

From Chalkboards to Chatbots

AI For Educators

An exploration of AI models
and how K-12 educators
may relate to them,
teach them,
and grow.



Renee Wilder, MBA, PMP, CSM

VDOE license: Business/IT, Computer Science, Algebra, Math 6-8, Special Education

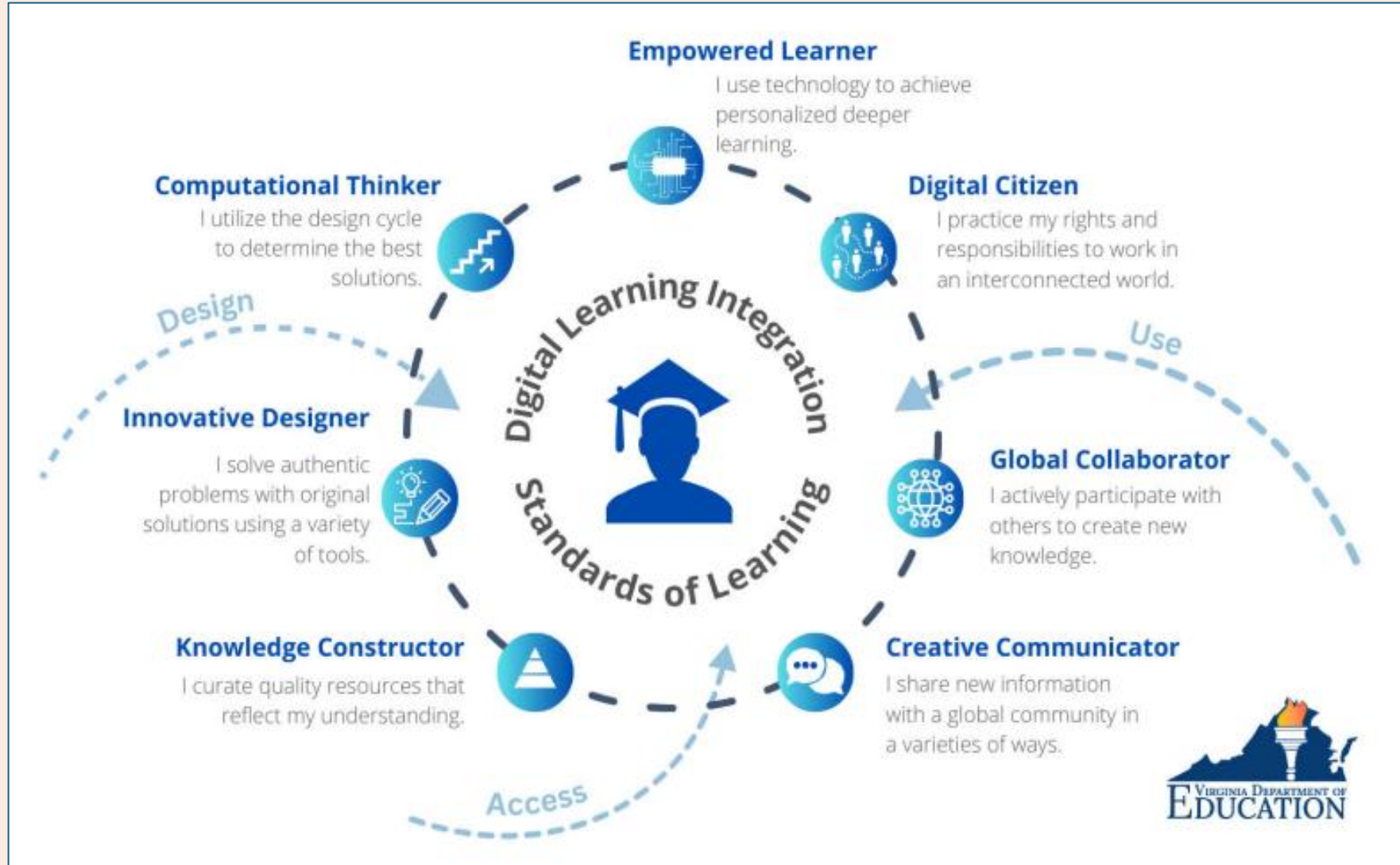
Wall Street award to the New York Stock Exchange, by VCEE

