYING FINANCIAL SERVICE JOBS
are abundant!*



A financial service person does things like:

- **Help people save and invest their money** - they give advice on how to save money, invest in stocks, bonds, etc, or put money in retirement accounts so their money grows over time.
- **Help people with Loans and borrowing:** -If someone wants to buy a house, a car, or go to college, the financial services person might help CLIENTS get a loan or mortgage to borrow money to spend on these choices.
- **Help people chose the right insurance** to protect their property (home and auto), their dependents (life insurance if they die), and health insurance
- **Help people set up a practical budget** to helps them spend their money wisely, save more and avoid getting into debt.

FINANCIAL SERVICES PEOPLE *help their customers make good decisions about their MONEY, so their customers can achieve their financial goals for the lifestyle they aspire to!*

MERITOCRACY is a key word in a financial services career - i.e. **people in this job are paid by how good they perform in their job, i.e. if their clients achieve their financial goals!** Required skills include **HARD WORK / LONG HOURS**, **CURIOSITY**, **good COMMUNICATION**, **CREATIVE thinking**, **great TEAMWORK** and the ability to **FOLLOW THROUGH / ACCOUNTABILITY**.

Financial Services people are some of the highest paid professionals, and compensation includes a base salary and bonus. Estimates for the average **entry-level** finance **salary** has been \$88,160 (2024). More **experienced** Banking & Finance **salaries** are -

- Investment Banking Analyst. **\$130,258 per year.** ...
- Banking Associate. **\$120,699** per year. ...
- Equity (investments, stocks, bonds, etc) Analyst. **\$203,444** per year. ...
- Investment Banker. **\$158,425** per year. ...
- Investment Associate. **\$55,366** per year. ...
- Investment Analyst. **\$182,615** per year. ...
- Credit Associate or Analyst (i.e. *determines whether or not a customer is a good candidate to offer a credit card, a loan, etc*) **\$117,473** per year.

Financial Services jobs include investment banking, and sales and Equity Trading (buying and selling stocks, bonds, commodities, crypto, etc). These jobs requires **great communication skills** and **networking**, i.e. the ability to cultivate relationships. In wealth management, there is an emphasis on long-term relationship-building. Financial Advisors become very involved in supporting their clients' life goals. It's an exciting job PLUS you can make a lot of money.

Many people in financial service feel these jobs allows them to affect their town, state, and the world economy because this type of job affect global growth, the success of companies and the lifestyle of all people. It is **constantly changing and innovating** to meet the needs of a changing world.

Today, **the percentage of women in senior investment banking roles is lower than in other areas of banking.** For this reason, investment banks are placing greater **emphasis on recruiting and retaining women.**

WEBINAR REPLAY

SOCIAL  ADVISORS

THE RISE OF WOMEN IN FINANCIAL SERVICES

with Sheryl Hickerson



SHERYL HICKERSON

FEMALES & FINANCE

Trade Occupations:

Electricians, Plumbers, Carpenters, Welders, Robot / Drone Technicians and more

The average hourly rate of an electrician today in Massachusetts (2024) is \$39.05.

The average annual salary for a licensed electrician in Massachusetts is \$77,409 per year, with a top earner making \$104,843 (2024).

The average pay range for a Drone Technician varies greatly (as much as 10 times), which suggests there may be many opportunities for advancement and increased pay based on skill level, location and years of experience.

Drone Up jobs pay as much as \$78,959 more than the average Drone Technician salary of \$57,556.



Job Title	Annual Salary	Monthly Pay	Weekly Pay	Hourly Wage
Drone Up	\$136,515	\$11,376	\$2,625	\$65.63
Electrical Qualifier	\$79,363	\$6,613	\$1,526	\$38.16
Drone Inspector	\$60,000	\$5,000	\$1,153	\$28.85
Bench Tech	\$51,384	\$4,282	\$988	\$24.70
Drone Inspection	\$45,040	\$3,753	\$866	\$21.65

America is facing a skilled labor shortage with longtime tradesmen like **electricians, HVAC** (air conditioning) **technicians, plumbers and welders** retiring and a new talent pipeline hasn't been able to keep up with the demand. The United States is expected to have 550,000 fewer **plumbers** than it needs by 2027, Bloomberg reported. Demand for **electricians and welders** is expected to grow twice as fast as the average for all occupations. As you progress in your career as an electrician, plumber, HVAC technician and welder, you'll have the chance to **earn a good salary and potentially even start your own business.**

Entrepreneurship



Photo above shows Central High School senior and first semester Social Studies 2.0 - Life Skills class student, **Frankie Noriega** (right), network with 2nd semester Life Skills student, **Manuel Volquez**, as junior **Leiser Bautista** listens in following Frankie's visit to Mr Cronin's class sharing the story of his new found entrepreneurial success. **Frankie spoke about lessons learned in the Life Skills class that have helped him achieve early success in his business: "TIME MANAGEMENT; I had to use my time better. I was wasting too much time playing video games. Secondly, I remember Mr Cronin talking about the importance of my PERSONAL BRAND and how a great BRAND was important for building a great NETWORK. Most of my new clients come from referrals from people in my NETWORK!"**

Entrepreneurship is about people starting businesses!

Entrepreneurship is the backbone of a strong economy. When someone starts a business, they don't just make money for themselves — they also create jobs for others and pay taxes that help fund schools, roads, firefighters, teachers, police, and even the military.

But remember, starting a business and successfully running one are two different challenges.

How Do People Start Businesses? There are two main ways:

1. Invention – creating something completely new:

Earle Dickson invented the Band-Aid in 1921.

Martin Cooper introduced the first mobile phone in 1973.

Albert Parkhouse invented the clothes hanger in 1903.

James Naismith invented basketball in 1891.

2. Innovation – improving something that already exists: This is more common.

Frankie Noriega, a student from **Central High School**, started a car cleaning business. Instead of making people drive to a car wash, he brought the cleaning service to their homes.

In 1853, **George Crum** made the first **potato chips** after a customer complained about his thick fries.

In the 1920s, **Herman Lay** began **selling chips in sealed bags** to keep them fresh — and created Lay's, the first national chip brand.

Famous modern entrepreneurs who changed how we live:

Steve Jobs (**Apple**)

Elon Musk (**Tesla, SpaceX, Neuralink, Optimus**)

Mark Zuckerberg (**Facebook**),

Garrett Camp & Travis Kalanick (**Uber**)

What Makes a Great Entrepreneur? Successful entrepreneurs are **curious**; **confident** and **persistent to try new things**; good **time management skills**; **sales and storytelling abilities**; the courage to **ask questions and use data**; **creative and critical thinking**; **NETWORKS** of successful, smart people. And most importantly, a **commitment to keep learning new things**

The Message:

Start your own business. Solve problems. Try something new.

Yes — YOU can be an entrepreneur!



Facial recognition cameras

connected to the internet of things, in **real time**, will be **everywhere; omnipresent!** Cameras in malls, along sidewalks, highways and in buildings will process our facial features and send **personal DATA** to algorithms for analysis. For example,

facial photos will be sent to special recognition software to identify a suspicious person or a criminal's location to police. Or, while walking

in a mall,

facial recognition software

will trigger specific advertising videos

to be shown on mall screens or

even on a person's mobile phone or

smart watch

showing the person's favorite products and

the stores in the mall to find them

with sale prices.

In fact, Apple launched a new **IPHONE** on September 12, 2017, **with facial recognition capabilities** enabling users to view information about people on their mobile screen they've just seen. A **Chinese company, Megvii**, is building a 'brain' for visual computing that allows Chinese users to 'swipe' their faces on their smart phones to authorize payments to companies they're buying things from. **Jet Blue** is taking steps to match passenger faces to passport photos to eliminate boarding passes. Some companies are even

writing algorithms to predict personal behavior from data they have collected!!!

The September 9th, 2017 issue of *The Economist Magazine* speculates stadiums and night clubs may scan faces of customers entering their venues to

PREDICT threats of violence.

And, University of Cambridge in England research has even proved artificial intelligence can reconstruct facial structures of people in disguise. Some airports in the United States were using facial recognition software with selected passengers deemed '**suspicious**'.

THE WALL STREET JOURNAL.

Dec. 15, 2020 7:48 am ET

Russian Hackers (Cyber Terrorists) Break Into United States Federal Agencies

In one of the most sophisticated and perhaps largest cyber terrorist hacks in more than five years, email systems were breached at multiple US Government Departments including **Treasury, Commerce, Energy, Homeland Security, and Cyber Security**. Other breaches are under investigation.

The **Wall Street Journal** and other media from around the world reported in their December 15th, 2020 editions "it was a widespread and **months long hack of the U.S. government and some of America's biggest corporations** enabled by an unlikely source: a little-known Austin, Texas, software company called SolarWinds Corporation that, until this week, was a household name only to computer network administrators in **400 of the Fortune 500 corporations and many government agencies**."

Security investigators say SolarWinds provided the perfect delivery mechanism for a carefully executed intrusion attributed to Russia's foreign-intelligence service.

The hackers targeted software that is foundational to most businesses, but not usually in the spotlight and used principally by technical staff that keep computer networks and software up and running and supposedly SAFE. 'SolarWinds is in the plumbing' said Stephen Elliot, a vice president with the industry research firm International Data Corp.

By building a back door into SolarWinds software, the hackers were able to compromise systems at the Department of Homeland Security, the Treasury and Commerce departments, the Department of Energy, national security agencies, defense contractors, and potentially hundreds of other entities. Also hacked was the Director of CISA, **the nation's top cyber security official**.

This kind of indirect cyber attack—targeting suppliers as a way to break into their customers—has become an increasing concern to government and cyber security experts. While companies have beefed up their cyber protections, most clients don't closely scrutinize the software that their suppliers deliver. In this incident, the hackers appear to have gained a foothold in their victims' networks by adding "back door" code to SolarWinds Orion software, according to an analysis of the event by Microsoft Corp. Once installed, this software connected to a server controlled by the hackers that allowed them to launch further attacks against SolarWinds customers and to steal data.... As the probe continues into the massive hack—which cast a nearly invisible net across 18,000 companies and government agencies—security specialists are uncovering new evidence that indicates the operation is part of a broader, previously undetected cyber espionage campaign that may stretch back years.... the United States National Security Agency, America's top cyber spy organization said Hackers were finding ways to forge computer credentials to gain wider access across networks and steal protected data stored on in-house servers and cloud data centers."

The attack blended extraordinarily stealthy trade craft, using cyber tools never before seen in a previous attack, with a strategy that zeroed in on a weak link in the software supply chain that all U.S. businesses and government institutions rely on—an approach security experts have long feared but one that has never been used on U.S. targets in such a concerted way.

Just **four days before the 21 year old Solar Winds company disclosed the hack, the company announced its CEO (chief executive), Kevin Thompson, would be leaving Solar Winds, effective January 4 2021...**"

Wikipedia profiled the attack this way - "The data breach, **considered to likely be the work of Cozy Bear (hackers) backed by the Russian state agency SVR**, was reported to be among the worst ever experienced by the United States, due to the high profile of the targets and the long duration the attacker had access. U.S. Senator Richard J. Durbin described it as tantamount to a declaration of war. Other prominent organizations, inside and beyond the U.S., were also exposed to the attack, and some of these may also have suffered data breaches. The cyberattack that led to the federal breaches began no later than March 2020 until their detection by **FireEye Inc.**, a major U.S.-based cybersecurity firm. The attacker apparently exploited software from at least three U.S. firms: Microsoft, SolarWinds, and VMware... **SolarWinds said that of its 300,000 customers, 33,000 use Orion**. Of these, around 18,000 government and private users downloaded compromised versions. ... Possible future uses could include attacks on hard targets like the CIA and NSA, or recruiting spies.... Former Homeland Security Advisor Thomas P. Bossert warned that it could take years to evict the attackers from US networks, leaving them able to continue to monitor, destroy or tamper with data in the meantime...the **hackers also breached the United States Department of Energy** which oversees the nation's nuclear weapons program, nuclear reactor production for the United States Navy, energy conservation, energy-related research, radioactive waste disposal, and domestic energy production."



Cyber Terrorism



Why **Cybersecurity** Matters — And Why It Pays High Salaries!

Back in 2015, people working in cybersecurity made over \$116,000 a year on average — and salaries are even higher today. There used to be about 1,000 jobs in this field. Now, we need at least 30,000 people to do the work.

Why?

Because data is extremely valuable, and keeping it safe is now one of the top priorities for companies and governments. They're competing to hire the best cybersecurity experts — which drives salaries up even more.

What do cybersecurity experts do?

They protect our personal info, like credit cards, medical records,

and passwords, from being stolen. They also protect big systems, like power grids, banks, and even elections, from being hacked.

It's serious stuff:

In 2013, **Target was hacked**. The attackers stole customer credit card info, costing the company billions.

In 2014, **Home Depot** was hit the same way.

In 2016, the FBI investigated **Russian hackers attacking the US government** possibly trying to influence the U.S. election.

In the future, hackers could even target power plants, airports, and bank systems. **Cyber security is one of the most important — and best-paying — careers in the world today.**

3D-Printed Houses? Yes, Really!

3D printing isn't just for small stuff — now it's being used to build houses, cars, and even body parts.

Instead of wood, machines use materials like concrete, plastic, or metal, building things layer by layer using computer designs.

A company called Mighty Buildings can 3D print most of a house in less than a day, using 95% less labor and finishing twice as fast as normal construction. Robots help with the walls, roof, and finishes — humans just handle the small details.

Another company in Vancouver is printing steel parts to replace wood in building frames. Their goal? No more wood houses. Everything is designed on a computer, printed, shipped, and snapped together with little cutting or drilling.

It's faster, cheaper (up to 45% less), and changing how buildings are made.

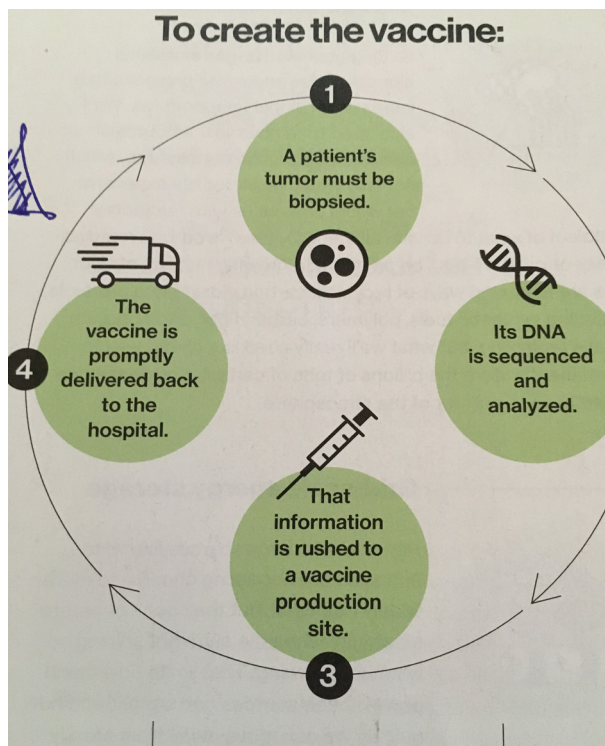




Personalized Medicine

What if we could cure diseases by creating a unique medicine for each, sick person to treat the disease that is making them sick?

What if we could cure human diseases by using each person's natural immune system to attack and destroy cell mutations in cancers and degenerative diseases like dementia and parkinsons?



Personal, genetic data collection, analysis, and ongoing testing will soon enable scientists to make and sell **personalized cancer vaccines to trigger a person's immune system to "identify, attack, and destroy a cancer tumor."** Research into this treatment began in 2008, five years after the Human Genome Project was completed. The most recent data findings have been extremely encouraging.

A startup company in Germany called BioNTech has created and tested a vaccine containing copies of mutations found in cancer cells which could activate a person's immune system to produce special cells which would find, attack, and destroy all cancer cells containing the malignant mutations. BioNTech has joined another company called Genentech to create a process to produce thousands of personally customized attack vaccines. The companies process for producing special attack cells take samples from a person's cancer tumor (biopsy), analyze the tumor's DNA, then produce a personalized vaccine based on their study of the tumor's DNA. **The personalized vaccine is then injected into the patient to find, attack, and destroy the Cancerous (malignant) tumor.**

Stay tuned for the ultimate victory over cancer scientists expect.

moderna

Our bodies can create their own defense.

mRNA, also called messenger RNA, is being investigated across many of our greatest health challenges. Keep reading to find out more about how mRNA delivers the instructions your body needs to potentially prevent, treat, or cure a disease.

Let's explore how mRNA science is being used in vaccines.

What Is mRNA — and Why Is It a Big Deal?

mRNA (short for messenger RNA) is like a set of instructions your body uses to make proteins. It's totally natural — every cell in your body uses it every day.

The COVID vaccines (like Pfizer and Moderna) use mRNA in a smart way:

mRNA give your body a short *message* that teaches it how to make a tiny, harmless piece of a virus attacking and harming your body — *called the spike protein*.

The spike protein can't make you sick, but it's enough to train your immune system to recognize and fight the real virus if it ever shows up.

After your cells use the mRNA, it quickly disappears. It never touches your DNA and can't change it.

mRNA technology isn't new — it's been around for billions of years — but scientists only recently figured out how to use it to fight disease. That's why COVID was the first time most people heard about it.

What's next?

Scientists believe mRNA could soon be used to treat heart disease, cancer, genetic conditions, and even repair damaged tissues. There are still challenges — like teaching the body to target the right cells — but the future looks promising.

Changing Genes?



CRISPR is a powerful tool that lets scientists **edit DNA** – the instructions inside all living things. This means they can now change the genes of plants, animals, and even humans.

Your DNA controls things like your height, eye color, and whether you might get certain diseases. With **CRISPR**, doctors can change those instructions.

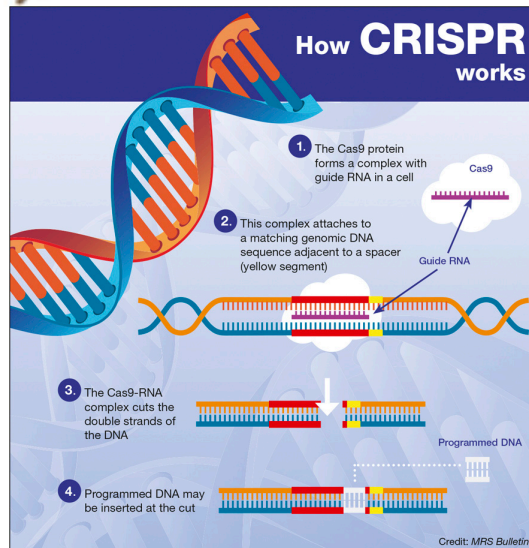
For example, scientists are changing the DNA of **mosquitoes** to:

- Make females unable to have babies
- make them resistant to malaria (a deadly disease)

If female mosquitoes can't reproduce, mosquitoes could go extinct, and that could stop the spread of malaria, which kills millions of people.

CRISPR could also be used in the future to:

- Fix genetic diseases like cancer or ALS



- Prevent birth defects
- Maybe even slow down aging

Instead of using harmful chemicals to fight disease, **CRISPR** could help us solve problems by rewriting nature itself.

BRINGING BACK THE DINOSAURS?



According to a 2025 article in MIT Technology Review, something remarkable is

already happening.

A Texas biotechnology company called Colossal Biosciences announced it recreated a snow-white canid that it believes closely resembles a species that last roamed the Earth about 10,000 years ago.

Thanks to modern **genetic science and gene editing**, scientists can now study **DNA** from long ago and sometimes use it to recreate traits that existed in the past.

So **what is DNA?** Think of **DNA as your body's instruction manual**. Every cell in your body carries a tiny set of instructions that helps determine: how tall you might grow, what color your eyes are, how your muscles work, how your brain develops, even how your body heals when you get hurt. Half of your DNA comes from your mother. The other half comes from your father.

But today scientists are learning how to **edit DNA**. **Gene editing tools like CRISPR** allow researchers to carefully **change tiny parts of a person's genetic instructions**. One newer version, called base editing, can sometimes correct single-letter mistakes in DNA.

This means that in the future, doctors may be able to

help people born with serious inherited conditions like sickle cell anemia, liver disorders, or high cholesterol by fixing the genetic problem by changing a person's DNA.

Aging - "No Mas!"



MR Cronin

teaching SOCIAL STUDIES 2.0 - A Life Skills class in 2075

when he is **126 years old.**

Is this possible?

Some scientists say... **yes!**

Not only is it possible — they think **it's probable.**

Doctors who study aging, like Dr. Nir Barzilai and Dr. Steven Austad, are working on ways to help people live 20 to 30 years longer. They study special genes and new medicines that could slow down aging and prevent diseases like cancer, heart problems, and memory loss.

One medicine they're testing is called metformin. It's cheap (just a few cents per pill!) and has been safely used for over 60 years to treat diabetes. Now, it might also help people stay healthy as they grow older.

These doctors believe that taking a combination of medicines could help people live much longer—and stay healthy while doing it.

Even cooler? Scientists at a lab in California have reversed aging in mice. They believe it might be possible to do the same with humans one day.

So... could Mr Cronin be sitting in a classroom at age 126? If these scientists are right—maybe yes!