VDOE Technology Curriculum Review Team, 2019

AI Ready RVA Member and Founding Funder, 2025

Teacher's Daughter, Bridging Industry & Education

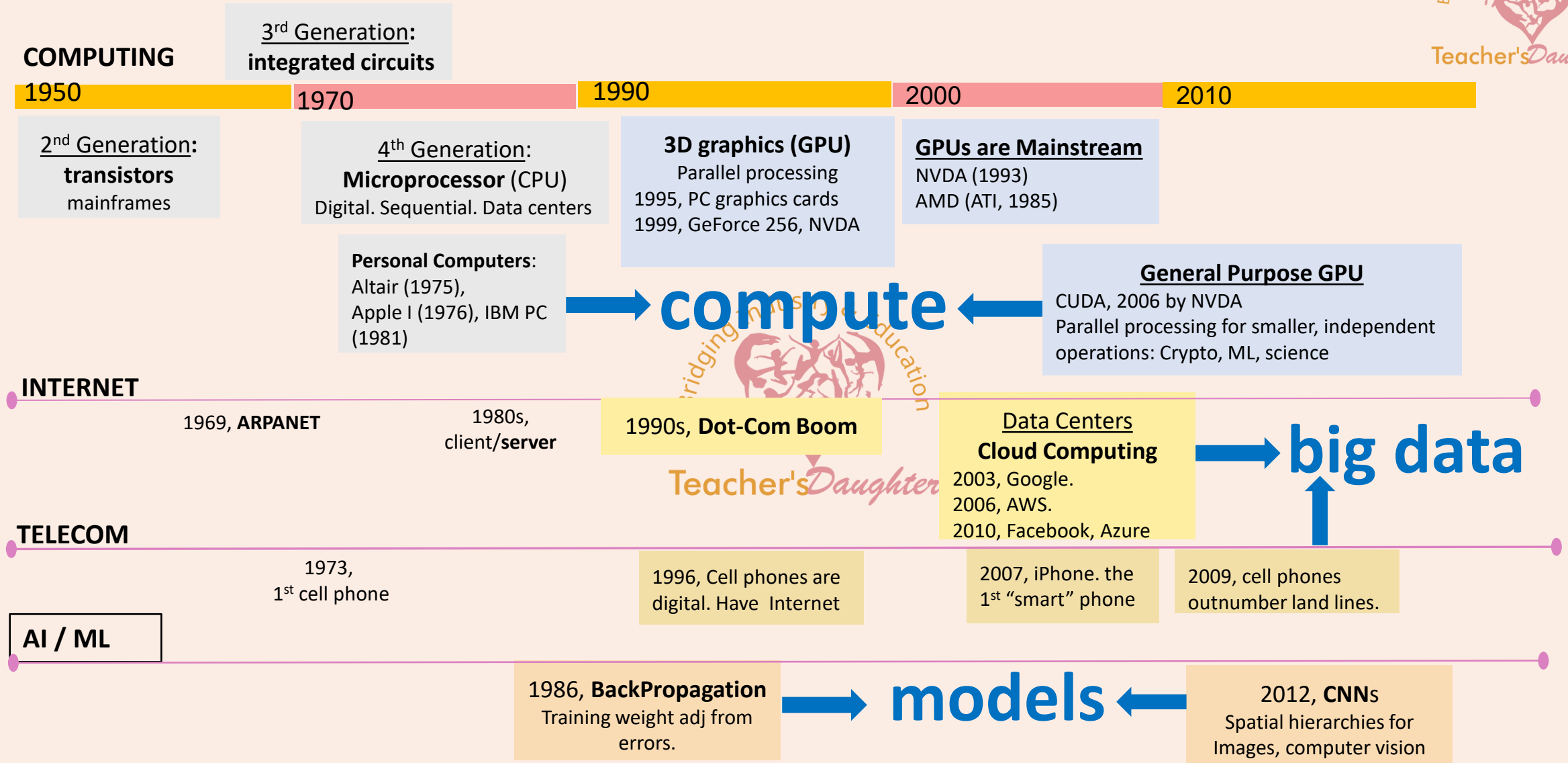
VDOE Digital Learning Integration (DLI)