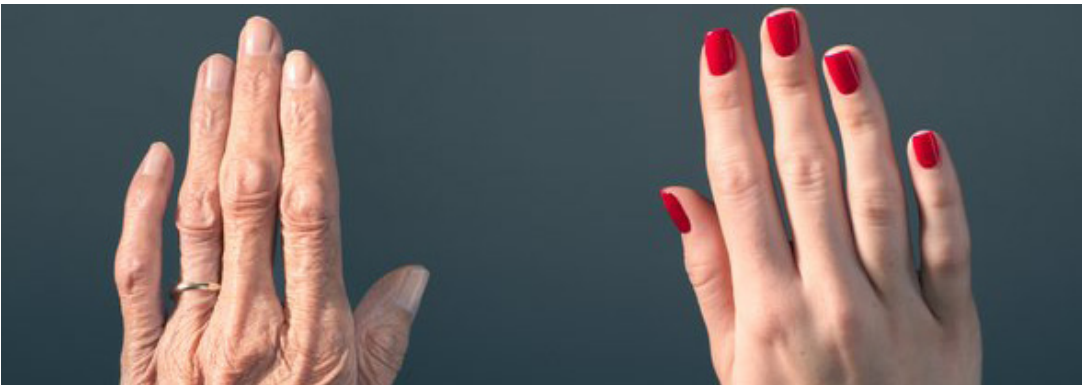


Photo Credit: Tim Flach Getty Images

'AI' Gyms and Fitness Centers



Working Out with AI Robots: The Future of the Gym

In Texas, there's a special gym using virtual AI coaches—like smart robot trainers—to help people exercise. These robot coaches appear on giant LED screens that cover the walls and guide gym-goers through their workouts while even cheering them on! This gym, called Lumin Fitness, says it's the first of its kind to bring artificial intelligence directly into a real workout space.

How It Works

The workout room is dark and high-tech. Up to 14 people can exercise at the same time, either working individually or participating in fast-paced group activities like squats, sit-ups, dumbbell lifts, burpees, and jump-rope routines. Each person stands in their own workout zone with a large screen directly in front of them. Behind the screens are sensors that watch how people move and track special equipment like: jump ropes, medicine balls and weights. The system uses machine learning, which means it keeps getting smarter the more people use it and the more movement data it collects. This makes each workout personalized—almost like having your own private trainer.

See It, Do It, Play It

At the beginning and end of each workout, the screens show a robot-shaped figure demonstrating warm-up and cool-down movements so participants can safely prepare their muscles and recover afterward. During the workout itself, the screens display interactive mini-games that make exercise feel more like playing than working. For example: Every sit-up might earn a ball toward a virtual basketball shot. Completing a burpee might help build a digital block tower. Finishing a set quickly could unlock bonus points or visual rewards. These features make workouts more fun and help people stay motivated longer. Why Use AI Coaches? Some people feel shy or uncomfortable around human trainers. They may worry about doing exercises incorrectly, being judged, asking too many questions, exercising in front of others. AI coaches reduce that pressure by making fitness feel private, supportive, and personalized.

In The Near Future - 'AI' Centric Gym Workouts

Gyms like this will also include AI health diagnostic stations that check things like heart rate, blood pressure, hydration levels, posture alignment (*posture alignment means how well your body parts line up with each other when you stand, sit, or move so your body works the way it was designed to prevent back and other injuries*), recovery readiness, non-invasive blood glucose monitoring (*Blood glucose monitoring means measuring how much sugar is in your bloodstream so your body has the right amount of energy to work properly - Think of glucose (blood sugar) as your body's fuel—like gasoline for a car - your brain, muscles and vital organs depend on glucose*), inflammation indicators and vitamin and nutrition signals. This means gyms will become something more than workout spaces—they will become personal health intelligence centers powered by AI. And that opens the door to exciting future careers for today's students in wearable health technology, data science for human performance, and preventative healthcare technology. Technology like this shows how AI can change everyday life.

Transportation



Imagine riding a train that floats on magnets and travels inside a vacuum tube—a tube with no air—at nearly 1,000 miles per hour.

That means you could go from **Los Angeles to New York City in under 1 hour!**

This super-fast train is **called a hyperloop.**

It uses no engines, no motors, and no gas like cars do.

There's no air to slow it down, because the tube is empty.

It's smooth and silent, with only a small feeling when speeding up or slowing down.

Most hyperloop tubes will be built underground. Some scientists say a ride might **cost only \$50!**

IT'S AN Elon Musk's company - The Boring Company.

is building test tracks in California. They also want to connect Washington, D.C. to New York in just 21 minutes, instead of a 5-hour car ride!

The goal is to fix traffic problems in big cities and help people get places way faster. Other countries are planning to build hyperloops too.

So, in the future, you might travel across the U.S. in minutes—like flying, but on the ground!



Electric Vehicles (EVs) - cars, trucks, planes & more



Elon Musk (top photo) is standing next to his Tesla, electric car.

Below, it's plugged in at a charging station.

Electric vehicles (EVs) don't use gas. They **run on batteries under the car that get power by plugging into special electric outlets**—at home, hotels, or charging stations along highways.

Some **Teslas** can go over **300 miles on one charge!** That's less than **gas cars (which go about 400 miles)**, but EVs are getting better fast. They're also super quiet.

Charging time depends on the car and charger. The **fastest Tesla chargers (called Superchargers)** can give you **200 miles in 15 minutes!** There are over

50,000 Superchargers around the world. Slower chargers can take 30–40 minutes to get close to full.

Cost? Charging a Tesla can cost \$10 to \$30. A Tesla Model 3 costs about \$10.49 to fully charge.

Other companies like Ford, Nissan, and Chevrolet also make EVs. Right **now**, only about **1 in 250 cars are electric**, but that's changing.

China wants most cars to be electric by 2030. Britain and France will ban gas cars by 2040. In the future, even ships, planes, and drones could be electric!

And with **more EVs**, there could be **new jobs in design, engineering, AI, and coding!**

Autonomous (self driving) cars and trucks



Self-Driving Cars = Safer, Quieter, Smarter!

Autonomous Vehicles (AVs) are also called **self-driving cars or robotaxis**. They can drive by themselves with little or no help from people!

These cars are powered by computers and artificial intelligence (AI). They learn from huge amounts of driving data, like what to do at stop signs, how to change lanes, or when to brake if a dog or cat runs across the road!

Where Are They Being Tested?

Waymo (owned by Google) is testing AVs in **Phoenix, San Francisco, and Los Angeles**. **Deep-Route.ai** started robotaxi rides in Shenzhen, **China** in 2021.

Are They Safe?

YES! A report from 2023 says self-driving cars are

much safer than human drivers:

85% fewer crashes with injuries

57% fewer police-reported accidents

The Facts -

Self-driving cars use **sensors and cameras** to "see" the road, **collect DATA** to **analyze and make smart decisions**—like a super-focused robot brain!

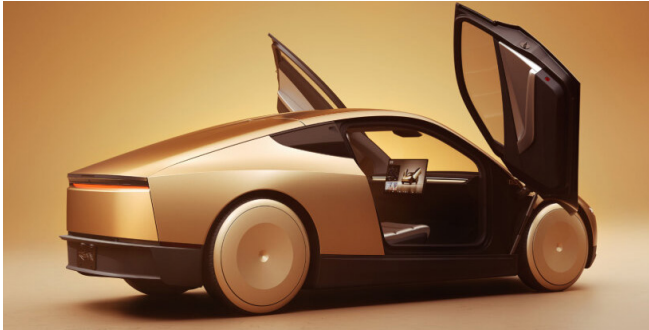
Dangers?

Yes, there are **a few**:

Battery fires: EVs use lithium-ion batteries, and if they catch fire, they're very hard to put out.

Hackers: Like computers, AVs can be hacked if not protected well.

ELON MUSK'S FULLY AUTONOMOUS VEHICLES -
HUMAN DRIVERS UNNECESSARY



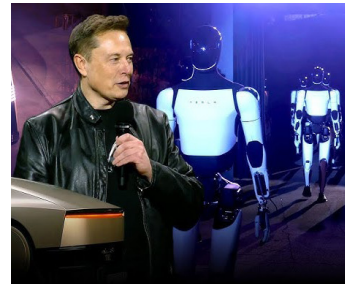
*Tesla RoboTaxi - rent the ride or buy the car - \$29,000
autonomous (self driving) 2 seat vehicle*

It was publicized as
"WE ROBOT",
a much awaited 2024 event
hosted by Elon Musk
to introduce
his latest tech services:

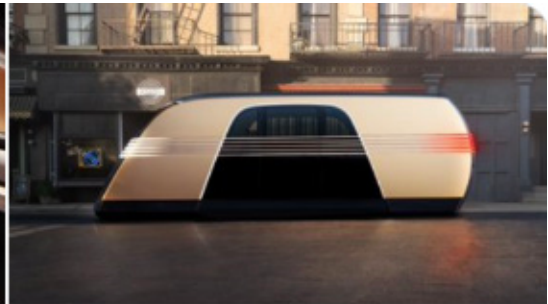
- 1. RoboTaxi
- 2. RoboVan
- 3. Optimus Humanoid



Tesla RoboVan sits up to 20 people



See page 6,10,35 for Humanoid info



World's Most Popular Electric Car



The Popular Chinese Electric

Car Company is called -

"Build Your Dreams" = **BYD**

This very popular electric car is a big Chinese car company that's trying to sell more electric cars than Tesla.

Who Started BYD?

The company made its first cars in 2003 after buying another small car company. BYD now makes **Electric cars, Buses, Electric bikes and forklifts, Trucks and Batteries for EVs.** At first, BYD made gas-powered cars, but stopped in 2022 to focus only on electric vehicles.

BYD vs. Tesla

In 2022, BYD sold more electric vehicles than Tesla—over 900,000 in China alone! BYD sells most of its cars in China, but it's also growing fast in Europe, Southeast Asia, Australia, and Latin America.

BYD Around the World

BYD has already opened in places like Norway, England, Thailand, and Australia. It has a small business in the U.S. making commercial vehicles, like buses and trucks.

EV Batteries

BYD owns a battery company called FinDreams Battery, one of the top 3 EV battery makers in the world!

Why Are BYD Cars Popular?

They're cheaper! In 2023, BYD showed off a new electric car called the Seagull, which costs only \$9,700—way less than a Tesla Model 3, which starts at about \$40,000!

Will BYD Sell Cars in America?

Right now, NO. The United States **(U.S.) government** puts a **TARIFF** on BYD cars. A tariff is like a tax that a country puts on things made in other countries. So, if a car is made in China and someone wants to sell it in America, the U.S. government adds extra money (a tariff) to the price of that car.

How Does This Affect BYD Cars in America?

BYD cost more for people in America to buy because of the tariff the U.S. government adds to the real cost of the BYD car. The BYD car is cheap in China but **the American government tariff makes the BYD much more expensive in the U.S.** That makes it hard for BYD to compete with American-made cars like Ford or Chevy because of the U.S. tariffs.

Example: If a BYD car costs \$10,000 in China, and there's a 100% tariff, then the same car might cost \$20,000 in America! So, because of tariffs, BYD cars might not seem like a good deal in the U.S.—which is one reason they haven't started selling their passenger cars here yet.



The Communist China car company, BYD, makes one of the world's best electric cars. (per Elon Musk among many others)

The photo above is a BYD car called the "Seagull" which sells for \$9,700 (dollars) in China. America's government politicians will apparently place a TARIFF (an extra tax) on BYDs sold in America raising the cost of buying a BYD Seagull in America to over \$25,000.



Middle and Bottom photos: BYD BRAND LOGO; BYD American Headquarters in Los Angeles, California

Flying Cars



Flying Cars: The Future Is Almost Here!

Imagine skipping traffic by flying over it! That's the idea behind flying cars, and they might be coming to cities around the world soon.

What Is a Flying Car?

A flying car is like a small airplane or big drone that can carry a person through the air instead of driving on the road. Some of these can also drive like a regular car, but most are just meant for flying.

Who's Making Flying Cars?

Big companies like Airbus (from Europe), Boeing (USA), and Uber are working on them. So are smaller companies like:

Volocopter in Germany (testing in Singapore)

Ehang in China (flying taxis in Dubai)

Aeromobil and Terrafugia (cars that can also fly)

There's even a new model called the Alef Model A, a flying car you might see on the roads (and in the skies) by 2025!

Will Flying Cars Drive Themselves?

Yes, many will be **autonomous**, which means a computer drives them. These computers use radar and GPS to stay safe. In the sky, it's actually easier to avoid things than on the ground!

But at first, some may still need a pilot just in case something goes wrong.

Are Flying Cars Safe?

Not yet! While **Paris was initially touted as a potential location for flying taxi trials during the 2024 Summer Olympics**, those plans were not fully realized. Most are still being tested. If a flying car has a problem, it can fall out of the sky, which is much scarier than a regular car crash. That's why:

Companies are testing them a lot.

Governments need to approve safety rules.

Emergency controls and backup systems are being made.

Also, **cybersecurity is super important**. **Hackers** could mess with a flying car's computer. That could be very dangerous, so scientists are working hard to make the systems safe.

How Much Will It Cost?

Rides in flying cars might cost around **\$40–\$50—a bit more than a regular taxi, but much faster**. **Example:**

In Brisbane, Australia, it takes 23 minutes to drive to the airport.

A flying car could do it in only 8 minutes!

That's great for busy people who don't want to miss work, flights, or meetings.



Where Will Flying Cars Be Used?

Flying cars will likely be used in big cities with lots of traffic like:

Shanghai (China)

New York City

Dubai, United Arab Emirates (UAE)

Brisbane, Australia

They'll take off and land on rooftops or special pads on buildings.

What's Slowing Things Down?

Rules and laws! Governments want to make sure flying cars are safe before everyone starts using them. They'll need:

New air traffic control systems

Rules for where and when flying cars can fly

Plans for emergencies and crashes

When Will We See Flying Cars?

Alef Aeronautics, a California-based company, is NOW

(2025) testing its flying car in a city environment. The test involved driving the vehicle on a closed-off road and then performing a vertical takeoff. The test was conducted in **San Mateo, California**, and used an ultralight version of the Alef Model Zero. Alef Aeronautics is developing a fully electric, road-legal passenger car that can also fly. The Alef Model A could be one of the first.

A 4-person model is planned for **2035 and might cost \$35,000!**

Did You Know Fact:

In 1940, **Henry Ford said**, "**Mark my word: a combination airplane and motorcar is coming.**"

He was right—it just took a little longer than he thought!

Elon Musk: Space X



SpaceX is an American spacecraft manufacturer, launch service provider, defense contractor and satellite communications company headquartered in Hawthorne, California. The company was founded in 2002 by **Elon Musk** with

the Space X goal of reducing the cost of transportation in space by using re-usable rockets for a cost effective (less expensive) way for space travel and to eventually establish a sustainable colony on Mars.

Space X currently operates the **Falcon 9 and Falcon Heavy rockets along with the Dragon and Starship spacecrafts**. In May 2020, SpaceX successfully launched two NASA astronauts (Doug Hurley and Bob Behnken) into orbit on a Dragon spacecraft making SpaceX the first private company to send astronauts to the *International Space Station* and marking the first space ship with a crew launched from American soil in 9 years. (wikipedia)

SpaceX started launching **Starlink satellites** in 2019 to provide internet access to regions of the world with limited or no access to the world wide web. As of early March 2024, Space X launched and deployed in space 6,000 mass-produced small satellites in low Earth orbit for streaming, online gaming, video calls and communication with ground receivers.



Left photo: Starship is a two-stage super heavy lift launch vehicle developed by SpaceX. It is the largest and most powerful rocket ever flown. **Starship** is intended to be fully **reusable**, allowing both stages to be recovered after a mission.
Right photo: Starlink satellite.



ELON MUSK'S PLAN to colonize MARS



Mars in its true color as captured by the Hope orbiter.

ENRICO FERMI, the SMART, famous Italian 20th century physicist, once asked "Where is everyone?" when musing about the possibility of extraterrestrial life.

"Mathematically it seemed logical there were other civilizations" beyond planet Earth.

ELON MUSK has gone further stating the urgency of extraterrestrial exploration for the purpose of colonization. **Walter Issacson** writes in his Elon Musk biography that Musk believes

colonization is critical for the survival of the human civilization. Earth is too fragile; it may someday be destroyed by an asteroid, climate change or nuclear war.

"My mission in life is to make mankind a multi-planetary civilization."

Elon Musk envisions the beginning of a Mars colony around 2044. Musk would ensure Martian colonization through a continuous re-supply of critical resources like water and food by his Space X rockets until human Martian inhabitants can be self sufficient through a process called in **situ resource utilization** (ISRU), the practice of collecting, processing, storing and then using materials found or produced on 'nearby' astronomical objects or planets (the Moon, Mars, asteroids, etc.) that replace materials that would otherwise be brought from Earth.

Mars is known as a desert planet, a rocky surface like that of Earth's hot deserts. The atmosphere of Mars consists of about 96% carbon dioxide, 1.93% argon (used in fluorescent tubes and low-energy light bulbs) and 1.89% nitrogen along with traces of oxygen and water. Water in its liquid form cannot exist on the surface of Mars due to low atmospheric pressure. Two large polar ice caps exist and, if melted, would be enough to cover the entire surface of the planet with a depth of 36 ft of water. Large quantities of ice are thought to be found on the planet. While Mars does not have enough natural oxygen to support human life directly, technological solutions presently exist to produce oxygen in **situ** (CHATgpt).

AND, **3D printers** will be building the homes and other facilities necessary for life on **MARS, THE MOON, and other planets** we attempt to colonize!



Mega Cities



What Is a Mega-City?

A mega-city is a huge city with **more than 10 million people** living in it! Some could **grow to 20 million, 50 million, or even 100 million** people by combining several cities into one big "city cluster."

Imagine a city so big it takes up as much land as the U.S. state of Rhode Island—or even a whole country like Holland in Europe!

Why Do Countries Want Mega-Cities?

Countries believe that if they build smart and organized mega-cities, they can:

- *Compete better with other countries*
- Grow their economies (*make more money*)
- *Attract smart, creative, and talented people*
- Start *new businesses like banks, schools, restaurants, sports teams, flying taxi companies, drone companies, robots, and more*
- Mega-cities can become *powerful centers of learning, business, and culture.*

What Makes a Mega-City Great?

To make life awesome in a mega-city, **city leaders need to make sure people have:**

Affordable homes (not too expensive)

Clean and fast transportation like bullet trains

Fast internet to connect, learn, and share ideas

Good jobs that pay well

Comfort and safety in daily life

Some cities might even watch internet activity more closely to keep people safe, but this could mean giving up a bit of privacy.

China's Mega-City: Example

China is building many mega-cities using a special model: Instead of one huge city, they combine several smaller cities around a main one. For example, the **Shanghai Mega-City Cluster** could grow to over **150 million people!** To help people travel between these cities, China built bullet trains. For example: A train ride from Wuxi to Shanghai used to take 2 hours. Now it takes just 29 minutes! This helps people live in cheaper cities like Wuxi and still work in big cities like Shanghai.

Challenges vs. Benefits

Mega-cities have challenge:

Overcrowding

Pollution



The Shanghai Maglev Train travels at a top speed of **270 miles per hour!!!** The Shanghai Maglev train uses two sets of **magnets**, one set to repel and push the train up off the track as in levitation; the other set of magnets moves the ‘floating train’ ahead at great speed taking advantage of the lack of friction. This train will eventually connect the Chinese city of Hangzhou to Shanghai. Hangzhou, part of the **Shanghai mega-city cluster**, is 105 miles from Shanghai. **The Chinese are also developing high speed electric trains.**

Privacy concerns

Creating enough jobs for all mega city residents

Building **More schools and hospitals**

Fun places to go (theaters, sports, museums)

Better technology and learning

In the Future...

Some future mega-cities may be **so big and smart (IOT) that they'll:**

Use AI to manage traffic and pollution

Have *flying taxis* and robot helpers

Be connected by **super-fast trains** or **underground tunnels**

If planned right, life in a mega-city can be amazing—full of chances to learn, work, and live better!



China's mega city clusters in brown. Note the location of the Shanghai cluster on the east coast of China and the listed population of 152 million people. Map from The Economist Magazine, June 2018.



One of the United States of America's mega-city clusters is called Silicon Valley, California,

encompasses the cities of **Palo Alto, San Francisco, San Jose, Cupertino, Campbell** and more. **Silicon Valley** is **home to world**

class companies like **Apple, Tesla, Google, Adobe, Netflix, Ebay, Intel, Facebook, Oracle, and Visa** and **universities like Stanford, Santa Clara, San Jose and California Berkley!!** Affordable housing, affordable higher education (college), effective public school secondary education, fresh water, and high speed transportation are just a few of the challenges facing Silicon Valley's mega-city cluster. The populations of America's mega-city clusters are much lower than China's mega-city clusters. The country of China's total population is 1.25 BILLION; the United States of America's population is 350 MILLION.

What Is Universal Basic Income (UBI)?

Universal Basic Income — or UBI — is an idea that every person gets a certain amount of money from the government every month, no matter what.

It's not just for poor people or people without jobs — it's for everyone: **Rich or poor**

With a job or without a job

Young adults or older adults

The goal is to help people live better lives, feel secure, and have more choices.

Has UBI Ever Been Tried?

Yes! UBI is an idea that's been talked about for hundreds of years, and a few places have even tried it, like:

England in 1795 (in a town called Speenhamland)

Finland, Canada, Scotland, and Iran

American cities like Oakland and Stockton, California

Why Do People Support UBI?

People support UBI for different reasons:

Machines and AI are doing more jobs, so UBI could help people who lose their jobs

UBI lets people go back to school and learn new skills

UBI can give people the freedom to start new businesses

Some believe it helps people feel more confident and happier

Some say UBI could reduce crime and lower the number of people in jail

Even famous people like Elon Musk, Richard Branson, and Andrew Yang think UBI is a good idea.

How Is UBI Different From Welfare?

Welfare is only for people who prove they are poor.

UBI is for everyone — no matter how much money they have or what job they do.

With UBI, you don't have to ask or prove anything — you just get the money.

How Much Money Would People Get?

Some ideas say people could get \$1,000 a month or more — that's \$12,000 a year!



But this would cost a lot. In the United States, UBI for everyone could cost about \$3.9 trillion every year. That's a LOT more than the U.S. currently spends to help poor people.

How Would the Government Pay for It?

People have different ideas for how to pay for UBI:

Raise taxes on income (people's pay) and estates (rich people's inheritance)

Raise "sin taxes" — taxes on things like **soda, cigarettes, gambling, video games**, etc.

Create a **new tax** called a **Value Added Tax (VAT)**

What's a VAT?