The topics covered here contribute to the **Access, Use, and Design** concepts in the Virginia Dept of Education DLI standards.

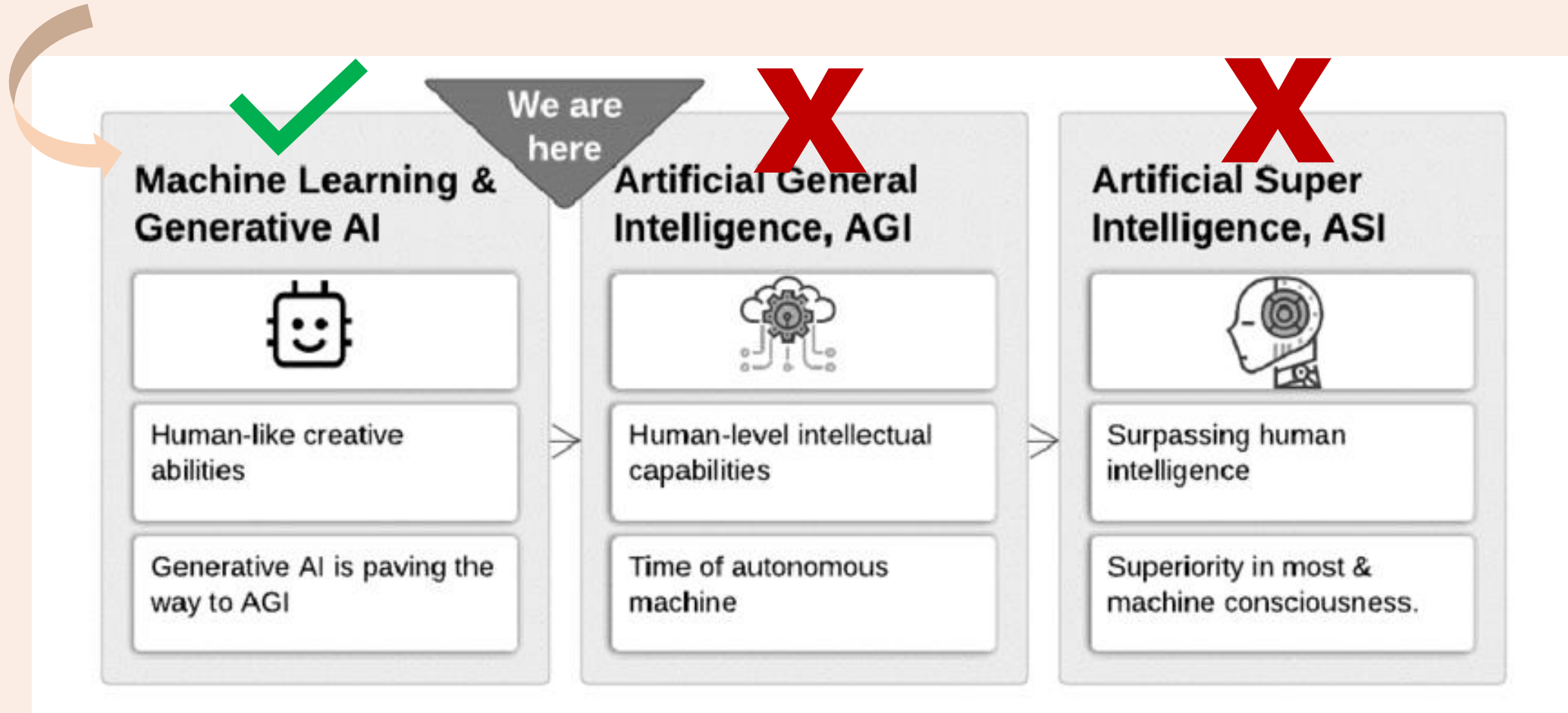


Timeline of Computing Era: **AI Readiness = compute + big data + models**



AI Models

The context of this session explores "Artificial Narrow Intelligence" (ANI).



AI Models

Now, about these models...

AI

Back to 1940s