A VAT is a type of extra tax added to things we buy. **Example:**

A company sells metal to make phones. They charge \$1 + 10¢ VAT

A factory buys that metal and makes a phone. The phone is sold for \$5 + 50¢ VAT

Every step adds a little tax that goes to the government to help pay for UBI.

The Big Debate

UBI sounds great, but people still ask:

Will it be too expensive?

Will people stop working if they get free money?

Can it really make society better and fairer?

Governments are still testing it — and the future will show whether UBI becomes a big part of people's lives!

Digital Money!!



No More Paper Money?!

Imagine - No more paper dollars. No more coins. You can't pay for pizza, clothes, or games with cash anymore.

Instead, you pay with digital money — like **Bitcoin**.

What Is Digital Currency?

Digital currency (also called **cryptocurrency**) is money **you can only use online**. You can't hold it in your hand like a dollar or a penny. It works just like other money — **you can use it to:**

- Buy things
- Sell things
- Save or spend it

But it's all done using computers and the internet.

What Is Bitcoin?

Bitcoin is the **most famous digital currency**. It was created in 2009 by someone (or a group) using the name Satoshi Nakamoto — but nobody really knows who that is!

Buy Bitcoin using real money, like U.S. dollars

Use Bitcoin to buy stuff **online**

Sell Bitcoin to get dollars back

What Makes Bitcoin Special?

It's not controlled by any country

It exists only on the internet

You can buy things anonymously — no names, no tracking

All Bitcoin transactions are recorded on a super secure system called the **BLOCKCHAIN**.

What's Blockchain?

Think of **Blockchain** like a giant notebook on the internet that:

Keeps track of every Bitcoin purchase

Can't be changed or erased

Is checked and updated by lots of computers around the world

How Are Bitcoins Created?

Bitcoins are mined. This means Computers compete to solve hard math problems. When they solve one, they get rewarded with new Bitcoins. The computers help check and protect Bitcoin transactions. In the beginning, the reward was 50 bitcoins. But it gets cut in half every 4 years. By 2023, about 19 million bitcoins had been created. The final total will be 21 million, probably by the year 2140.

Bitcoin's Value Changes A LOT

In 2011, 1 Bitcoin was worth **30 cents**. In 2018, it jumped to over **\$11,000**. But then dropped to **\$6,000** **The value of Bitcoin goes up and down fast — that's called volatility.** **In May of 2025, one Bitcoin was valued at \$104,000!**

Why Do Some People Love It?

#1. **It's global** — anyone can use it. #2. **It's private** — no one knows what you're buying

Why Do Some People NOT Like It?

#1. The value is unpredictable. #2. It's not backed by a government or bank like most banks are backed or insured by the government (FDIC). #3. Famous investors like Warren Buffett and Jamie Dimon say it's too risky or even a "fraud"

Still, many countries and companies are exploring digital money — and some countries are even trying to make their own crypto currency versions!

In Short:

#1. Paper money might disappear someday and Digital money like Bitcoin could be **the future**



the EARTH'S ARCTIC CIRCLE

Russia, Norway, Canada, Denmark (which controls Greenland) **and The United States of America border the Arctic Ocean.** **The next war** may be fought over control and access to the Arctic Ocean and the minerals lying at the bottom of this ocean. This part of the world has become more valuable now that **global warming** is melting the ice cap at the top of the earth. **NO ICE** allows ships to travel from the Atlantic Ocean to the Pacific Ocean faster and less expensively than going through the longer route at the Panama Canal in Central America. Traveling across the top of the world is a **FASTER WAY TO SHIP THINGS**. Furthermore, **beneath the Arctic Ocean lies** an abundance of **valuable natural resources** that countries want and need... iron ore, copper, nickel, zinc, phosphates, diamonds, rare earth metals, as well as potential for manganese nodules and polymetallic nodules which are rich in metals like cobalt, nickel, and copper. **AND, CHINA IS WATCHING.**

COMPETING IN A GLOBAL ECONOMY

Welcome to the GLOBAL / WORLD Economy. You are growing up in a world where you're not just competing with people in your town or country — **America and YOU are competing with people from all over the world for jobs, business opportunities, and success.**

Thanks to technology and the COVID-19 pandemic, **more jobs are now virtual** — meaning people can work from home, coffee shops, or even other countries. For example, Casey works for a company in New York but helps clients in Wisconsin and California — all while living in North Carolina. Another company closed its office in Rhode Island and now hires people across the U.S. while the company president lives in Paris, France!

This is what the global economy looks like: people, companies, and ideas moving across borders. And **one of America's biggest competitors in this global economy is China — a country with a population of 1.4 billion and one of the world's fastest-growing economies.**

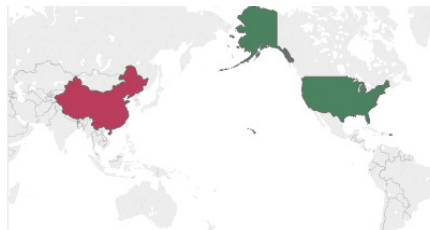
This initial activity focuses on **COMPETITION** and the **OPPORTUNITIES** that **COMPETITION CREATES** in a 21st century **GLOBAL / WORLD ECONOMY**.

The People's Republic of China could be the place of your most formidable career **CHALLENGES** and the place of YOUR greatest career **OPPORTUNITIES**.

THIS IS WHY CHINA MATTERS. China is a country full of both opportunities and challenges. Many American companies like **Apple, Nike, and Tesla** do business in China because it helps them grow and earn money. At the same time, China is trying to become the #1 economy and military power in the world. The government invests heavily in education, technology, and national strength.

Understanding how and why China competes is important. The Chinese government and people remember a painful time in their history called the “*Century of Humiliation*,” when foreign countries, including the U.S., treated them unfairly. This history shapes the way China sees the world today.

Countries like China as well as Singapore, India, Russia, Sweden, and Viet Nam compete with the United States in the 21st century **global economy**. **THIS AUTHOR** believes **CHINA** will be America's greatest economic and military competitor. China has a **population of 1.4 billion** (USA - **326.7 million** in 2020).



China has one of the fastest growing 'ECONOMIES' in the world. The word 'ECONOMY' means the production, distribution, trade, as well as the buying (consumption) of products and services. Simply stated, an economy is made of

3 basic things: *“all of the people who make 'stuff', all of the people who use the 'stuff', and all people who buy and sell the 'stuff'”*. Countries, states, and cities have economies. If a city, state or country doesn't make/produce/manufacture/or grow something, it doesn't have things to sell. If it doesn't have anything or little to sell, everyone in the city, state, or country doesn't make money. If companies products don't sell, nothing gets bought and people lose jobs. Governments don't have tax revenue to collect. If a country makes or grows a lot of things, sells a lot of the things it makes or grows, an economy is perceived as “good”. China's economy allows American entrepreneurs and companies like **Apple, NBA (the National Basketball Association) Tesla, (electric cars), Donmario (soybeans), Nike, Ford, Starbucks, Boeing (air planes), and Caterpillar (farming equipment like tractors, etc)** to sell their products in China to earn money to be profitable, i.e. **'profitability' means** a company makes enough money to pay their bills and exceeding the costs / expenses to operate their business.

Map of the world:
China in RED and the United States of America in GREEN.

China is a country full of both opportunities and challenges. Many American companies like Apple, Nike, and Tesla do business in China because it helps them grow and earn money. At the same time, **China is trying to become the #1 economy and military power in the world.** The Chinese government invests heavily in education, technology, and national strength. Shi Yinhong, Director of Center for American Studies, School of International Studies, Renmin University of China, recently shared **China's goals for success.**

- #1. China wants to have the #1 economy (GDP) in the world
- #2. upgrade CHINA's military and combat capabilities to be among the best in the world
- #3. be among the leading countries in the world investing in research and technology (AI)
- #4. take over the Republic of China, an ally of the United States, located only 1,307 miles from the People's Republic of China (also called 'Communist China) on island of Taiwan
- #5. have a larger, more powerful military than the United States in the western part of the West Pacific Ocean, not including Okinawa or Japan AS WELL AS maintain an indestructible military in the Eastern Indian Ocean. China does NOT want to dominate the Eastern Indian Ocean but rather maintain a basic China's presence in the eastern Indian Ocean area that's difficult to be harmed or destroyed.
- #6. to be regarded by other countries as having the most prestigious NATIONAL BRAND and most influence in the world"



PHOTO OF - Mr Xi Jinping - most powerful man in the People's Republic of China, general secretary of the Chinese Communist Party (CCP), chairman of the Central Military Commission (CMC), and President of the People's Republic of China (PRC) since 2013.

China has significantly more soldiers, sailors, and pilots than the United States, more than 2.8 million troops in the various services of the military. The **United States military has the second largest military in the world;** the only other countries with more than a

million active duty troops are China's neighbors—Russia, India and North Korea. "China has the largest navy in the world, with a battle force of approximately 350 ships and submarines" a United States report stated. The U.S. Navy's current battle force is composed of 295 ships. The United States has larger and more sophisticated ships than China. America is ahead of China in the quality and quantity of long-range attack submarines, even if China now has a respectable force of shorter-range and mostly nonnuclear-powered attack subs itself. Many of China's new ships are well-equipped with launch tubes and modern missiles. **China is also creating new islands atop reefs in the South China Sea through a vast land reclamation program** that began in 2014-2015, to enhance its physical presence and **project power and strength** in the waters off its mainland coast **to America and America's nearby ally, Nationalist China, on the island of Taiwan.**

EMPATHY is an **ability to understand the feelings, the emotions, of other people / organizations / countries** and why they act the way they do. Empathy is a valuable **SKILL for all people, especially LEADERS,** to effectively **manage relationships, create opportunities AND solve problems** with families, companies, and countries. This author encourages American politicians to use empathy when competing with China in the 21st century. **Empathy begins with an understanding of Chinese history.**



TESLA



TikTok



BYD is a Chinese auto maker that is the world's largest electric vehicle manufacturer

- The earliest known written records of **the history of China** date from as early as 1250 BC making it arguably the oldest history of mankind. China has been a proud, scientifically advanced civilization with the world's earliest inventions of gunpowder, paper, printing, the compass, umbrella, porcelain, the wheelbarrow, iron casting, hot air balloons, seismographs to measure earthquakes, kites, matches, stirrups for riding horses, and acupuncture. Some historians contend the great Chinese admiral, **Zeng He**, and his fleet of Chinese ships preceded Columbus to the North American hemisphere in 1421.

- **Here is some information which may help you understand why China acts they way it does today.** It was the early **19th century into the 20th century** which brought China its greatest misfortune and this misfortune may have affected China's perception of the world today. It was during this period that England, France, Russia, Japan, and other "Western" allied nations engaged in multiple conflicts and wars with China. The Chinese call this period **"the century of Humiliation"** (1839 -1949). China lost almost all of these conflicts and was frequently forced to give up large amounts of its territory to England (Hong Kong), France (Zhanjiang), and Russia (Outer Northwest China), as well as pay large amounts of reparations (\$ money) to them. It was also during this time that **England flooded China with the addictive drug, opium, creating widespread addiction among the Chinese people and led to the first Opium War.** Chinese **distrust of "Western Nations"** was further reinforced in 1999 during the Kosovo War in Yugoslavia when **American CIA drone guided bombs hit the People's Republic of China embassy** in the Belgrade district of New Belgrade, Yugoslavia, killing three Chinese journalists. Chinese leaders and the Chinese people were naturally outraged. The United States President at the time, William Jefferson Clinton, apologized, essentially telling the Chinese government *"we made a mistake. Sorry"*.

- China's reaction to the **"century of Humiliation"** and the military and verbal attacks on their country by "Western" world powers (England, France, the United States, Japan, Australia, etc) **further deepened their suspicion, distrust and animosity toward the "West"**

- **MOST RECENTLY, in 2021, President Biden** criticized Chinese leaders for purported discrimination, incarceration, and torture of the **Uighur people and Muslims living in the Chinese province of Xinjiang for their religious and political beliefs.** Other "Western Powers", i.e. Canada, England, and France, echoed Biden's condemnation of China.

- **China vociferously responded! The Chinese diplomat Yang Jiechi** (the Chinese Communist Party's foreign policy chief) **called the critical claims against China "lies and disinformation!!!!"** Yang Jiechi and other Chinese leaders pointed out the **hypocrisy of United States politicians who criticized China.** Chinese leaders challenged American politicians to examine **America's history before criticizing China.** Chinese leaders cited **numerous shameful, inhumane, criminal practices** initiated by American politicians against other nations AND America's own people: #1) the American slave trade; #2) 19th century exploitative **American colonialism in places like Hawaii;** #3) **American President Franklin Roosevelt's forced Japanese American internment camps** throughout America during World War 2;

- #4) *the United States orchestrated the overthrow of the democratically elected Prime Minister of Iran, Mohammad Mosaddegh, code name **Operation Ajax**, in 1953 and then placed America's favored leader, Shah Mohammad Reza Pahlavi, as the new leader of Iran;* #5) *the United States financially backed and military directed attack on the Communist government of Cuba in 1961 on what came to be known as the infamous 'Bay of Pigs' invasion;* #6) *American politicians acquiescence of the assassination of South Viet Nam President, Ngô Đình Diem, in 1963;* #7) *decades long policies of American politicians that maintained inferior education for poor families living in American cities like Providence and Baltimore;* #8) *and the genocide of American Indians authorized by American political leaders in the 17th, 18th, and 19th centuries are but a few examples of America's injustice against its own people and others ! (See the Economist Magazine, April 3rd, 2021 edition page 36.)*
- **When President Trump** criticized China for stealing American '*intellectual property*,' i.e. **theft of American ideas, inventions, creative expressions, trade secrets, proprietary products, movies, music, and software as well as copyrights on books or articles**, a logo design of a soft drink company, unique design elements of a web site or machine, a **patent** on a particular process like chewing gum manufacturing **and** classified information on the W-56 Minuteman II ICBM missile - **China's leaders once again responded "shame on you, America! America did the same. America is the ultimate "intellectual property thief!"** China again pointed to American hypocrisy, specifically, to American immigrant **Samuel Slater** who stole British textile technology in 1789 and brought it to America. **Slater's theft of British technology started the Industrial Revolution in America and enabled America to successfully compete against England and other industrialized countries in the technology driven, global economy of the late 18th and 19th centuries.** Slater worked as an apprentice (an intern) in a British textile factory making cloth before emigrating to the United States at the age of 21. Slater used this British machine technology to design the first textile mills in the United States which started an American **Industrial Revolution. As a result**, American workers started leaving their jobs on American farms for manufacturing jobs (i.e. working in factories) in **American cities**. Slater later went into business for himself, using the British technology ideas he learned working in English factories, to develop a successful family manufacturing business with his sons and investor, **Moses Brown**. Slater eventually owned thirteen spinning mills and developed **tenant farms** and company towns around his textile mills in many American communities like **Slatersville, Rhode Island** (Slatersville today is a village that is part of the town of North Smithfield, Rhode Island).

China's world class EDUCATION SYSTEM teaches skills and behaviors RELEVANT TO WHAT CHINA'S COMPANIES and the CHINESE GOVERNMENT NEEDS TO BE SUCCESSFUL IN THE 21st CENTURY GLOBAL MARKETPLACE. **Chinese students consistently score much higher than American students on the PISA international tests measuring science, math and reading abilities.**

The **Chinese government** also believes their type of government, a **ONE PARTY, COMMUNIST** government, is the **most effective way of maximizing a country's 'resources' and potential as well as a better way of governing its citizens than America's** multi-party (Democrat, Republican, Libertarian, etc), **highly partisan, democracy where all American politicians do is seemingly argue and rarely collaborate and compromise to get things done .**

The operating **rules for businesses in China are different** from the United States. *Capitalist* opportunities exist in China. **ALIBABA**, a Chinese company similar to America's **AMAZON**, allows "**U.S. entrepreneurs and companies like Stadium Goods, a re-seller of cool sneakers, to sell its products in China via its web based 'business-to-consumer' platform called the TMall marketplace**" according to Carol Roth writing in **ENTREPRENEUR MAGAZINE** in 2017.

CHINA overtook the United States as the country with the highest number of rich people in the world.

ICBC 工銀澳門

the logo above is the **Industrial and Commercial Bank**, a multinational banking company in China. **Like most businesses in China, the government owns and controls the activities of the company.** According to Wikipedia, as of 2006, ICBC had 2.5 million corporate customers and 150 million individual customers. Goldman Sachs, a privately owned, large American investment bank, invested \$2.6 billion in ICBC and owns 5.75% of ICBC.



one of ICBC's banks located in Shanghai, China's largest **city of 25 million**.
See the ICBC logo lit on the building.



PHOTOGRAPH: GETTY IMAGES

Contemporary Amperex Technology Co., Limited (CATL) is a Chinese **battery manufacturer and technology company** that specializes in the manufacturing of lithium-ion batteries for electric vehicles and energy storage systems (Batteries).] CATL is the **biggest EV and energy storage battery manufacturer in the world**. In December 2023, North Carolina's Duke Energy Company disconnected CATL batteries they installed in the Marine Corps Base Camp Lejeune **due to American government security concerns!! (espionage / spying)**



photo above shows the **principal owner** of this company called **Alibaba, Jack Ma**. Alibaba is a multinational **technology company** specializing in **e-commerce** platforms like the American companies Amazon and eBay. Alibaba owns other companies offering electronic payment services, other search engines for shopping and cloud computing operating in many other countries around the world. FORTUNE MAGAZINE ranked **Alibaba as the 31st most valuable company in the world**.



photo above shows fast food in China being paid for using **Alipay**, a third-party mobile and online payment platform. Alipay was **established by the Alibaba Group and its founder Jack Ma**. **Alipay surpassed PayPal**, the American owned and operated mobile payment service, as the world's largest mobile payment platform in 2013. Alipay had **870 million users**. **55% of consumers in China use Alipay**. **Alipay was introduced in South Korea** in 2015 and is now accepted as a means of payment at many companies in South Korea. Alipay users can also receive an instant tax refund in South Korea. In 2019, **taxis and Starbucks in the city of Seoul, South Korea, will accept payments using Alipay**. **Alipay has also partnered with an American company called First Data** allowing payments for more than 4,000,000 businesses **in the United States**.



founded in 1987 by Ren Zhengfei, a former Chief in the Chinese army, **Huawei offers telecommunications networks**, providing operational and consulting services and equipment **to 170 companies all over the world**. Huawei has over 194,000 employees as of December 2019. **Huawei is the largest telecommunications equipment manufacturer in the world and overtook Apple in 2018 as the second-largest manufacturer of smartphones** in the world behind Samsung Electronics.

THE WALL STREET JOURNAL

China Limits Online VideoGames to Three Hours a Week for Young People

New regulation will ban minors from playing videogames entirely between Monday and Thursday

By Reporter Keith Zhai - Updated Aug. 31, 2021 12:13 am ET

SINGAPORE—China has a new rule for the country's hundreds of millions of young gamers: No on-line videogames during the school week, and one hour a day on Fridays, weekends and public holidays.

China on Monday issued strict new measures aimed at curbing what authorities describe as youth videogame addiction, which they blame for a host of societal ills, including distracting young people from school and family responsibilities.

The new regulation, unveiled by the National Press and Publication Administration, will ban minors, defined as those under 18 years of age, from playing online videogames entirely between Monday and Thursday. On the other three days of the week, and on public holidays, they will be only permitted to play between 8 p.m. and 9 p.m. The government announcement said

all online videogames will be required to connect to an *“anti-addiction”* system operated by the National Press and Publication Administration. The regulation, which takes effect on Wednesday, will require all users to register using their real names and government-issued identification documents.

In restricting online videogame play for younger people, the government is seeking to *“effectively protect the physical and mental health of minors,”* China's state-run Xinhua News Agency said Monday.

The People's Daily, the Communist Party's principal newspaper, said in a commentary that there was no room for compromise and negotiation on the new measures. In regulating the videogame industry, the commentary read, *“the signal sent by this move is very clear—the government can be ‘ruthless.’”*

RARE EARTH MINERALS

Throughout the history of mankind, there have been specific natural resources that have had exceptional, extraordinary value.

In the 19th century, it was GOLD. The 20th century had oil, aka BLACK GOLD. And, now, its RARE EARTH MINERALS.

**RARE EARTH MINERALS
ARE VALUABLE
WITH
LIMITED ACCESS
with
rapidly increasing
GLOBAL DEMAND.**

TODAY, rare earth minerals like

**metals
COBALT and LITHIUM**

**and
elements such as
SCANDIUM, LANTHANUM,**

yttrium, lanthanum, cerium and others are playing an increasingly important role in the GLOBAL ECONOMY of the 21st century. Products like

**electric vehicles (EV),
wind turbines,
laser guided missiles,
smart phones,
flat screen televisions,
magnets,
and
batteries**

**depend upon rare minerals
in the production process.**



Photo is a mining operation in the **Democratic Republic of the Congo (DRC)**. The DRC is considered the wealthiest country in the world, with an estimated US\$24 trillion in untapped mineral resources. Copper, gold, diamonds, cobalt, uranium, and coltan are just some of the valuable minerals beneath the soil in the Congo. The **relationship between China and the DR Congo** has significantly increased due to massive growth in the DRC's exports of raw materials like cobalt to China. In January 2021, the Chinese government agreed to forgive US\$28 million the Congo owed China. China then pledged US\$17 million in aid to Congo, mainly for development projects. At the same time, the Democratic Republic of the Congo joined **China's Belt and Road Initiative** which provided China a vital supply line of vital minerals in return for investments in Congo's infrastructure.