Machine Learning (ML)

improve automatically through experience and data.

- Supervised
- Unsupervised
- Reinforcement Learning

Expert / Rule Based Systems “GOFAI”

Knowledge-based language tools,
“coded” by humans. Logic, rules.
Ex: Eliza.

ML models (computer algorithms).
They Learn. Get better. Require *a lot* of data (scale).

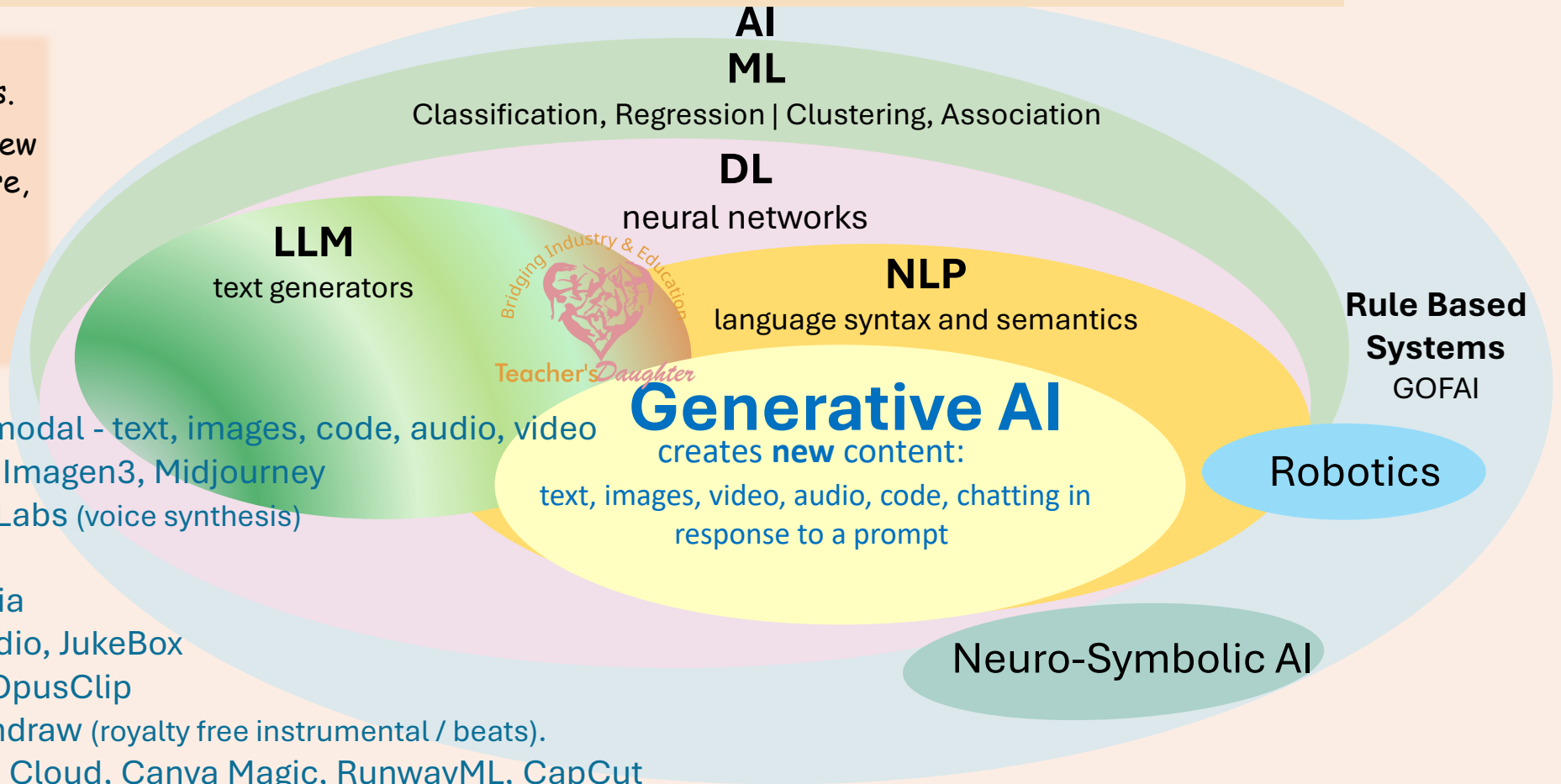
AI Models: Machine Learning to Generative AI