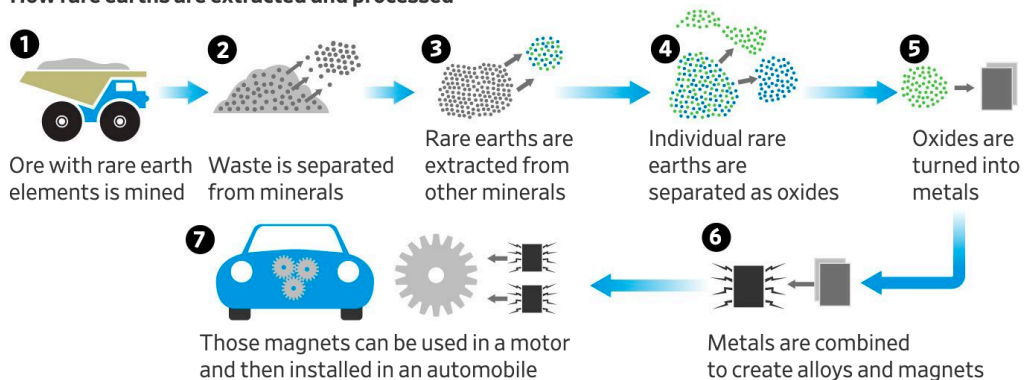
China mines over 70% of the world's rare earths and is responsible for 90% of the complex production process of turning these minerals into **magnets, computer chips** and other high demand products according to a April 11, 2021 Wall Street Journal article. "For these rare minerals to go from a hole in the ground to produce magnets, you need vast skills and expertise, which barely exist out of China," said Constantine Karayannopoulos, chief executive of Neo Performance Materials ULC, one of a few Western companies able to process rare earths and make magnets.

This expertise gives Chinese government sponsored companies a great advantage over companies in America and other countries throughout the world. China's expertise

vehicle. As concerns for clean energy, energy independence and other issues drive the sale of electric vehicles and wind turbines, the demand for batteries made with rare earth compounds increases even faster.

Western companies like the United States are years behind China establishing mining of rare minerals in the United States but also establishing treaties with the few countries that have rare minerals to export them to America. The United States needs not only the rare minerals but also the supply lines and production infrastructure to turn these rare minerals into the batteries, magnets, and missile systems to survive and process in the global marketplace of the 21st century.

How rare earths are extracted and processed



Source: Industrial Minerals Company of Australia

mining and then processing rare minerals into valuable products creates not only economic but also strategic advantages to China as they compete in the global marketplace.

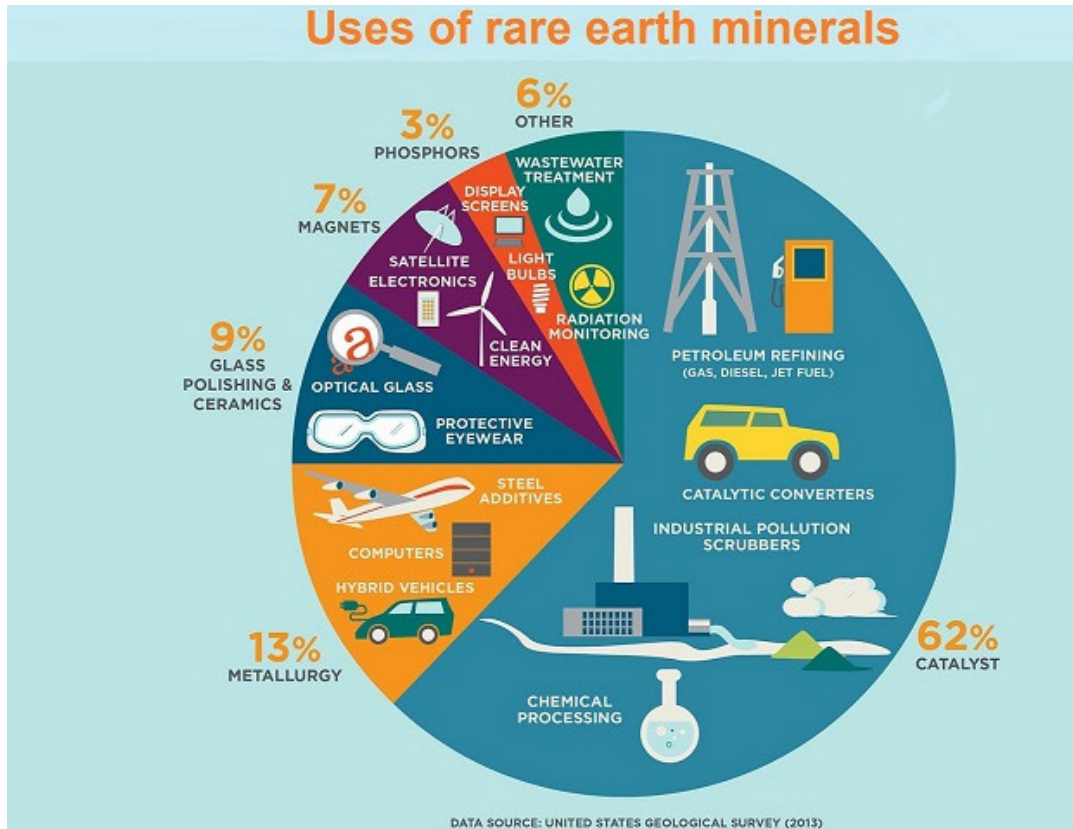
Many rechargeable **batteries** are made with rare earth compounds. Demand for the batteries is being driven by the worldwide popularity of portable electronic devices such as **cell phones, readers, portable computers, and cameras.**

The value in these rare minerals rests in specific qualities and capabilities like fluorescence, conductivity, and magnetic properties which makes them very useful especially when mixed in small quantities with more common metals like iron. According to a *Geoscience News and Information* publication, these minerals are so rare, countries compete to control supply lines to ensure their delivery to their country. China has established many exclusive supply lines from the mining of a rare mineral in a foreign like the Republic of the Congo on the African continent to delivery to China.

Several pounds of rare earth compounds are in **batteries** that power every **electric vehicle and hybrid-electric**

China controls more than 80% of rare earth mineral global supply, accessibility, and production!!

Countries like the United States and its "Western" allies like England, France, etc and



USA Pacific Ocean allies like Taiwan, Japan, South Korea, Australia, etc are ANXIOUS

about China's dominant access and production know-how with rare earth minerals. Furthermore, China has protected their advantage by creating dependable and often exclusive supply chains with many rare mineral rich foreign countries (like the Congo) as well as building internal national security systems. According to a June 2020 article in the *Wall Street Journal*,

China sees its dominance in strategic rare-earth minerals as leverage used against America and its allies over

trade

(i.e. exporting and importing products like electric cars, computers, batteries, micro-chips, smart phones, etc which depend on rare earth minerals)

according to a new report by U.S.-based researchers. "China's *rare earths* positioning both implicates and threatens the entire global system..... They (China) see controlling this type of [industry] as a path to win (world dominance) without fighting (a violent, military war)."

America's Defense Department is trying desperately to catch up to China by investing in America's supply chain for importing rare earth minerals as well as announcing grants to companies to develop a rare mineral facility at the only **United States ONLY rare-earth mineral mine, Mountain Pass** in **California**, as well as a new rare mineral processing plant in Texas.

The United States Congress claims it will now spend more money by easing environmental regulations and spending more money on securing and processing rare earth minerals.

While opportunities for future success are exciting to think about,

**there are
responsibilities
which
always accompany success;**

exciting and fulfilling responsibilities to family, loved ones, to the company you own or the company you work for, to your employees or colleagues you work with. What about them? And, what about on a global scale? What about the planet, Earth, we inhabit? Do you have a responsibility to it?

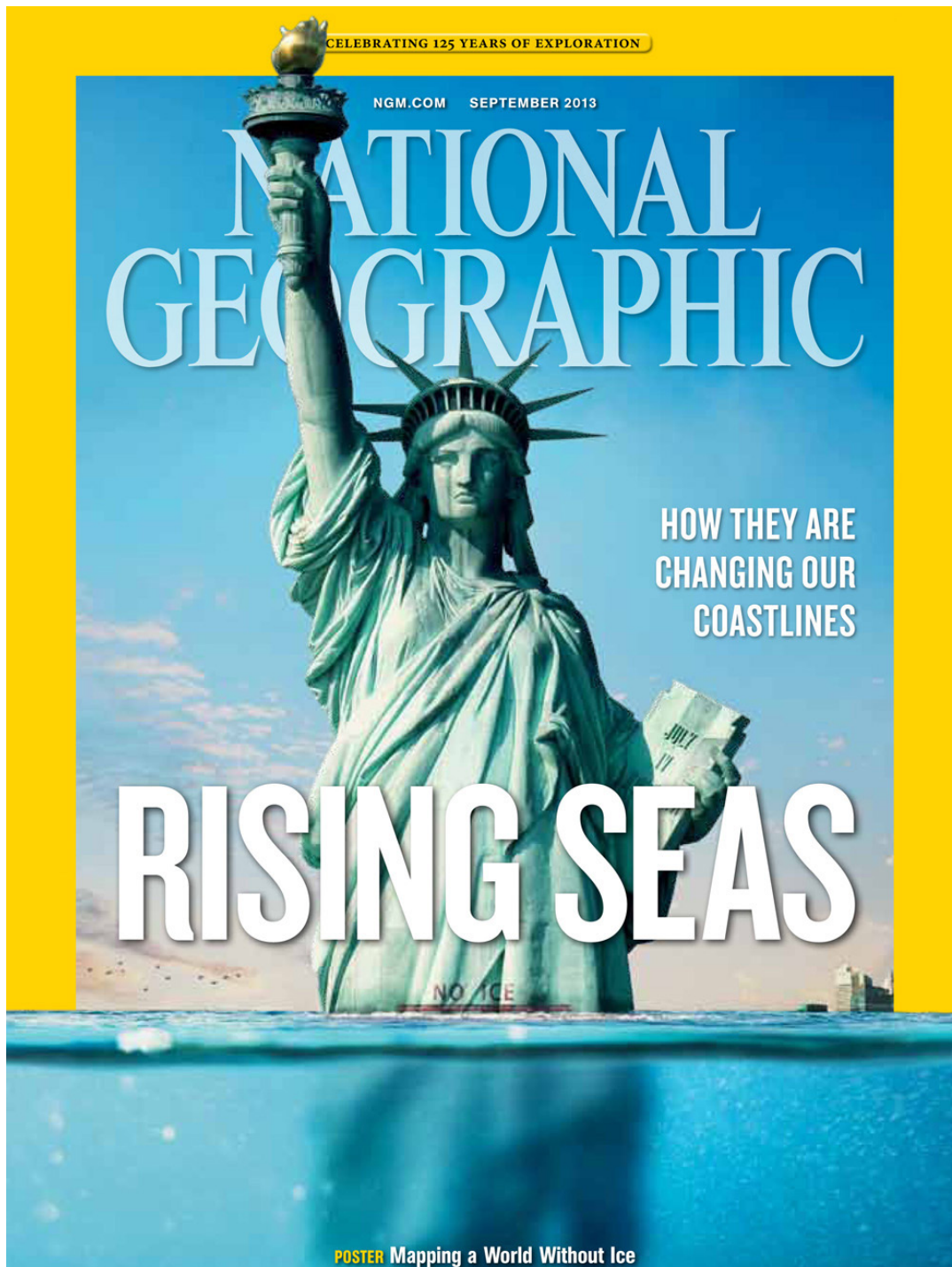
Responsibility to the changing planet brings new opportunities, new jobs, for **creative, curious people**. Engineers. Analysts. . Robot mechanics. Welders. Meteorologists. Financial advisors. All with **'AI' skills!**

**Artists. Designers.
Oceanographers. Marketers.
Cyber Security and Sales people.
Futurists. And,
jobs which have
yet to be created!**

All awaiting the curious and those willing to go out of their comfort zone, today and in the future.



there is a lot of **data scientists are collecting and analyzing rising temperatures on Earth and the impact hotter temperatures are and will have on ocean levels** throughout the world. Some scientists contend, if global temperatures continue to rise, glaciers will continue to melt in the Arctic Ocean and Antarctica dumping more water into the oceans and cause **ocean levels to rise and come farther onto coastal lands**. The map of North America above shows the present coast line and future coast lines **when** oceans rise significantly. Notice the cities of **Boston, New York, Houston, Philadelphia, Washington D.C.** and the area of southern **Florida; all under water!**



"Providence, Rhode Island, has witnessed sea levels rise about 10 inches since 1929. We're expecting about a foot increase in the next 20 years and 2 to 3 feet by 2050. 7 feet by 2100! At 7 feet, certain areas of Warwick, RI are gone, underwater, as well as the downtown area of Providence. Even a foot increase takes out the Providence Place Park boardwalks. Climate change is the single biggest issue that the coastal environment will be facing over the next several decades." Grover Fugate, Executive Director, RI Coastal Resources Management Council. Providence Business News. February 15 - 21, 2016



The *Economist Magazine* published a story on the world's water supply in its March 2nd, 2019 edition with opening statement - "*Climate Change and Population Growth Make The World's Water Woes More Urgent!...*"

The problem with climate change will not be too much water but too little clean water"

The city of Capetown, South Africa, almost ran out of water in 2018 after a 3 year drought bringing the city the ignominious distinction of being the first among the world's large cities to run out of water. At one point, Capetown government leaders discussed the feasibility of towing **an iceberg from Antarctica** to provide the city with drinking water! In 2014, Sal Paulo, Brazil faced the same problem. While over 70% of the earth's surface is covered by water, 97% of it is salt water thus unable to be used for humanity's greatest needs, i.e. drinking and farming. Another 2% of the earth's water is frozen at the north and south poles. Furthermore, large sources of fresh water, like the Ganges River in India, are polluted. Rubbish litters the river's edge. Companies empty their by-products into the river. And, most alarmingly, **open, human defecation** routinely occurs further jeopardizing the purity of this great river's water. The problem, according to Asit Biswas, a water expert at the Lee Kuan Yew School of Public Policy in Singapore, "*is not scarcity, drought, lack of money or a number of other convenient excuses. The problem everywhere is the people in charge, i.e. bad management!*" Israel is noted as the model for sensible and effective water management; India, unfortunately, the worst.

Less than 1% of the earth's water is available for drinking and irrigating farms. Most of the fresh water is found underground.

The most significant demand for clean water is farming, mostly for irrigation. Five countries use the most fresh water from underground sources: America, China, Iran, Pakistan, and India. As a result, "*a third of the world's biggest sources for groundwater are in danger of drying out*" according to the *Economist Magazine* study.

The three major causes for the earth running out of fresh water are: **more people in the world; more people making more money, as a result, fewer poor; and climate change.** Climate change disrupts weather patterns. Air temperatures and ocean temperatures are getting warmer. As a result, sea levels are rising threatening to flood long standing neighborhoods and farms

throughout the world. "*Wet places will become wetter and dry places drier.*" In other words, there will be more extreme weather events, i.e. more intense hurricanes, tsunamis, blizzards, droughts, heat waves, etc.

Many countries and cities are turning to alternative sources for fresh water. 8 countries, Singapore, Qatar, Malta, Kuwait, Bahamas, Bahrain, Maldives and Antigua, take more water from the ocean than fresh water sources. The process of **turning salt water from the sea into freshwater suitable for drinking and farming is called DESALINATION.**



Countries like **Israel and Singapore** go one step further to ensure their citizens have enough water for drinking and farming. Both countries **drink their treated sewage!** Singapore has 4 **NEWater plants** to treat their sewage with ultraviolet disinfection. Their sewage treatment facilities provide 30% of the entire country's water supply. The rest of Singapore's water supply comes from water imported from the neighboring country of Malaysia, collecting urban rainwater, and seawater desalination. The country of Israel has 5 desalination plants. Israel also treats and re-uses 86% of its waste water.



Israeli Desalination plant

Most **Americans** receive their water from the cities and town offices where they live. Americans pay their city or town hundreds, and in some cases, thousands of dollars a year for their water and sewage services. By 2018, 87% of the American population received their fresh water from their city, town or county owned water departments. The **Ogallala Aquifer**, found throughout several mid western states of America, is **one of the world's largest aquifers.** An aquifer is an underground layer of rock, sand, gravel, and soil filled with moving water. Water travels between spaces in the aquifers. Aquifers can range from a few square



OGALLALA AQUIFER

miles to thousands of miles in size/length. The Ogallala supplies drinking water to 82% of the of American citizens living in the mid western states of South Dakota, Nebraska, Wyoming, Colorado, Kansas, Oklahoma, New Mexico, and Texas. Scientists are concerned about the Ogallala's longevity. Water levels in the aquifer are dropping precipitously in each of Ogallala's states. In Texas alone, water levels are dropping an average of 1 foot a year to as much as 3 feet per year in some places! If the water of the Ogallala is depleted by overuse and mismanagement as some critics say is happening today, it would take nature 6,000 years to replenish the aquifer water by natural rainfall.

Most **Rhode Islanders** receive their water from their cities and towns which, in turn, draw their water from the **Situate Reservoir**. The Scituate Reservoir is the **largest inland body of water in the state of Rhode Island and supplies drinking water to more than 60 percent of the state population, including Providence**. The Scituate Reservoir is operated by Providence Water Supply Board. Residents who get their water from the Situate Reservoir pay hundreds of dollars, if not more, each year to their cities and town governments for their water.

With many countries and states within countries having difficulty consistently providing clean water to their citizens,

**governments are outsourcing
their responsibility
for clean water
to private companies.**

Regulating water use to prevent overuse and finding enough tax revenue to find new water sources as well as maintain sewerage treatment and water distribution infrastructure has proven too

much to bear for governments.

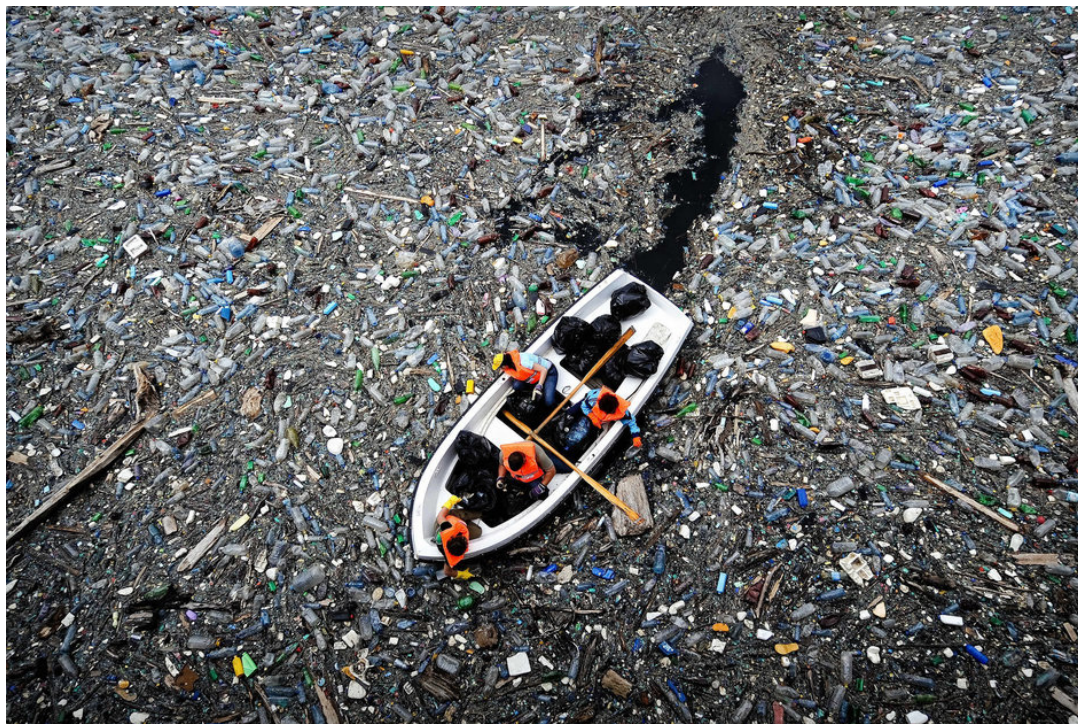
**Private companies
are being hired to
operate city, state, or national
water delivery and sewerage treatment facilities
as well as
provide clean water
from private water sources.**

If countries "cannot or will not deliver clean water to their citizens who desperately need it, private companies will, FOR A PRICE" writes Laurence Smith in "*The World in 2050*". . Siemens, Veolia Environmental Services, and Thames Water are just a few companies doing this now. "In return for new infrastructure, companies must charge fees for the water in order to recoup money spent and make profits for their investors". It's business 101. Laurence quotes Maude Barlow, author of "*Blue Gold and Blue Covenant*" - "Powerful corporate water cartels have emerged to seize control of every aspect of water for its own profit. Corporations deliver clean drinking water and take away wastewater. More importantly, corporations want governments to de-regulate water and allow the marketplace to set water policy" and prices.

**Water will be
a commodity in the 21st century
potentially having the same demand
as rare earth minerals!**



5 million to 14 million tons of plastic waste flows from rivers and coastal areas into our oceans all over the world. By **2050, there will be more plastic in the oceans than there are fish** (by weight). Sunlight, wind, waves and heat break down plastics into smaller bits that look like food to all types of ocean creatures from shrimp, fish and plankton to birds and turtles. The plastic clogs the digestive systems of sea creatures, often diminishing their urge to eat and thus reducing their growth, reproduction systems and their live expectancy. Of the **5 to 14 million tons of plastic waste flowing into our oceans, 236,000 tons are micro-plastics** – tiny pieces of broken-down plastic smaller than your little fingernail.



Activists around the world are lobbying for bans on the most polluting plastics — i.e. straws, and the bottles, bags, and containers that markets put our food and drink in. **Photo above** shows men in boats navigating through some of the “*garbage patches*” of plastic debris that have collected in our oceans. Plastic products can take hundreds of years to decompose, and they put marine life at serious risk of injury and death. Fish and birds often mistake plastic for food. Researchers are now beginning to find plastic embedded into the tissue of marine life. Plastic has been found in more than 60% of all seabirds and in 100% of sea turtles species. Scientists are trying to determine the impact, if any, on humans consuming plastic infested fish.