LLMs are an NLP model. Their function is to process and generate text, with some being multimodal across image, code, audio, video.

LLMs can now be used for generative (GenAI) purposes. This area is growing - with new apps and features. Therefore, the examples are not exhaustive, nor necessarily recommended.

Gen AI Apps:

- LLMs: some are multi-modal - text, images, code, audio, video
- Text-to-image: DALL-E, Imagen3, Midjourney
- Text-to-speech: ElevenLabs (voice synthesis)
- Text-to-video: Sora.
- Text-to-avatar: Synthesia
- Text-to-music: Suno, Udio, JukeBox
- Video-to-shorts clips: OpusClip
- Prompt-to-music: Soundraw (royalty free instrumental / beats).
- Suites: Adobe Creative Cloud, Canva Magic, RunwayML, CapCut



AI Models: ML → DL → NLP → LLMs **How to Prompt**

In **simple** language:

- 1) State the **task**.
- 2) Provide a **context**.
- 3) Give a **role**.
- 4) Give an **example**.
- 5) Name the output **format**.
- 6) Describe the **tone**.

Refine. **Review** all results!

Sample prompt: research

Task: Find videos (Youtube, AI apps) aligned to curriculum .

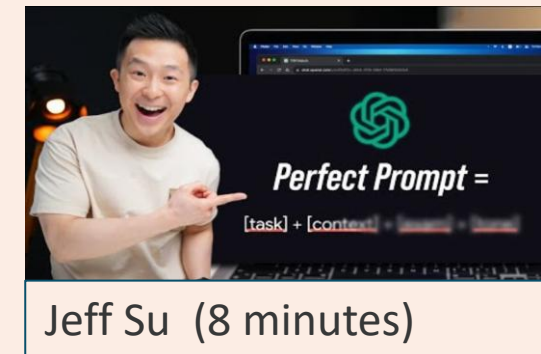
Context: Virginia Department of Education (VDOE) [History/Social Science] Standards of Learning [x.x].

Role: You are an instructional design specialist, for grades [X].

Example: U.S. History, Grade X [paste wording from the standard].

Output : Table with columns: Standard | Video Resource | Source/Link

Tone: no explanations, just the table output.



AI Models: ML → DL → NLP → LLMs **Sample prompt #2**

ChatGPT4 Prompt Input: Product Launch

Task: Write a press release for a new product launch.

Context: **[PosiePots]** is launching **[Washboard]**, a [another self watering planter, crafted with a bold, artistic touch. **Washboard** design is the perfect canvas for your grand plants and larger botanical aspirations, making a striking statement in any space.]

Target audience is [both consumers and businesses].

Role: You are a corporate marketing communications writer.

Example: Product: Posie Pot – patented design to make plant growth achievable for any home, office, or garden.

Output Format: Press release with headline, subhead, date/location, body paragraphs, and boilerplate (“About [Company]”).