The map above shows **an ocean dump** called the **Great Pacific Garbage Patch**. **It is one of five major garbage patches drifting in the oceans** north and south of the Equator (0 latitude). Much of this waste starts in rivers and flows into the ocean. These areas of plastic garbage continue to increase in size. Plastic waste of every description, from toothbrushes to tires to unidentifiable fragments too numerous to count, litter the oceans for hundreds of miles without end. In the Pacific Ocean, there is even a floating island formed by dozens of plastic buoys used in oyster aquaculture that had solid areas you could walk on. **Is there a business opportunity here to make money and save the oceans?**



Imagine this piece of trash

falling from the sky

through the windshield of your car

or the roof of your home.

It could!

The term "**space debris**" or "**space trash**" refers to the natural **TRASH** found in the solar system. Items like large rocks called asteroids and comets, and even smaller pieces called meteoroids which break off from asteroids and comets, litter our solar system and

threaten to collide with planet Earth.

The term also includes parts of old satellites and smaller spent rockets breaking apart in space and falling to the earth. Making matters worse, five satellites have collided in space since December of 2016 creating even more trash and an eventual collision with the earth (Wikipedia). "**Space junk**" is a threat to active satellites and spaceships. Although most debris burns up in the atmosphere before reaching the Earth, larger objects can reach the Earth intact. According to NASA, an average of one piece of debris has fallen back to Earth each day for the past 50 years! Incredibly, despite their size, there has been no significant property damage from "**space debris**".

In 1969 five sailors on a Japanese ship were injured by 'space debris'. In 1997 an Oklahoma woman, Lottie Williams, was uninjured when she was hit in the shoulder by a 3.9 inch x 5.1 inch

piece of blackened, metallic material confirmed as part of the propellant tank of a Delta II rocket which launched a U.S. Air Force satellite the year before. On 12 January 2001, a Star 48 Payload Assist Module (PAM-D) rocket upper stage (in the photo above) re-entered the earth's atmosphere after a "**orbital decay**" and crashed into the Saudi Arabian desert. It was identified as the upper-stage rocket for NAVSTAR 32, a satellite launched in 1993.(Wikipedia).

After a large space station panel from the International Space station

fell to the Earth in 2025 and flattened

an unoccupied, volunteer fire station

in southwest Rehoboth, Massachusetts,

demolishing two of the town's fire trucks, NASA (National Aeronautics and Space Administration), an independent agency of the United States government responsible for the civilian space program as well as aeronautics and aerospace research,

accepted bids from

leading space travel companies like

Elon Musks' Space X company,

Richard Branson's **Virgin Galactic** company, and Russia's **Gagarin Space Cleaners** to protect the Earth by

clearing debris from the near universe around the Earth.

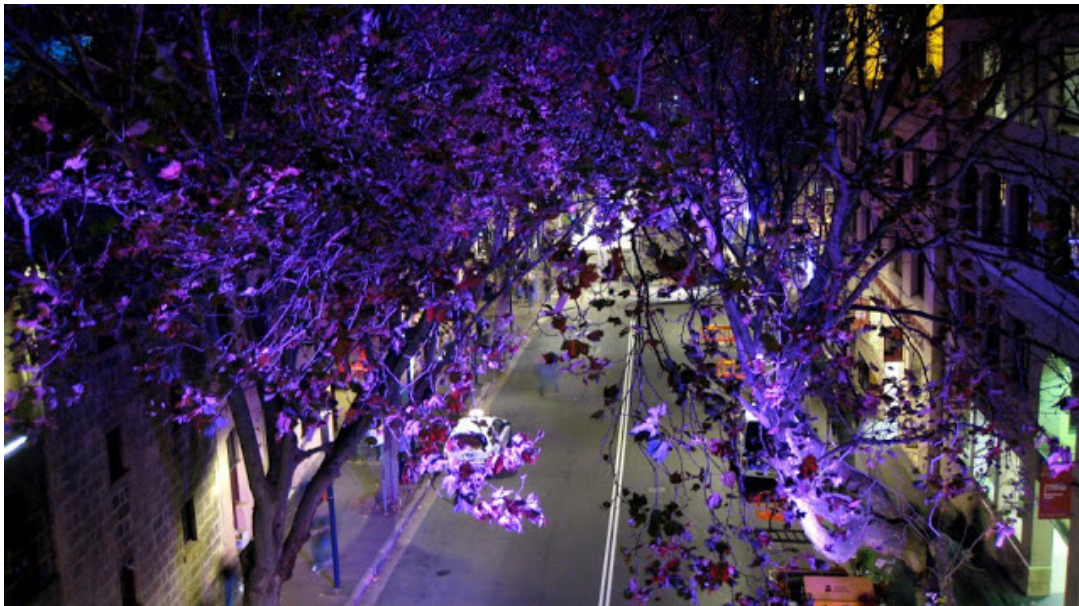
Alternative Energy



**“Imagine,
a highway lined with trees
that glow and light up a road
the way traditional street lights do!”**

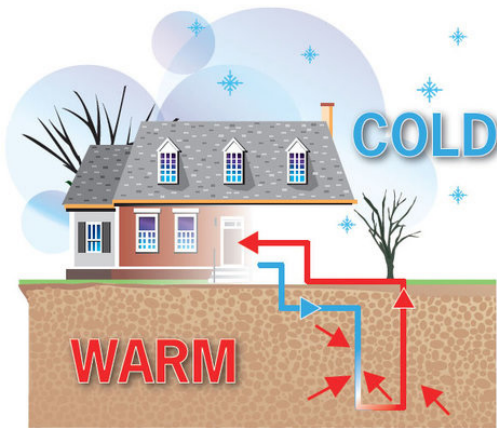
In November of 2017, scientist Michael Strano, a chemical engineering professor at MIT (Massachusetts Institute of Technology in Boston, Massachusetts) and his team announced they've figured out a way to get plants and shrubs to give off light, lots of light! They described a process of **putting NANOPARTICLES into plants** and then, taking photosynthesized particles **in the plant to turn**

the particles into light. The nanoparticles enter a leaf through the plants pores. Once inside the plant, scientists get the particles to activate stored chemicals in the plants to turn into light, “*making the whole plant glow*”. The glow or light in the early experiments lasted for about 3 hours. Scientists believe they can eventually give plants the ability to glow for a plant's entire life and to glow for a much longer period every day. The challenge is the brightness that a plant, tree or shrub can glow. Eventually, scientists believe they can get plants and shrubs to easily light streets in the future the way street lights have been lighting up streets and roads in the 20th (1900s) and early 21st (2000s) century. **Stay tuned!!!**



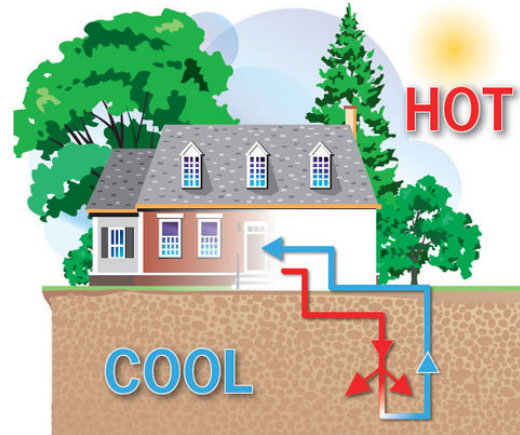
Geothermal Energy

*A cleaner, cheaper way to heat a home in the cold of the winter
and cool it during the heat of the summer
by using the capabilities of the Earth below the surface!*



Heating

In the winter, water circulating inside a sealed loop system absorbs heat from the earth and carries it to the heat exchanger. Here, the water is compressed to a higher temperature and is sent as warm air to your indoor system for distribution throughout your home.



Cooling

In the summer, the system reverses and expels heat from your home to the cooler earth via the same closed loop system. This heat exchange system is not only a natural process but is a highly efficient way to create a comfortable climate in your home.

Geothermal Energy: Heating and Cooling from the Earth

Instead of burning fossil fuels like oil or gas, geothermal energy uses the natural heat from underground to warm and cool your home.

The key part is the geothermal heat pump. It connects to pipes buried underground that transfer heat between your home and the Earth.

In winter, the system pulls heat from underground (where it's warm) and brings it into your house.

In summer, it takes heat from your house and pushes it back into the ground, keeping your home cool.

The Earth's core is super hot—almost 10,000°F—and even a few feet below the surface, the temperature stays steady year-round. This makes geothermal systems very efficient

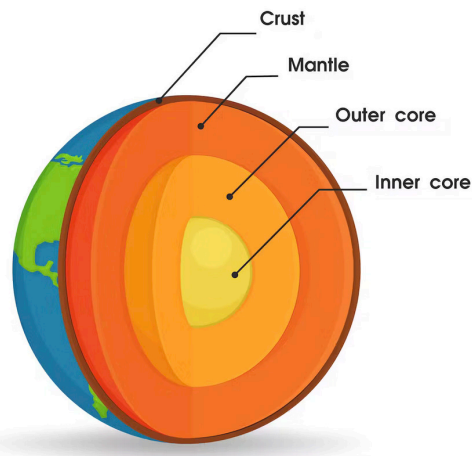
There are two main types:

Closed loop: uses a mix of water and antifreeze in sealed pipes.

Open loop: uses water from a well.

Bottom line:

Geothermal energy is clean, reliable, and saves energy by using the Earth's natural heat to keep your home warm in winter and cool in summer — no fossil fuels needed.



Clean Energy -



The Itaipu Dam is a hydroelectric dam on the Paraná River located on the border between Brazil and Paraguay in South America. Electricity is 55% cheaper when made by the Itaipu Dam than the other types of power plants in the area.

Only the Three Gorges Dam in China produces more hydroelectric energy than Itaipu. - Wikipedia

The Future of Energy – Facts

- Wind & Solar = Fastest growing energy sources (but still only made up 1% of global electricity)
- Hydropower = 16% of global electricity

Leaders in wind energy:

- Denmark & Prince Edward Island – 20% from wind
- European Union – 4% from wind
- Fossil fuels are cheaper. Most electricity comes from oil, gas, and coal

The Rise of Batteries

- Batteries are key for storing clean energy
- Tesla Powerwall batteries store solar/wind energy for homes and use energy day and night, even when the sun isn't shining



image of a Tesla PowerPack. Tesla built and installed the world's largest lithium-ion battery in Hornsdale, South Australia, using Tesla PowerPack batteries. Since then, the facility saved nearly \$40 million in electricity costs its first year alone and helped stabilize the region's unreliable electric grid.

- Batteries decrease use of fossil fuel electricity

The Battery Problem -

What Happens to Worn-Out Batteries? -

- Old batteries are taken apart and valuable materials (like lithium, cobalt, nickel, and copper) are recovered.
- These materials can be reused to make new batteries, reducing the need to mine more raw materials.
- Companies like Tesla, Nissan, Toyota, Redwood Materials, and others are building battery recycling programs. Even when a battery is too weak for a car, it may still be strong enough for less demanding jobs, like powering homes or storing solar energy. This is called a "second life" for batteries
- WORST CASE - Landfill. If not recycled, old batteries may end up in landfills, which is dangerous: They can leak toxic chemicals into the area aquifers and water systems.

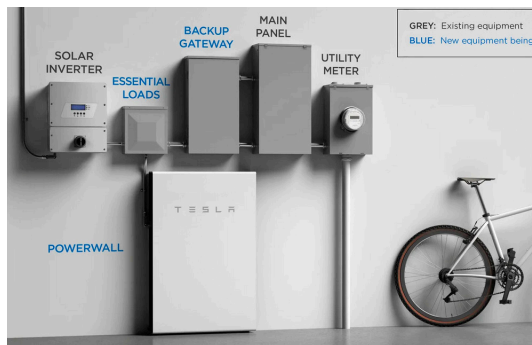


image of a Tesla PowerWall in the basement of a homeowner. Note the Tesla PowerWall on the basement floor and its connection to the "SOLAR INVERTER" which sends solar energy to be saved in the PowerWall

Here Comes the SUN!



The
Economist

AI and war
Why India needs more states
China in the Arctic
The champagne boom
JUNE 22ND-28TH 2024

DAWN OF THE SOLAR AGE

A SPECIAL ISSUE



Two Tesla Powerwall 2 devices "stacked" together in a person's home in New York



solar panels on a solar farm in the European country of Portugal

According to an Economist Magazine 2024 article ,

by the mid-2030s, solar cells could be the single largest source of electric power on earth!!

"Solar is on track to provide more electricity than all the world's nuclear power plants in 2026, than wind turbines in 2027, than hydro dams in 2028, than natural gas power plants in 2030 and coal fired plants in 2032"

A primary concern is storage,

that is, solar energy needs a place to store the power it's collecting from the sun. **The best place now for storage is batteries.**

Elon Musk makes Tesla Powerwall batteries for homes to store energy collected from solar panels on the home's roof; as a result, homeowners don't have to pay for electricity from a local energy company. **FREE ELECTRICITY!** Tesla Powerwall batteries also provide backup power when electricity is interrupted during storm outages. Moreover, according to Musk -"If you wanted to

power the entire U.S. with electricity , it would only take a small corner of Nevada or Texas, about 100 miles by 100 miles, to place solar panels...

Solar power is the last energy resource that isn't owned yet - nobody taxes the sun yet!" And, the more solar panels are made, the less expensive they are.

Another concern of American politicians is CHINA.

As Musk is producing thousands of batteries in his Giga battery factory in Reno, Nevada, United States of America, most of the world's solar panels and the materials and the precious minerals to make them, like purified silicon and lithium, come from China, America's international rival. And, Chinese solar panels are less expensive to buy than most solar panels made throughout the world.

Electric, SOLAR POWERED, Aircraft



Electric aircraft, that is, airplanes, blimps, airships, and possibly flying cars, will use batteries to store energy collected from the sun. They will soon be flying the skies.

Solar-powered aircraft do not require traditional, fossil based jet / aircraft fuels that pollute the earth. The advantage of solar power is that it is free (*no charge to buy*) and emission less (*no air pollution*) thus more environmentally friendly than using jet fuel. **A solar plane never needs re-fueling,** and, in theory, it can stay in the air when the sun is shining and when the sun isn't shining. Perpetual flight, i.e. staying in flight constantly without stopping, is possible if the power collected from the sun is stored in batteries that charge and power the aircraft at night. These solar powered aircraft are NOW able to operate at altitudes 12 to 62 miles and **stay in the air for months at a time without refueling.** In 2016, CNN reported on a weird-



looking plane, covered with more than 17,000 solar panels, which showed the world the future of solar based flight. With the wingspan of a Boeing 747 and **weighing only as much as an SUV automobile, this electric aircraft** circumnavigated the Earth using the power from the sun and without using a drop of traditional aircraft, fossil based fuel.

Solar Airship One is another example. It is being developed by Euro Airship and is planning to launch a world tour in 2026 and fly over 25 countries in 20 days and never stopping for more fuel. **This aircraft will be autonomous, i.e. NO PILOTS ON BOARD,** and use electric power from the sun stored on aircraft batteries which allow the aircraft

to keep moving at night when the sun isn't shining. These kinds of electric, solar powered projects are attracting interest from government and military. The US Navy has invested \$5 million in an electric powered aircraft project to patrol the oceans of the earth for the security of the United States.

The World's Greatest Threat



Seven suspected cases in UK ++ Universities on alert ++ 20million locked down in Chinese cities

IS THE KILLER VIRUS HERE?

Taking no chances on the streets of Britain

Mask of concern: A young woman protects herself in Glasgow yesterday

THE deadly coronavirus was feared last night to have arrived in Britain. GPs have now been instructed to check the travel history of any one with a chest infection. **China** - the world's most populous nation in the US, with millions asymptomatic - five in Scotland and a total of a seventh suspicion case at last night already identifying at all and students who had recently visited the worst-hit areas, with some told they would need to adhere back on campus unless they agreed to a 'suitable quarantine protocol'. **Officials** fear thousands of foreign students who have gone back to China to celebrate their New Year this week will return to the UK wherever they have the virus. Universities were **Big Chinese cities** - which are home to up to 500 million people - were put on lockdown. **A British man** in Wuhan described the 'chaos' of his hospital after the city at the center of the outbreak. **Singapore and Saudi Arabia** became the latest countries to conduct mass facial screenings for febrile cases. **Ministers** issued warnings for airlines to monitor jet passengers arriving in the country.

Turn to Page 4

above -2020 newspaper story on the coronavirus pandemic below -official takes a person's temperature during 2020 screening of the coronavirus pandemic



1950s North Carolina newspaper headline about the polio outbreak in America.

A **PANDEMIC** is a *widespread, infectious disease* that spreads across multiple countries, even worldwide. A widespread disease with a number of infected people that is not growing quickly is not a pandemic. A seasonal flu, for instance, is not generally considered a pandemic.

There have been a number of pandemic diseases throughout the history of the world like **smallpox, tuberculosis, HIV/AIDS, cholera, typhus, the flu (influenza), measles, leprosy, yellow fever** (especially during the 'American Revolution'), **polio, malaria, and the plague**. One of the most devastating pandemics was the **Black Death plague** (1331 to 1353) which killed an estimated 33% to 66% of the people living in Europe and 75-200 million people worldwide. The **Spanish flu** (1918 - 1919) lasted 18 months and claimed the lives of 675,000 Americans and approximately 75 million people world wide. **Smallpox**, unknown on the American continents prior to the arrival of European explorers, decimated Native American tribes beginning in 16th century. 80% to 90% of some North American tribes, like the Wampanoags in southeastern Massachusetts and Rhode Island, were killed by smallpox in the 1660s and 1700s.

The coronavirus pandemic of 2020 was first identified in the city of Wuhan China in late **December 2019** and soon spread as an acute respiratory disease referred to as **Coronavirus 2019 or COVID-19**. More than 170 countries and territories were affected with major outbreaks in central China, Italy, South Korea, and Iran. On March 11, 2020, the World Health Organization (WHO) called the spread of COVID-19 a 'pandemic'. Borders between countries were closed preventing people from traveling from one country to another to stop the spread of the virus between countries. Professional sports leagues in the United States of America like Major League Baseball and the National Basketball Association (NBA) cancelled games. NCAA college basketball cancelled "March Madness", otherwise called, the college basketball national championship tournament. Schools, health clubs, restaurants, and many businesses within countries were also closed to prevent the spread of this new virus while scientists worked on developing and distributing testing kits to identify carriers of the virus as well as an vaccine to administer to those affected by the virus. Less than three months after the first known Covid-19 death in the U.S., more Americans have died of this disease than fell in battle during the Vietnam War.

Compared to past pandemics, Covid-19 was relatively mild. Many of those infected with Covid 19 appeared asymptomatic; in other words, showing no visible signs of the virus. Only a very small percentage of cases required hospitalization, and, most who were hospitalized, recovered rather than died. Compared with the 1918 Spanish flu, smallpox, or Black Death pandemics that preceded it, the Covid-19 pandemic was MUCH LESS DEADLY.

One of the concerns today is the potential danger of terrorists hacking the genetic code of a virus and turning it into a weapon.

Weaponizing disease has been practiced before. Ancient *Hittites*, from an area today of modern day Turkey, seem to have driven virus infected people into enemy lands in 1000 B.C. In 1346, **Mon-gols catapulted the bodies of people who died of the plague into the Crimean city of Caffa before their attack.** In the 20th century during World War 2, both Axis (*Germany, Japan, Italy*) and Allied (*US, England, Russia, France, et more*) governments developed biological weapons. Japan used viruses as a weapon against China during World War 2. The Japanese dropped ceramic bombs carrying bubonic-plague carrying fleas on the Chinese city of Ningbo during the war. In the post-Covid future, some countries and terrorist groups may seek to create virus plagues as weapons. All **countries today will need to defend themselves against potential weaponized virus attacks.** The ability to recognize new diseases and quickly and rapidly develop treatments and vaccines will become a critical mission of national defense programs.



Bill Gates, founder of Microsoft

In a 2015 TED Talk, Bill Gates warned the world is not prepared for an epidemic, pandemic, or virus outbreak.

Bill Gates, the world's second richest person, is the founder of Microsoft and the head of the Gates Foundation which gives millions of dollars to fund multiple efforts to fight dangers and challenges facing the world's population. Mr Gates

warned Americans and the world of this most grave danger.

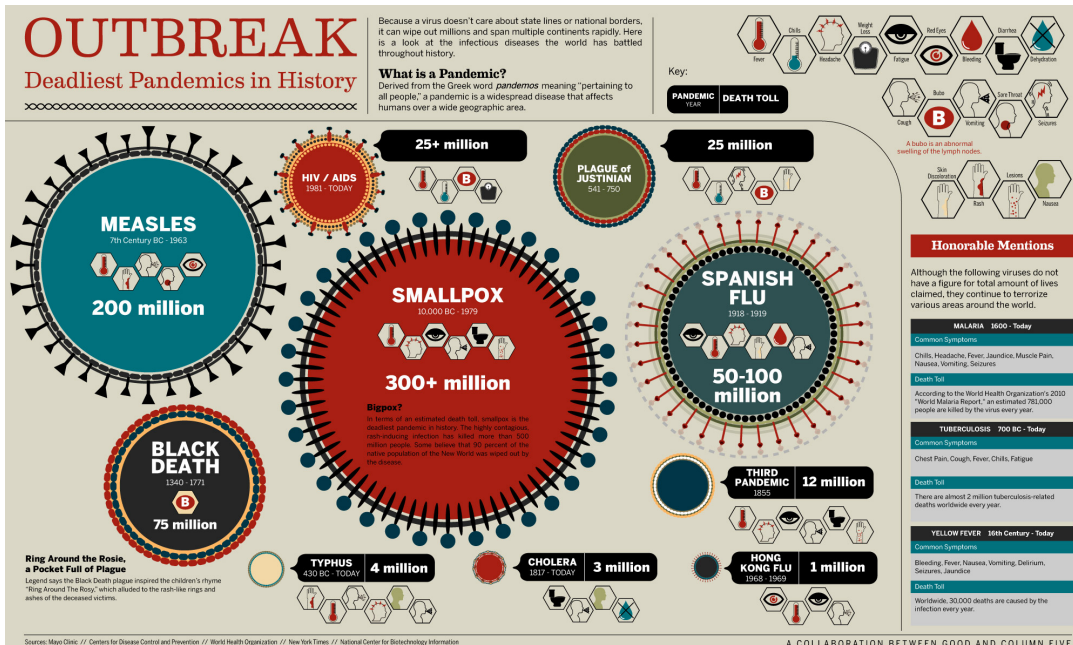
Mr Gates was speaking about the world's reaction to a recent **Ebo-la virus** outbreak in 2014 in Africa. He said during his TED TALK

"if anything kills over 10 million people in the next few decades, it's most likely to be a highly infectious virus rather than a war.