Tone: Professional, clear, persuasive.
07/28/2025

Output:

FOR IMMEDIATE RELEASE

PosiePots Unveils “Washboard”: A Bold Self-Watering Planter for Grand Botanical Ambitions
Striking design meets sustainable function in the latest addition to the PosiePots collection

Scottsdale, AZ – September 7, 2025 – PosiePots, the design-forward brand known for its patented planters that make plant growth accessible in any home, office, or garden, today announced the launch of *Washboard*, a self-watering planter with a bold artistic profile.

The *Washboard* planter is designed as both a functional vessel and a statement piece. Its distinctive ridged silhouette serves as a canvas for large plants and dramatic greenery, offering an art-inspired alternative to traditional planters. With built-in self-watering technology, *Washboard* allows both consumers and businesses to nurture larger botanical displays with less maintenance.

“Washboard continues our mission to blend design and sustainability,” said [Founder/CEO Name], founder of PosiePots. “It empowers people to showcase plants as living art, while simplifying care through our proven self-watering system.”

Customer Perspective
“As an interior designer, I’m always searching for statement pieces that are both beautiful and practical,” said Maria Lopez of Verde Interiors. “The Washboard planter is exactly that—it’s sculptural, it elevates my clients’ spaces, and the self-watering system makes plant care effortless.”

The launch expands PosiePots’ lineup of innovative planters, which already includes the award-winning *Posie Pot*, recognized for its patented design that makes plant growth achievable for any space. With *Washboard*, the company reinforces its commitment to combining craftsmanship, sustainability, and creativity in everyday environments.

Availability
The *Washboard* planter will be available starting October 15, 2025, at www.posiepots.com and through select retail partners nationwide.

About PosiePots
PosiePots designs and crafts innovative planters that merge artistry, sustainability, and functionality. With patented self-watering technology and a bold design ethos, PosiePots makes it easy for people and businesses to grow thriving greenery in any setting.

For media inquiries, please contact:
[Name]
[Title]
[Email Address]
[Phone Number]

♦ Instagram / Short Post (Visual + Engaging)

✨ Introducing Washboard ✨

The planter that’s as bold as your botanical dreams.