Not missiles, but microbes!...

We've actually invested very little in a system to stop an epidemic.

We're not ready for the next epidemic...."



America's Great THREAT: - DEBT!~

American FEDERAL POLITICIANS' Spend More Money Than America Collects in Taxes

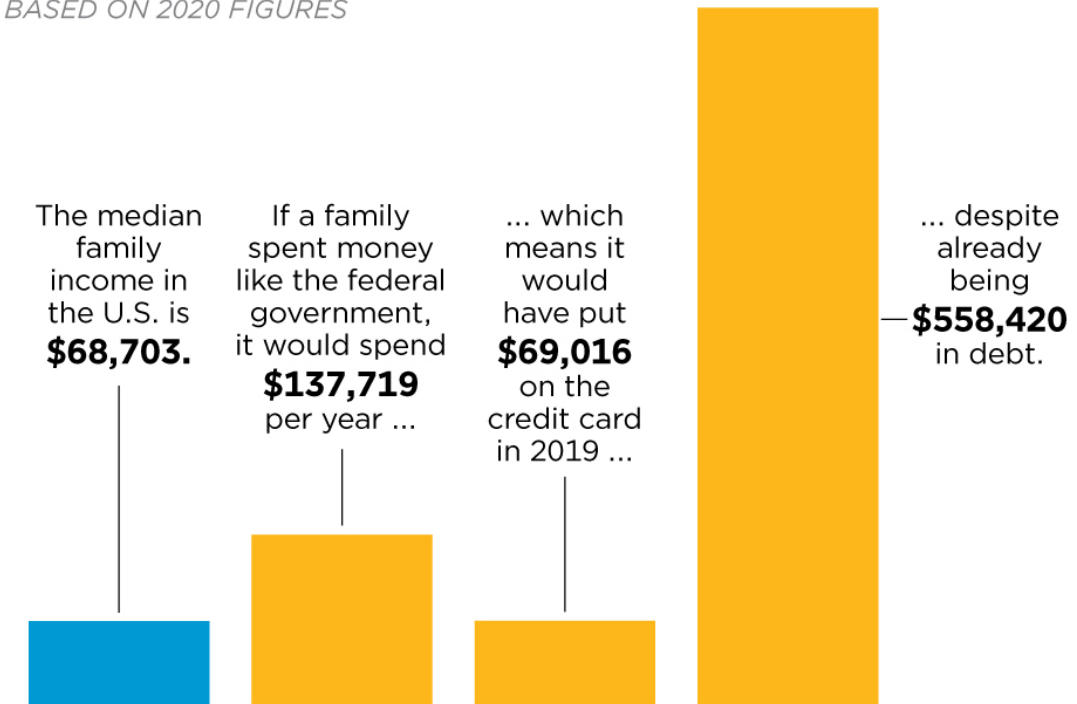
*“The accumulation of **DEBT** is
the
FISCAL DISEASE of governments.*

*It is not easy to conceive of anything more likely than this
to lead to
great convulsive revolutions of empires.”*

Alexander Hamilton's warning about a mounting debt's disastrous effect on the United States.

James Madison concurred with this opinion.

BASED ON 2020 FIGURES



From America's beginning in 1789
 to 1989,
 the U.S. government borrowed \$2.9 trillion
 to pay the country's bills.

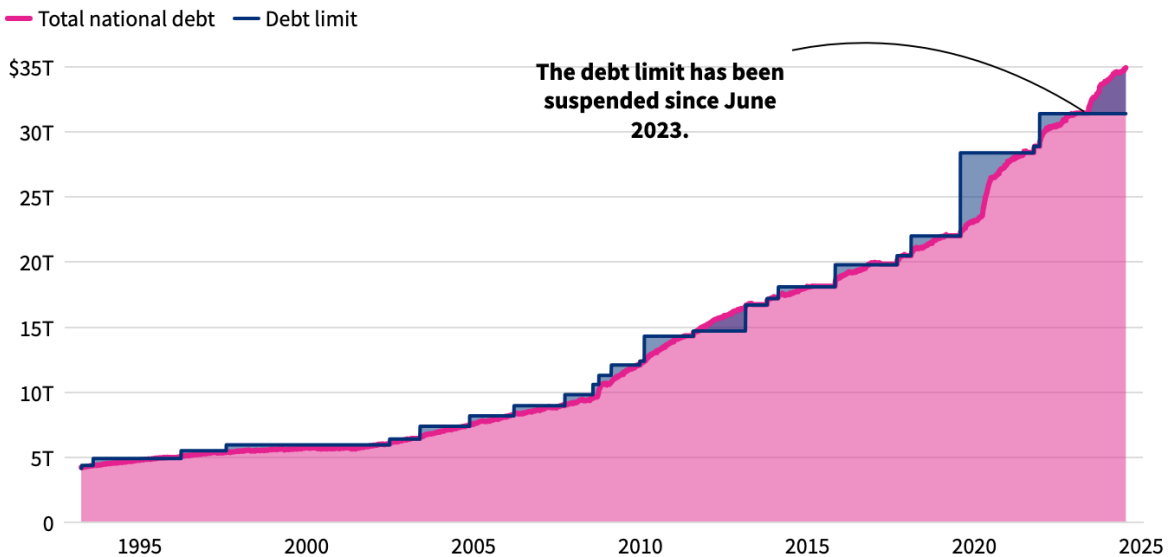
Because the concern over so much borrowing, an infamous “*debt clock*” was installed near New York’s Times Square in 1989 to keep track of how much American FEDERAL politicians (SENATORS, REPRESENTATIVES, PRESIDENTS) were borrowing to pay the country's bills.



2004 photo of America's debt clock

Since 1989, America has borrowed
 another \$33 trillion!

\$35 trillion is enough to cover a public four-year degree for every graduating U.S. high school student for 103 years.



Source: Treasury Department • Get the data • Embed • Download image • Download SVG

The Economist

How to shore up America's banks

Can Turkey sack a strongman?

Battling superbugs with viruses

Coronation nation

MAY 6TH–12TH 2023

FISCAL FANTASYLAND

When will politicians wake up?



Founded in England in 1843, the Economist Magazine, with over 1.6 million subscribers world wide, is a British weekly magazine publishing articles on current affairs, international business, politics, technology, and culture. **This Economist issue focuses a "big and enduring problem"**, i.e. the borrowing of money by the American political leader who run the United States government. **United States of America political leaders spend more money** on "swelling handouts and government interest payments" (the money the American government has to borrow to pay its' bills) **than the government collects in taxes and fees**. China, England, Germany and other countries face the same dilemma. Almost 10% of all the money the federal government of America spends on the military, education, social security, green energy tax cuts, and other government programs is paid to countries and organizations/banks America borrows money from. American political leaders running the United States government have **borrowed \$1.2 trillion—4% of total U.S. debt—from JAPAN**. America government leaders have borrowed **\$980.8 billion—3.2% of the total U.S. debt from CHINA!** American political leaders **also borrow money from the Social Security Fund that is set up to pay American senior citizens their retirement payments each month; American citizens paid into this FUND when they were working**. The U.S. national debt, the money it owes to the countries and institutions it borrows money from was **\$36.41 TRILLION in January 2025**. **"Politicians need to get real, fast! Public debt is in danger of becoming unmanageable"** writes The Economist.

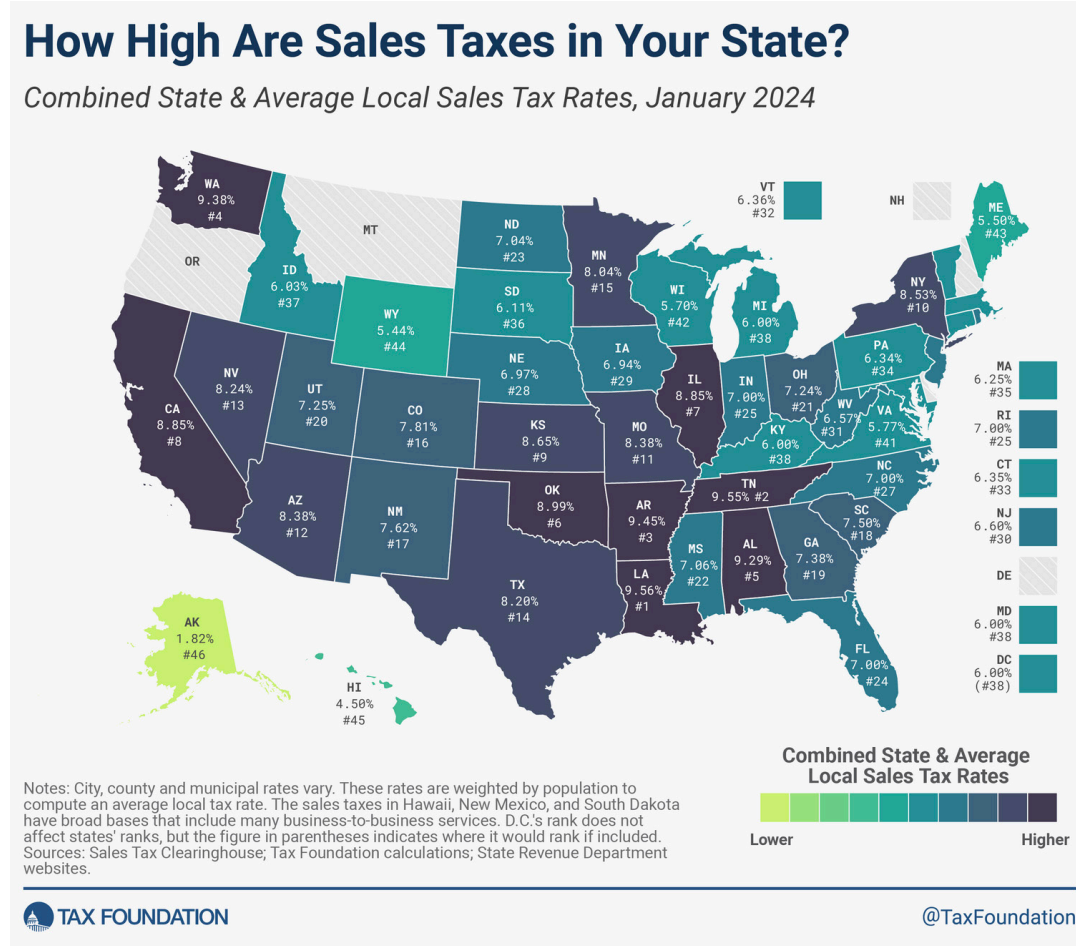
Glossary / Definition of Terms

WHAT IS A / CONSUMPTION / SALES TAX?

A sales tax is **an extra charge on stuff you buy** like *cars, cigarettes, gasoline, clothing, restaurant food, TVs and other appliances, toys, books, furniture, and other goods*. Many governments exempt goods like groceries.

In the United States, retail sales taxes are a significant source of money / revenue for states, cities and towns. All United States of America states **EXCEPT Alaska, Delaware, Montana, New Hampshire, and Oregon** collect statewide sales taxes. Of these, Alaska allows cities and towns to charge local sales taxes.

As of 2024, local sales taxes were collected in 38 states. In some cases, local sales tax rates can rival or even exceed state rates.



WHAT ARE INDIVIDUAL TAXES? is a charge on the wages, salaries, dividends, interest, and other income a person earns.

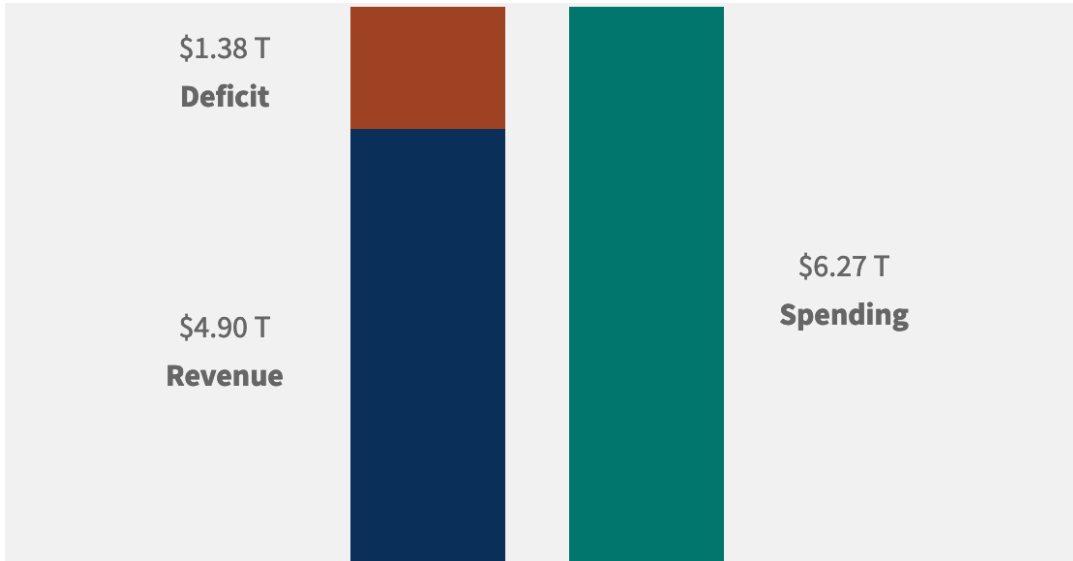
WHAT ARE CORPORATE TAXES? is a charge on the money businesses make after expenses are subtracted from revenues (money charged for products and services sold)

WHAT ARE PROPERTY TAXES? quarterly, semiannual or annual charge levied by a local government and paid by the owners of real estate / property / homes / buildings owned by individual or companies.

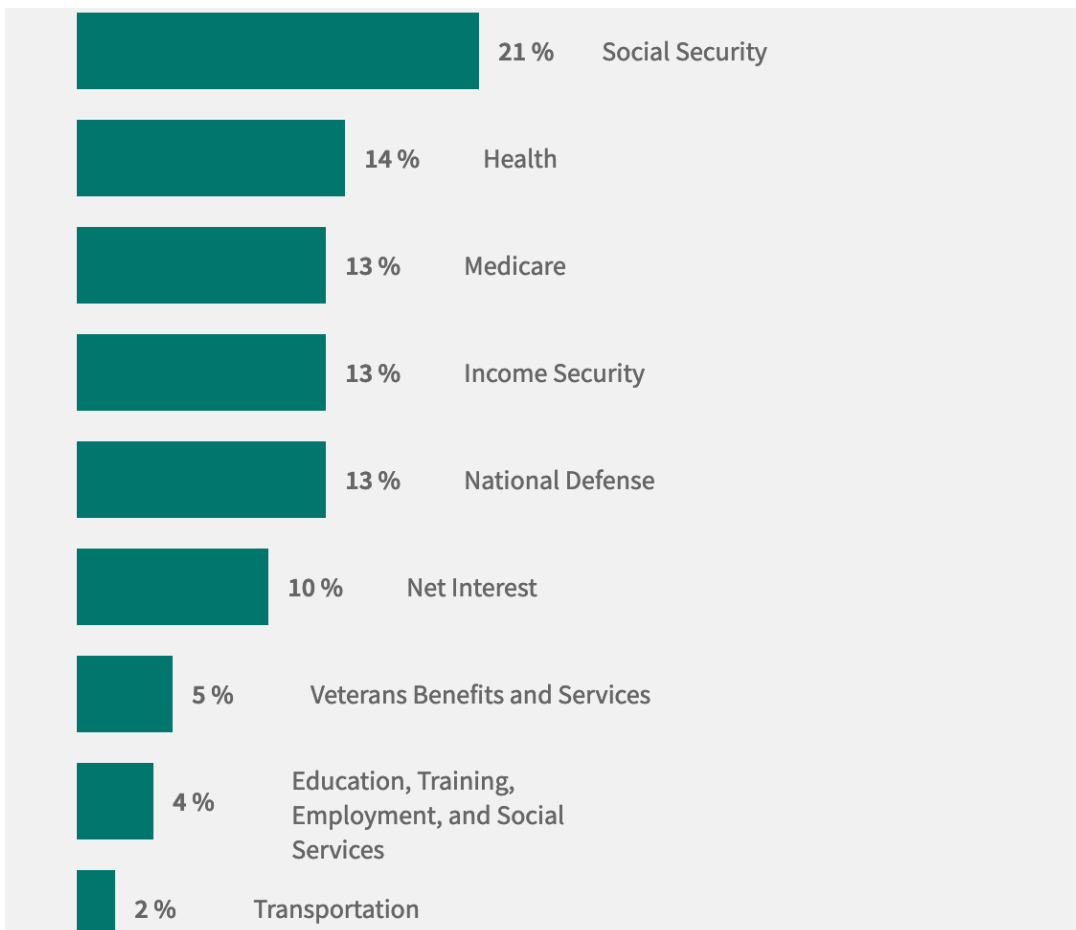
WHAT ARE SOCIAL INSURANCE TAXES? money deducted by the FEDERAL government in Washington, DC from a person's pay check for a special savings account to be paid to people when they retire.

US Federal Government in Washington, DC Budget

How much money the Federal Government in Washington, DC SPENT (green), how much money the Federal Government COLLECTED IN TAXES (revenue in blue), and how much money the Federal Government in Washington, DC HAD TO BORROW to pay its bills (red).



United States Federal Government Spending by Category in 2023



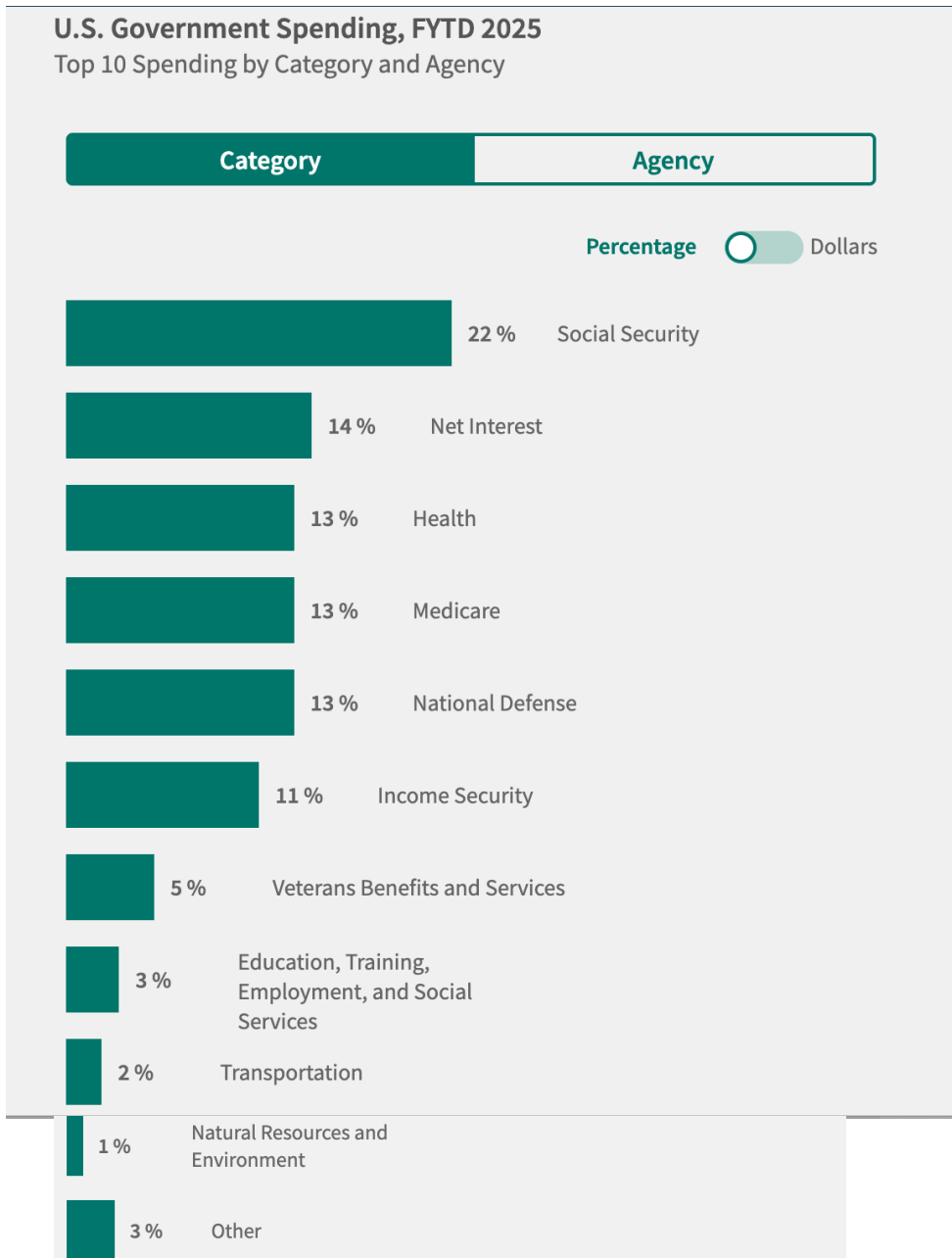
The U.S. national debt consists of both debt to be repaid to private individuals, companies, and other government agencies like the Social Security Savings Fund which pays monthly benefits to all senior citizen Americans receiving Social Security.

When government politicians decide to borrow more money by selling securities, the government increases what it owes to its borrowers. *In 2025, America's national debt, or the total amount of money it owes its lenders, is 38 trillion U.S. dollars. ALSO, in 2025,*

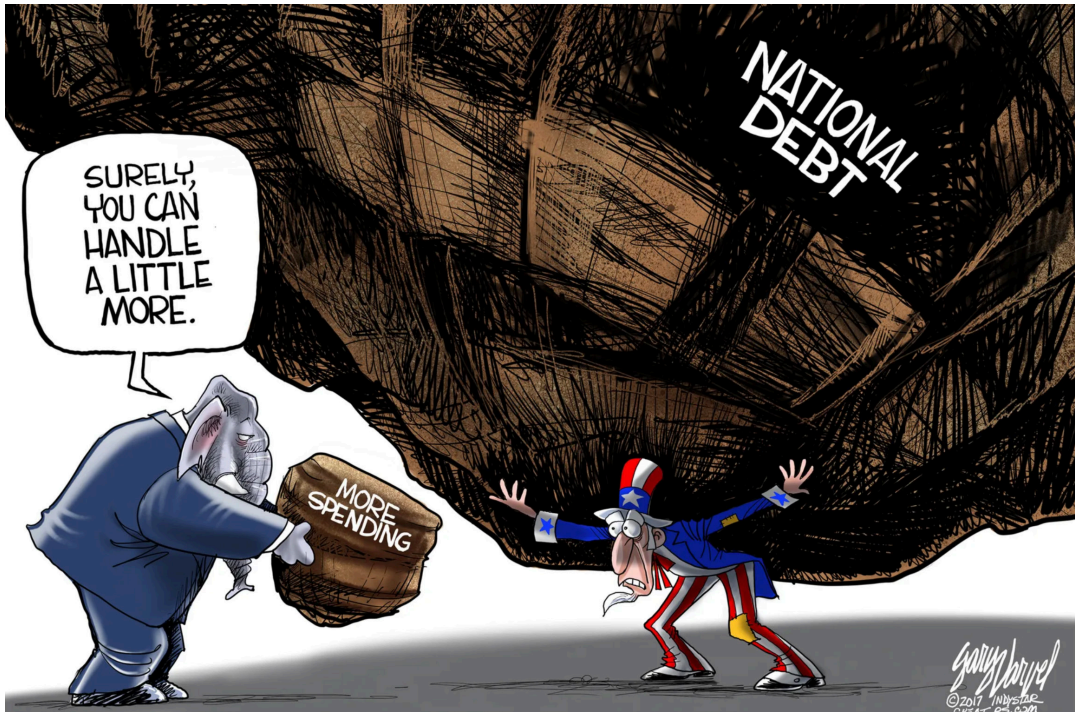
America will pay \$952 billion in INTEREST CHARGES (annual payments to lenders just to borrow money in 2025.

There are interest payments due each year, probably \$1 Trillion dollars in interest payments due on America's total debt in 2026!).

America now spends MORE each year for INTEREST FEES than DEFENSE (US Military - army, navy, cyber, space, etc!)



America Borrows Money Every Year to Pay America's Bills



BECAUSE America's **POLITICIANS CHOOSE TO BORROW MONEY**

RATHER THAN ONLY SPENDING THE AMOUNT OF MONEY THE GOVERNMENT COLLECTS IN TAXES AND FEES,

the United States government must BORROW money to pay its bills.

Here's how the government borrows:

The Treasury Division of the federal government sells IOUs (called securities) which essentially means the government promises to pay the lender back the amount it borrows PLUS INTEREST CHARGES. **Interest charges are extra money that must be paid just for borrowing money; interest payments have nothing to do with repaying the actual amount of money borrow.** There are different types of IOU / security promises. Some government securities promise to pay back lenders in a few days to 1 year. Other securities are promised to be paid back in 2 to 10 years and others 20 to 30 years.

America borrows money from foreign countries like China and Japan AS WELL AS borrowing from itself by borrowing money from the Social Security Savings account, Medicare, etc. The American government also borrows by selling securities from as well as private banks and investors. America promises to repay by a specific date AND WITH INTEREST.

The government sells its IOUs (securities) in an AUCTION. The interest charges are determined by the demand for these securities; in other words, how many foreign countries, private banks, investment companies or government agencies who want to buy the government IOUs. If there's high demand, the interest rate tends to be lower; if the demand is low, interest payments are higher.

The money from the sale of government Treasury securities are used to pay **government bills like paying the salaries of men and women in the army, navy, cyber security, space, and other military branches, salaries for Congress men and women, National Parks, construction and highway maintenance, buildings, research, education, and training, and for other federal programs and obligations including Social Security benefits to senior citizens and Medicare.**

WHAT IF FOREIGN COUNTRIES LIKE CHINA AND JAPAN DECIDE TO STOP LENDING MONEY TO AMERICA'S FEDERAL GOVERNMENT ?

America's total debt in 2024 was \$36 trillion. **\$26.64 trillion of America's total debt has been borrowed from banks, insurance companies, state and local governments, and foreign countries like China and Japan.** Of

America's total debt of about \$36 TRILLION (2024),

23% is borrowed from FOREIGN COUNTRIES (2024)

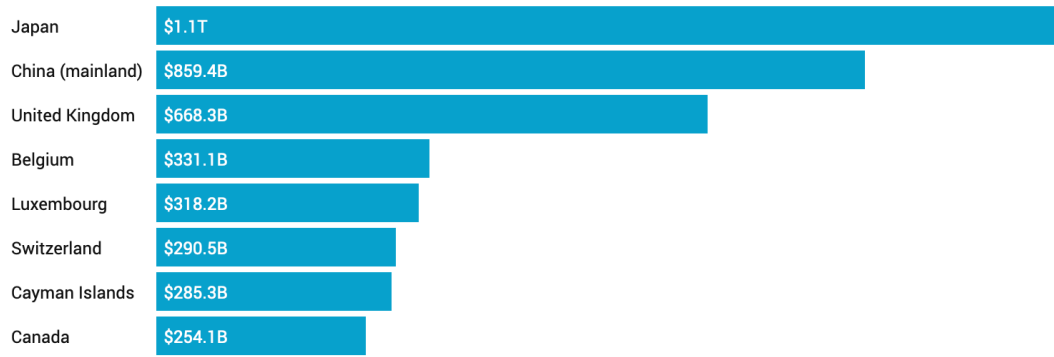
\$8 trillion dollars is borrowed from federal government agencies

**like the Social Security Savings account, the US Defense department and
the United States Post office.**

INDEPENDENT INVESTORS and COMPANIES LOAN THE REST !

(NB - foreign countries are less willing to lend us money in 2025. NOW, 16% is borrowed from foreign countries).

Top 10 territories that own the most U.S. debt



This interest payment on the money the US federal government borrows from all these sources is paid by using tax revenues and by issuing new debt (securities) to refinance existing debt when it matures.

The United States federal government has a limit on the amount of debt (securities) it can sell in auction. This is called the **Debt Ceiling**, in other words, a limit to how much money the federal government can borrow. When the Debt Ceiling limit is reached, Congress must vote to borrow more money to raise the Debt Ceiling so the federal government can pay its bills. If the Congress does not vote in favor of raising the Debt Ceiling, it can't pay all its bills. Some federal agencies could be closed like the Post Office OR the government may not be able to pay its Social Security benefits to retirees.

Most states, like Rhode Island and Massachusetts, have a balanced budget REQUIREMENT law.

***Do you think America's federal government should have
a balanced budget requirement too
except during times of national challenges like war?***

THE WORLD "RESERVE CURRENCY"

Imagine every country has its own kind of money—the United States has **the dollar**, the U.K. (England) has **the pound**, Japan uses **the yen**, and China uses **the yuan**. Normally, if you travel to another country, you have to trade your money for theirs so you can buy things. That's kind of like using the right “language” in a different place.

But when countries trade with each other—like buying oil, cars, or food—they don't want to waste time constantly switching money. So, they all agree to use one type of money that they trust the most. Right now, that money is the U.S. dollar.

The **American dollar is NOW the world's reserve currency**—it's the money that most countries prefer to use when doing big deals or saving for the future, because they believe the dollar is safe, stable, and accepted almost everywhere.

The U.S. dollar became the top choice after World War II because America's economy was strong and trusted when most other countries' currency was weak and lost value. So today, many countries keep stacks of U.S. dollars in their central banks—kind of like having emergency savings in a money that holds its value well.



WHY does being THE WORLD'S RESERVE CURRENCY important? By being the world's RESERVE CURRENCY, the United States of America **has more influence in the world. As a result, the United States of America can borrow money more easily and it gives the United States of America more power and influence in global decisions and activities.** It's like being the person at school that everyone trusts to organize group projects—your voice matters more, and people are more willing to listen to you and work with you.

Before the U.S. dollar, the British pound was the world's go-to currency for trade and savings, back when the British Empire was the most powerful.

**WHAT IF OTHER COUNTRIES IN THE WORLD
LOSE CONFIDENCE IN THE UNITED STATES DOLLAR
AND
PREFER ANOTHER COUNTRY'S CURRENCY
TO REPLACE
THE UNITED STATES DOLLAR
AS THE WORLD'S RESERVE CURRENCY ?**

why would other countries lose confidence in the value of the United States dollar?

Debt, the amount of money America borrows each year to pay its bills, is one reason. Investors, business leaders and economists are **concerned that other countries could lose faith in the value of the United States dollar** **IF AMERICA'S DEBT CONTINUES TO RISE**. United States politicians are borrowing too much money to spend on government programs each year. **On August 1, 2023, Fitch Ratings, one of America's three major credit rating agencies, announced that it lowered the United States credit rating from AAA to AA+** because of America's rising debt and also the lack of collaboration and compromise among Democrats and Republicans in Congress to solve America's problems. As of February 16, 2024, the US government has borrowed \$34.27 **Trillion dollars!** Interest costs, the cost to just borrow money, is close to \$1 TRILLION in 2024. This is more than the government spends on most other programs in the federal budget. **Furthermore, AMERICA'S ENEMIES, ESPECIALLY CHINA AND RUSSIA, ARE TRYING TO REPLACE THE AMERICAN DOLLAR AS THE WORLD'S RESERVE CURRENCY** (The Economist Magazine May 2024).

***If other countries lose confidence in the United States currency
and refuse to lend America money,
(China, Japan, England, Belgium, etc),
where will American Federal politicians get the money to pay
America's bills?***

United States Federal Government Debt as a % of GDP

What is GDP?

GDP or gross domestic product is the value of a country's output, i.e. all the services provided & sold (e.g. haircuts, investing advice, car cleaning, etc), all products made, grown & sold (e.g. cars, homes, mobile phones, hamburgers, sushi, strawberries, etc) in a country during a specific period of time, usually a year.

PRODUCTS like cars, software, cell phones, ice cream, and solar panels and SERVICES like a massage, lawn care, dog walking, or haircutting; all of the stuff that someone makes, provides, and sells which someone else buys or pays for, are all part of a country's GDP. In 2019, the **United States of America's GDP, i.e. the value of its economy, was \$21.44 trillion.** The U.S. has had **the world's largest economy** since 1871. **China's** GDP in 2019 was \$14.14 trillion. The Chinese are now competing with the United States for the world's largest economy. **India** is the fastest-growing trillion-dollar economy in the world and the fifth-largest overall, with a GDP of \$2.94 trillion. India became the fifth-largest economy in 2019, overtaking the **United Kingdom (England)** and **France.** **The United States money problem NOW is US government owes MORE MONEY to the people and other countries the United States leaders borrows from (Japan's government, China's government, the United States Social Security savings account fund, American banks, and American citizens who purchase US bonds, etc), THAN its GDP, i.e. the value of all money THE UNITED STATES creates!**

(from ChatGPT) - Imagine you and your friend both have part-time jobs. You decide to save your money, while your friend spends all of theirs and even borrows some extra money.

Now, let's compare your financial situation to a country's economy using a concept called the "**debt-to-GDP ratio.**"

Debt is the total amount of money a person, state, city, company or country owes. It's like the total debt your friend has from spending and borrowing.

GDP (Gross Domestic Product) is the total value of all the goods and services produced in a country in a year. It's like the total amount of money you and your friend earn from your part-time jobs combined.

The debt-to-GDP ratio is a way to see how much debt a country has in relation to its income or economic output.

Let's say your friend has a total debt of \$500, but earns \$5,000 from their part-time job in a year. If your friend was a country, you divide \$500 by \$5,000 = 0.10. In other words, the debt to GDP ratio is 0.10 OR 10%

For a country, a high debt-to-GDP ratio can indicate the country may have trouble paying back its debt because its debt is a large portion of its income.

On the other hand, a low debt-to-GDP ratio suggests the country's debt is manageable relative to its income.

Just like people like you might worry if your debts (*your bills/how much \$ you owe*) gets too high compared to your income (*how much money/ \$ you earn*), countries also worry about their debt-to-GDP ratio. If it gets too high, it can be harder for the country to borrow money in the future or to pay back what they owe, which can lead to economic problems.

In summary, **the debt-to-GDP ratio is a tool used to understand how much debt a country has compared to the total value of all the goods and services it produces in a year.**

GDP Forecast

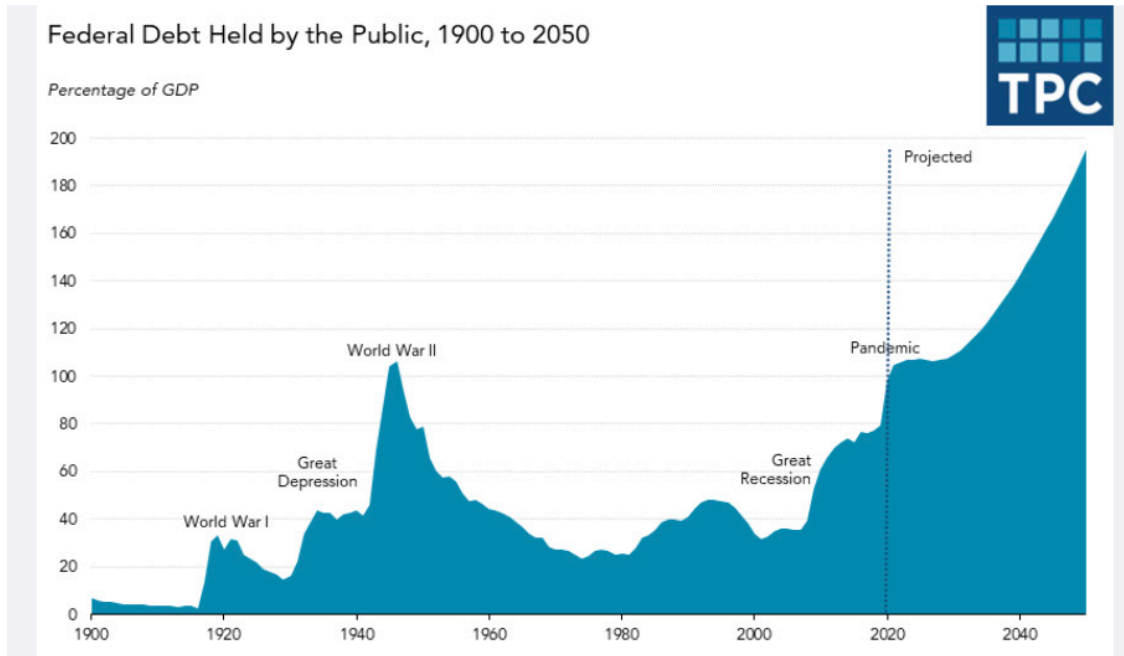


Would you run your *PERSONAL* or *FAMILY BUDGET*

LIKE

***AMERICA'S FEDERAL GOVERNMENT BUDGET* ??**

Tax Policy Center



THE UNITED STATES FEDERAL GOVERNMENT has a **DEBT PROBLEM;**

in other words,

**government leaders keep spending more money than
the government collects in taxes and fees.**

As a result, the United States of America FEDERAL government is **forced to BORROW MONEY** from other countries like Japan and China AND from America's Social Security SAVINGS ACCOUNT **to pay its bills**.

ONE SOLUTION is collect MORE money in taxes & fees from American citizens and businesses **OR** spend less money.

*Would **YOU** be in favor of requiring the US federal government to have an*

ANNUAL BALANCED BUDGET

*unless there is a war, pandemic or some other catastrophe requiring
more money than initially planned (budgeted)?*

yes or no

Moody's *Low*ers America's Credit Rating (May 2025)

Why America's Credit Score Dropped — and Why It Matters to You

Two major companies, called Moody's and Fitch, check how responsible countries are with their money — kind of like how people have credit scores. These companies recently lowered the credit score of the United States because they're worried that American leaders are borrowing too much money and aren't working together to make smart budget decisions.



Moody's dropped the U.S. rating from Aaa to Aa1, and Fitch dropped it from AAA to AA+. This has only happened twice in U.S. history, and it's a big deal.

It the U.S.'s credit rating on Friday. PHOTO: REUTERS/ANDRE

The main problem?

The people in charge of the government (**politicians**) won't collaborate and agree on a plan to stop spending more money than the country earns from taxes and other income. It's like if someone kept spending more money than they made each month, and never tried to fix it.

Because of the lower credit score, the **U.S. is penalized by paying \$25 to \$30 billion MORE in interest fees** each year— it's like **late fees** or higher charges when you don't pay your credit card or other bills on time each month. That's money that can't be used for other important things like:



















- Better schools
- Safer roads and bridges
- Healthcare and science
- Strong national defense
- Possibly even lower taxes for families

• ***In short: when AMERICAN POLITICIANS running the government can't manage money wisely, EVERY AMERICAN pays more — including you and your family!***

State Fiscal Stability: A State's Ability to Pay Its Bills

Source: US News & World Report (2021)

The **fiscal stability** (the ability to pay one's bills) of a state or city government is vital to both each state or city's goals and responsibilities. The ability of each state or city government to pay its police, fire, public safety workers, teachers, and government employees, to **maintain infra-structure** like roads, bridges, airports, school buildings, trains, parks and beaches, rivers and streams, securing its data base of important information, and pay the retirement pensions promised all government workers (police, fire, teachers, state employees) is critical to its success. **Governments pay their bills by collecting taxes from citizens and the companies which reside in their state.** Most **importantly, citizens and companies must have money to pay the taxes, i.e. PEOPLE** must have a source of money, i.e. a job, pension, trust fund, or inheritance **AND COMPANIES** need to make a profit, i.e. they must have enough customers to buy their products (e.g. clothes on Amazon, cars from a car dealership, food at Caserta's Pizza on Federal Hill, etc) or pay for their services (Santos Landscaping, Wayland Square Cobbler, Sanchez Wealth Management, Signature Printing, etc) **in order for the state to collect taxes!** If citizens don't have jobs and companies are not profitable, the state or city government has no tax revenue to collect. **When a state or city no longer can collect enough taxes** or borrow enough money to pay its bills, it declares **bankruptcy** forcing a higher authority like a state when a city declares bankruptcy to take over the fiscal affairs of the city. **Detroit, Michigan** was the largest American city to declare bankruptcy in 2013. **Central Falls, Rhode Island,** declared bankruptcy in 2011. Unfortunately for Central Falls, their bankruptcy forced the state of Rhode Island to over the fiscal affairs of the city and enact massive cutbacks, including closing a community center, reducing library funds, laying off city workers, and greatly reducing pension payments for police and fire. **Here's a list compiled by US News & World Report magazine listing the best and worst states for their ability to pay their bills, i.e. their fiscal responsibilities. Alaska is the highest ranked state for the best fiscal stability, i.e. the ability to collect enough taxes to pay its bills. It's followed by South Dakota, Tennessee, Idaho and Utah to round out the top five. Illinois is the WORST!**

RANK	STATE	LONG-TERM	SHORT-TERM
1	 Alaska	41	1
2	 South Dakota	3	5
3	 Tennessee	1	11
4	 Idaho	6	7
5	 Utah	7	8
6	 Washington	2	19
7	 North Carolina	5	16
8	 Florida	11	9
9	 Wisconsin	4	34
10	 Texas	19	6
43	 Massachusetts	34	48
44	 Rhode Island	44	41
45	 Colorado	42	46
46	 Hawaii	43	45
47	 Pennsylvania	46	43
48	 Kentucky	48	47
49	 New Jersey	49	49
50	 Illinois	50	50

Great Leadership -

America's and The World's Most Important Need

*More challenging than pollution, pandemics, and terrorist threats to the future of the world and its residents, will always be **finding effective leaders** to navigate the challenges and create new opportunities to mitigate these perils.*

Throughout history and certainly in our future, numerous threats jeopardize the world's people. Economic depressions. Tsunamis. Meteors. Gang terror. Drought. Clean water. Global warming and consequential rising sea levels displacing coastal populations. Earthquakes. Partisan politics. Partisan media and press. Fake news. Drought. Failing public schools. Carbon emissions and the resulting air pollution. Systemic poverty. War and the maniacal, selfish despots who instigate them.

Effective leadership is the constant antidote for protecting nations, states, and cities by rallying people to collaborate and compromise to find remedies and create opportunities from their crises.

*“A leader’s
most important skill is
getting people to work together,
to
collaborate,
to
compromise,
in order to
solve problems
and
create opportunities
for the entire community
not just one group”.*

As often as the world benefits from the great leadership of **Winston Churchill** (England), **Nelson Mandella** (South Africa), **Mohandas Ghandi** (India), **Joan of Arc** (France), **Margaret Thatcher** (England), **Golda Meir** (Israel), **Martin Luther King Jr** (United States), **Jacinda Ardern** (New Zealand), **George Washington** (United States), **Ellen Johnson Sirleaf** (Liberia), and **Massasoit** (southeastern New England Wampanoag Indian Nation) during dangerous times, the world is threatened by self serving, maniacal, demagogues like **Adolf Hitler** (Nazi Germany), **Pol Pot** (Cambodia), **Josef Stalin** (Soviet Union-Russia), **Empress Wu Zetian** (China), **Queen Isabella** (Spain), **Idi Amin** (Uganda), **King Leopold the 2nd** (Belgium), and **Queen Ranavalona I** of Madagascar to name a few.

The world always needs great leaders who embrace *leadership's true mission of selfless service to the **ALL** the people they lead.*

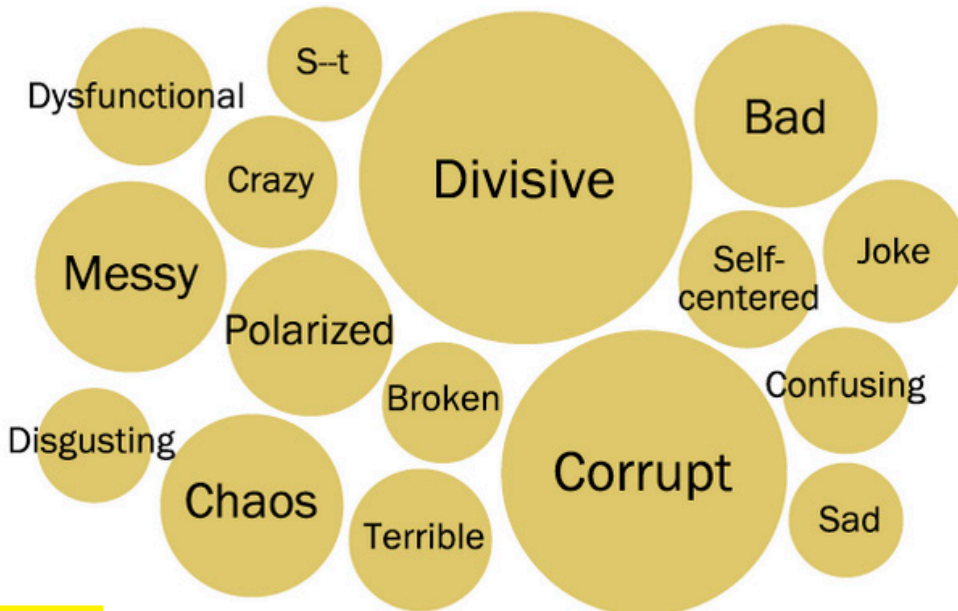


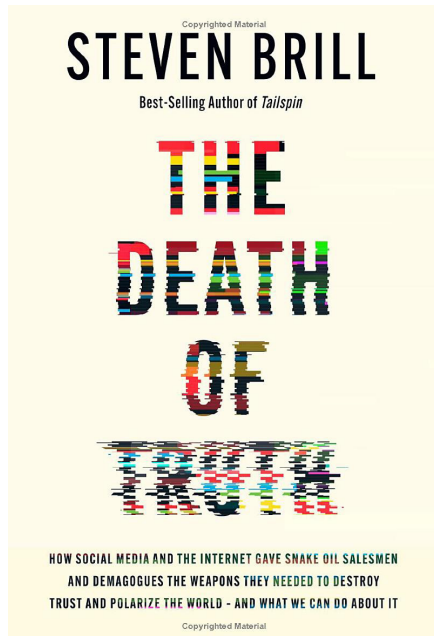
Former South African President Nelson Mandela (left) and Frederik Willem de Klerk, South Africa's last head of state from the era of white only, minority rule and former leader of South Africa's National Party that wrongly imprisoned Mr Mandela in 1964 for more than 20 years! . The National Party propagated the racist policy of **APARTHEID** which dictated that South Africa to be completely dominated politically, socially, and economically by South Africa's minority white population. Non whites had inferior education options, restrictions on owning property, the use of public facilities, entrance to certain social events and public spaces., Black South Africans could not vote in national elections. **Remarkably**, upon Mandela's release from prison in 1990 and his election to the Presidency of South Africa in 1994, Mandela essentially forgave the National Party for his imprisonment by reaching out to deKlerk to help him unite black and white people of the country for a peaceful transition to a united South Africa giving equal rights to all its citizens. **Mandela chose forgiveness rather than vengeance, peace rather than war, unity rather than divisiveness, collaboration rather than exclusion**, to ensure long lasting success for all people of the Republic of South Africa.



Americans' top descriptions of the current state of politics

What one word or phrase would you use to describe politics in the U.S. these days? [open end]





The Truth

Do you ever wonder when a person or a media platform with **influence and power** claim they're saying 'the truth' but you suspect they aren't?

'THE TRUTH'

is defined as

something that can be proven by indisputable evidence, i.e **FACTS!!**

The AI bot, ChatGPT, says "if you say 'The sky is blue', and you can look up and see that it's blue, that's 'THE TRUTH' and a 'FACT'. The **OPPOSITE OF 'TRUTH' IS 'UNTRUTH' OR 'MISINFORMATION'** which **DOES NOT** have indisputable evidence to support the claim of being 'truthful'.

So, what is 'fact'? 'Fact', by definition, is indisputable, undeniable information supported by unquestionable, unbiased evidence to prove the claim of 'truth'. Unfortunately, an increasing number of people in positions of power and influence are making statements on various social media and traditional media (cable and traditional TV) that have been proven to be 'misinformation' or 'opinion'.

For example, American political leaders in 2002 publicly claimed "**weapons of mass destruction**" were hidden in the country of **IRAQ** by the Iraqi leader, Saddam Hussein, and threatened America and its allies. These statements led to the United States military and its allies (e.g. England) to attack Iraq on March 20, 2003 at 9:34 pm EST. However, the claims of hidden *weapons of mass destruction* in Iraq were later **proven false**. 4,507 United States soldiers died in the attack on Iraq (wikipedia). AND, a **social media site, WTOE 5 News, reported in 2016 "POPE FRANCIS ENDORSES DONALD TRUMP"** and was soon copied and posted by popular fake news publisher, Ending the Fed. By November 8, the story picked up 960,000 Facebook engagements. Pope Francis soon after said "I never say a word about electoral (political) campaigns". Pope Francis also spoke out against the dangers of **fake news** on December 7, 2016 in an interview with the *Belgian Catholic Weekly*, calling *fake news* a "**sickness**." These are just 2 examples; there have been many more.

Author Steven Brill, in his popular book "**The Death of Truth**", writes about **dangers** to people, their communities, organizations, and countries when **'untruths', 'misinformation' AND 'opinions' are accepted as 'truth' or 'fact'**. "A diminishing belief in the 'truth' and a rising belief in 'alternative facts' (i.e. mis-truths or opinions) cause people to lose 'trust' in their institutions, in political leaders, in scientists, in doctors, and their own ability to solve community problems..... **If different people believe in different versions of the 'truth', then there is no real 'truth'** shared by all. 'Mis-truths' replace the (real) 'truth'..... 'TRUTHS' have lost their power and influence to bring people together as a community, as a country and a global (society). (Unfortunately today), *power* (its influence and control) comes, not through ideas debated respectfully, but from those who generate the most distrust for their own purposes."

My advice as your hopefully trusted teacher is **TRUST YOUR INSTINCTS** when you hear or read suspicious statements that claim to be 'fact' or 'the truth' that you feel may not be. Ask your questions about claims made by 'influencers' or 'leaders' as well as news reports or social media posts that seem doubtful. **THEN, do your research to find FACTS that address the doubts you have about any suspicious claims of 'the truth'**. To do this,

find trusted sources of information
with reputations for reporting 'FACTS'
supported by undeniable evidence,
NOT BIAS, PARTISAN STATEMENTS,
before YOU DECIDE what is the 'truth'.

AMERICA's SAFETY AND SUCCESS THREAT: **PARTISANSHIP**

PARTISANSHIP occurs when influential people like politicians and sources of information like the media and press only speak about one point of view without respecting & sharing opposing points of view.

Sometimes media or political groups twist facts to make their side look better, which can confuse people.

Imagine if someone said, "We lost the game because the other team cheated," but it wasn't true. That could cause unnecessary anger. If people only listen to one side of a story, they might not learn the full truth. It's like only hearing your best friend's version of an argument and never asking the other person what happened.

George Washington, Abraham Lincoln, Nelson Mandela, President Bill Clinton, Speaker of the House Tip O'Neill, President Ronald Reagan placed their primary loyalty to the safety and welfare of their country and its citizens NOT their political parties. All **the right things to do like "respecting', showing empathy while 'collaborating for compromise for the good of all not just the few ' is now regularly ignored by partisan POLITICIANS.**

Spock, from the starship *Enterprise*, reminded his leader, Captain James T. Kirk, of the Starship Enterprise, - **"the needs of the many always outweigh the needs of the few, or the one."**

The New York Times



'Partisanship' divides people. It causes people to argue and, as a result, refuse to collaborate, to find compromises to solve problems.



Photo above - the **BEST example** of two politicians from different political parties put aside their political party ideologies to collaborate and find common ground for the good of the entire nation not simply the interests of their political parties -- **Democratic Speaker of the House of Representatives, Tip O'Neill (right) and Republican President of the United States, Ronald Reagan, in a 1986 photograph.** These men consistently compromised and worked together for the good of all Americans.



Photo above shows the WORST example of PARTISANSHIP as Democratic leader and Speaker of the House of Representatives, Nancy Pelosi, (in the white coat to the right), stands and rips up a copy of Republican President Donald Trump's *State of the Union* message. The consequences of this partisanship further divided an already divided nation.

America needs non-partisan 'media' as well as political leaders who collaborate and compromise for the good of ALL AMERICANS NOT JUST for their supporters.

A DAY IN YOUR FUTURE

“Hello, Lisbet!” Welcome to **Mr Cronin’s Superstore.”** **Sensors at the entrance of the store recognize Lisbet’s image from a data base that activates an audio welcome to Lisbet in her favorite ‘Lionel Messi’ voice as she walks into the store to get a shopping cart.**

Lisbet still enjoys going to the market and the food shopping experience rather than simply ordering her food from her We-Chat app for same day delivery.

As the cart handlebar completes a scan of Lisbet’s face and fingerprints, it immediately matches the results with the Artificial Intelligence (‘AI’) profile of Lisbet and then quickly displays a list of the groceries she needs. **AI has been collecting and analyzing Lisbet’s food shopping data for years, updating her shopping profile and storing the data in the cloud.**

Based on the data collected from the last time Lisbet shopped PLUS what’s she’s been using and now missing in her ambient (**IOT – Internet of Things**) refrigerator and cupboards at home, a list of items for her to buy appears on her mobile phone. Then, from her carriage handlebar, comes this message - *“Let me know, Lisbet, if you’d like to add or subtract anything for this list. Based on what’s on your list and in your refrigerator, it looks like your diet will be needing some fiber and calcium. Shall I add some milk and some almonds for a delicious spinach salad with salmon,*

strawberries, and asparagus I know you like?” Lisbet smiles and responds *“sure!”*. Lisbet then proceeds to make a few adjustments to the list based on the fact she’ll be hosting a dinner for three former classmates from her college, Loyola University in Baltimore, Maryland, where she majored in **“ AI Marketing”** and **“Business”**. One of her classmates is from Florence, Italy and the other from the North End of Boston, so Lisbet will be making a few pasta dishes. *“I always make my own sauce, so let’s add tomatoes, garlic, cheese, lean beef and, of course, pasta for a few recipes I have in mind”* she speaks to her shopping cart handlebar. Instantly, the items appear on her revised list as well as the aisle number in the store where each item can be found. *“Will do, Lisbet”* her cart responds to her additions.

Her autonomous shopping cart proceeds a few feet ahead of Lisbet and pauses as she checks out some ripe eggplants she considers adding to the dinner she’ll prepare for her visiting Loyola classmates. As Lisbet places each item into her cart, cameras on the carts side bars



Lisbet shopping with her smart shopping cart



"An autonomous, self driving (no human driver) car is a data center on wheels."

Lisbet riding home in an **autonomous (self driving), electric automobile** after leaving **Mr Cronin's Superstore**. Sensors in the car know the person in the car is Lisbet. Thus, the car knows exactly where she lives.

quote - Simon Bolton, CIO Jaguar Land Rover. **Waymo**, formerly known as the Google Self-Driving Car Project, is an American autonomous driving technology company headquartered in Mountain View, California. It is part of Alphabet Inc. In October 2020, Waymo became the first company to offer service to the public without safety drivers in the vehicle. Waymo currently operates commercial robotaxi services in Phoenix, Arizona, Los Angeles, and San Francisco, with new services planned in Austin, Texas.

recognize each item and sensors weigh the vegetables and fruits at the bottom of the cart before producing an item cost and the accruing total cost.

As Lisbet rounds the corner onto another isle, a well-dressed man raises his eyes from his mobile device to greet her. From her AI Marketing classes, Lisbet realizes the important sales and marketing role the **store concierge** plays in a store. **Lisbet also realizes the access the concierges has to her data profile.** "Hello Lisbet" the concierge says as Lisbet approaches. "We've just received some deliciously, elegant Napa wines. I understand your sister's birthday will soon be here and I

want to offer you a 15% discount on your first purchase of any one of our Napa Valley vineyard selections. I know you and your sister like Christian Brothers wines. Would you like a tasting of one of the most popular varieties?" **Lisbet just smiles and says "yes!"** The concierge knows her passion for Christian Brothers wines from her data profile. Lisbet accepts the tasting from a delicate wine glass. "It's wonderful" Lisbet tells the concierge. "I know she'll love it. Thank you so much. I'll take two bottles." The concierge responds "that's great, Lisbet. You can continue shopping while I gift wrap the bottles and bring them to you in a few minutes."

The concierge then places *each bottle on a table for a nearby android to place in a box and then gift wrap* in beautifully designed wrapping paper with the Mr Cronin Superstore logo prominently yet elegantly displayed. *Whenever Lisbet goes shopping at Mr Cronin's Superstore, she always wonders if this concierge is a real person or an android.*

When the bottles are delivered to her, seemingly within one minute, Lisbet notices the colorful instructions on the wrapping paper encouraging her to scan her smart phone over the Mr Cronin Superstore logo for a video about a popular pasta recipe from the famous Italian chef, **Giada Pamela De Laurentiis**. Ms De Laurentiis is an Italian-born American chef, writer, television personality, and the host of the current Food Network television program "**Giada at Home**". Lisbet has watched her guest appearances on NBC's Today show and has used some of her recipes in the past.

Lisbet finishes her shopping and glances at her smart phone to review the itemized list of her purchases and total cost. She then says "ok" for her smart phone to instantly approve *the purchase. No need for cash or credit card.* In fact, there's no store cashier or check out area in the store. Lisbet's phone utilizes *her WeChat Wallet app which links to her bank and withdraws the money from Lisbet's ac-*

count to pay the bill. If Lisbet forgets to use the app, the store would then automatically withdraw the money from her account by the end of the day. Lisbet has 30 days to dispute any charge. The app works everywhere, from stores like **Mr Cronin's Superstore** to restaurants and concert venues. Stores like the app because there is no processing charge like the credit card companies charge them which the stores end up adding to their customers' bill. Customers like the app because of its ease and better security than credit cards.

Once Lisbet removes ALL her purchases from the cart and places them in her UBER autonomous, electric car, the cart guides itself back to the rack at the front of the store to await the next customer to interact with. In Lisbet's future, it will be *illegal for anyone to drive cars.* Too dangerous; data has proven autonomous vehicles are MUCH safer AND less expensive to own and use. Research has shown only a few people miss owning a car because autonomous vehicles are easier and offer a more relaxing and productive ride; you can do other 'stuff' while riding an autonomous vehicle. Most people and businesses will prefer autonomous services like **UBER, GOOGLE, TESLA, LIFT**, and Chinese autonomous vehicle competitors **DIDI** and **BAIDU** as well as hyper fast public transportation. Finally, *Lisbet's home will feature ap-*

pliances, security devices, lights, and other features which connect to the Internet of Things (IOT). The Artificial Intelligence in Lisbet's home will turn on her air conditioning or heating system to the temperature she likes as well as the lights on the first floor 10 minutes before her autonomous UBER ride turns into her driveway after work. Her coffee maker will have a warm coffee prepared to her liking minutes before she wakes up in the morning. All of these things and more will happen in Lisbet's future because of the significant amount of data collected about Lisbet and her habits.

Similar data will be collected on all peo-

ple because everything people use and do will be collected by sensors which are connected to the **Internet of Things (IOT)**. Personal data will be continually collected, protected, and analyzed, according to the government, to make peoples' lives easier and safer.

*The question is -
'is AI's impact on our world
good for the people
who live on it'?*

So, what do you think?

*I'm asking for your opinion on
the following question -*



The **mirror in Lisbet's bathroom** will have many personalized features to offer. The mirror will display Lisbet's weight after stepping on a scale embedded in the bathroom floor tile directly below the mirror. 'AI' will also use the data collected about Lisbet to offer 'AI' based social recognition software to detect her mood as she looks into the mirror and plays specific music she likes. The mirror will give Lisbet access to her favorite station to get the weather report and the local and national news. Lisbet's mirror will also display the text messages received while she was sleeping. The mirror will give her traffic information and post her schedule for the day.

I'm Asking for Your Opinion

ARE THERE 'BENEFITS'

***when companies and governments use technology
to watch, collect and analyze
people's activities (DATA)?***

FOR EXAMPLE - **autonomous autos** have fewer car accidents and, as a result, fewer motor vehicle injuries and deaths while autonomous car riders relax in their autonomous cars playing video games or checking their Instagram / Snapchat account. **OR, keeping people and their neighborhoods safer because street cameras, sensors, monitoring of internet activity and android police watching and analyzing everything people do for the purpose of stopping crimes before they happen;** OR, being able to buy less expensive appliances, clothes, and food prepared in android factories and farms; OR, having **'bots' diagnosis diseases and viruses** which assist doctors accelerating the treatment and eventual cure of sickness; OR, **'bots** to tell you **what companies and stocks you should invest in to create more personal wealth for your retirement;** OR, **genetic engineering** of plants that resist different diseases and use less insecticides and water to grow them; OR, using **Alexi, Siri, Erika** and other automated, AI driven personal assistants to keep you more organized and entertained; OR, **personalized advertisements** and notifications on your smart phones, tablets, and watches about sales and discounts available on your favorite products and services; **OR, using AMBIENT TECHNOLOGY. Ambient technology is technology that's all around you, working quietly in the background without you even needing to think about it. For example, when a t-shirt, watch, or jewelry informs people, in real time (instantly), about the health of the person wearing the t-shirt, watch, or jewelry OR devices that act based on your location, like a door unlocking automatically when you approach your home, lights turning off when you leave or refrigerators alert you when you need milk....**

Is this SURVEILLANCE, DATA COLLECTION & ANALYSIS

acceptable to you?

PLEASE TELL ME WHAT YOU THINK.

Activity

Are You Ready for Your FUTURE?

#1. Explain what you hope you will be doing in **8 years** (*job / career/ lifestyle/ the place in the world you hope to be doing all this, etc*). Please make sure your statement is well written with perfect spelling, good grammar and capitalization, and no run on sentences.

#2. THEN, please state **what you are doing NOW, TODAY** to identify a **JOB / CAREER** you'll be interested in which will provide you enough **MONEY** to live the **LIFESTYLE** (*having things you want in life which may include owning a house, owning a car, being able to buy new clothes, having a savings account, investing for the future, taking a vacation each year, having and taking care of a pet, and more*) **you desire**. **ONLY STATE THE THINGS YOU ARE REALLY DOING NOW TO FIND THE FULFILLING JOB / CAREER WHICH WILL SUPPORT THE LIFESTYLE YOU HOPE FOR;** please do not say things you are not really doing NOW. Be honest. **If you are NOT doing anything NOW to help you find a fulfilling, well paid job / career which will pay for the lifestyle you hope to enjoy in your future, state "I don't know what I should be doing NOW. I would appreciate any help".** **If you are taking steps to identify a future career / job which will provide the money to give you the lifestyle you hope for, please be specific describing the actions you are NOW TAKING.** FOR EXAMPLE, *getting As and Bs in school, building a NETWORK of successful, influential people who are mentoring / advising me, getting an INTERNSHIP in a career I'm interested in, etc*. Please make sure your ANSWER is well written with perfect spelling, good grammar and capitalization, and no run on sentences. Thank you.

#3. Please describe how **your BRAND** is being **perceived TODAY / NOW by teachers, coaches / work managers, and peers**. **I am not interested in the BRAND perception you hope for or want; instead, share the BRAND perception teachers, coaches / work managers and peers ACTUALLY have of your BRAND.** **FURTHERMORE,** explain **how you know** this BRAND PERCEPTION others have of you is **accurate**. Thank you. Finally, please make sure your statement is well written with perfect spelling, good grammar and capitalization, and no run on sentences. Thank you. Send your statement to **stevecronin1949@gmail.com**

YOU ARE INTELLIGENT. YOU CAN BECOME SMART. HENCE, YOU CAN BE SUCCESSFUL!!!!

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We look forward to the opportunity to work together through a formal purchase or partnership."

What He's Saying About "The Future"

*"The Future' is an eyebrow raising, jaw dropping, mind boggling, "No Way!!!" declaring, curiosity igniting, imagination arousing, creativity inflaming, 'aburrido' extinguishing, jump up and down causing, collaboration rallying, and confidence building **experience**."*

*"The mission of this book is to **provoke 'thought'** and the '**by-products**' from it: wonder, imagination, doubt, questioning, criticism, reflection, analysis, research, inquiry, collaboration, evaluation, opinion, judgement, suggestion, exhilaration, action, initiation, and creativity!"*

*"The Future" is a must read for high school students preparing for the AI influenced, global marketplace they will soon find themselves **competing** in."*

*"It's a book which causes one to ask - 'what am I **learning today** which is truly **relevant** to the success and fulfillment I aspire to in my future?' "*

*"The Future' inspires 'what if' thinking and **what a person has to do** to exploit the possibilities."*

*"Each year, the **Social Studies 2.0 - Life Skills class** begins there, "The Future", before moving to the '**past**' to cull and analyze events in order to ensure **relevance** to what we're doing in the '**present**'."*