Self-watering ✔

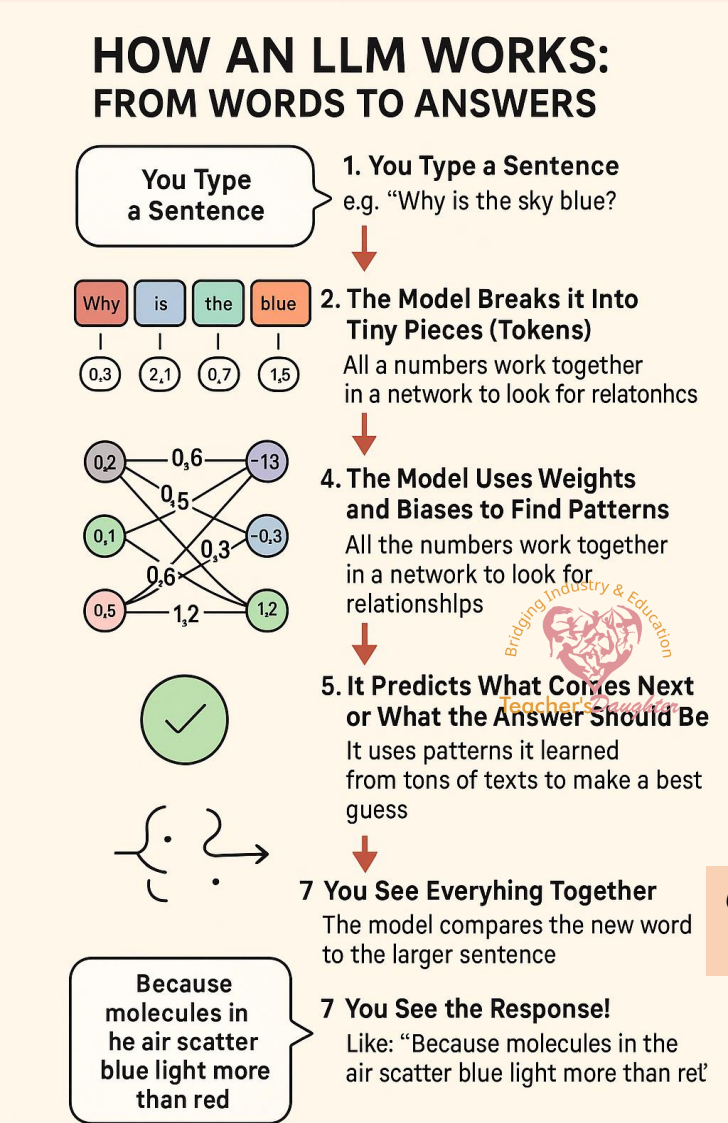
Sculptural design ✔

Big impact ✔

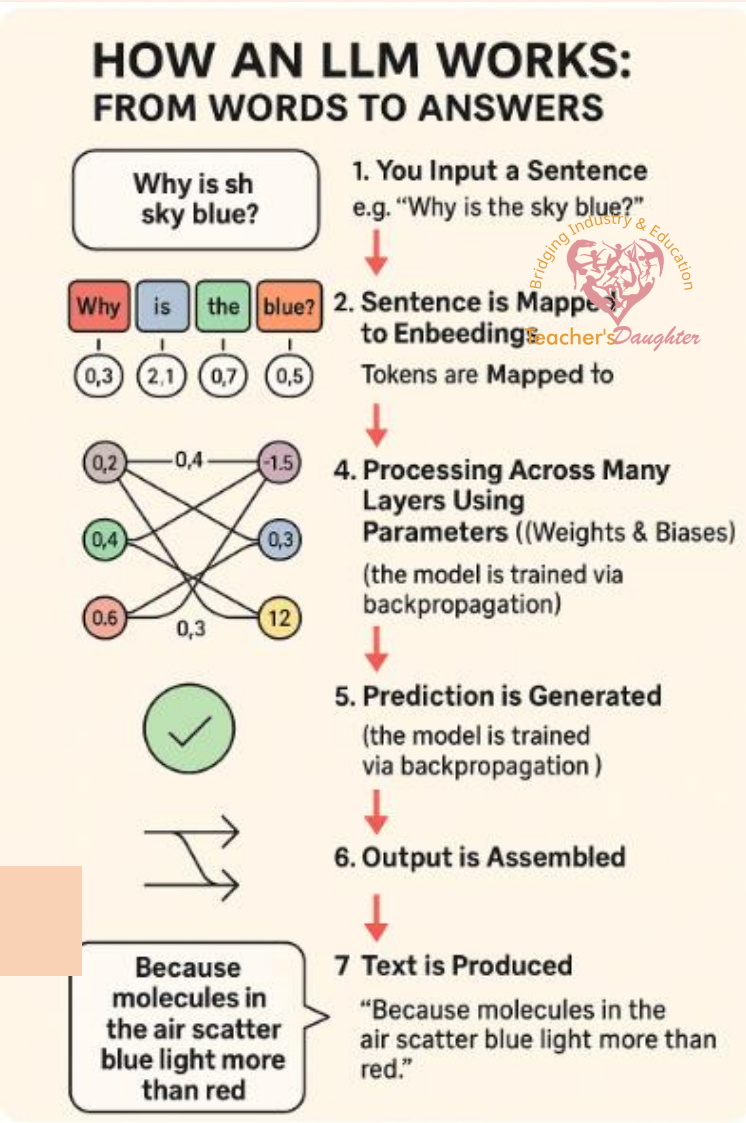
Launching 10.15.25 at posiepots.com »

#PosiePots #WashboardPlanter #PlantDesign

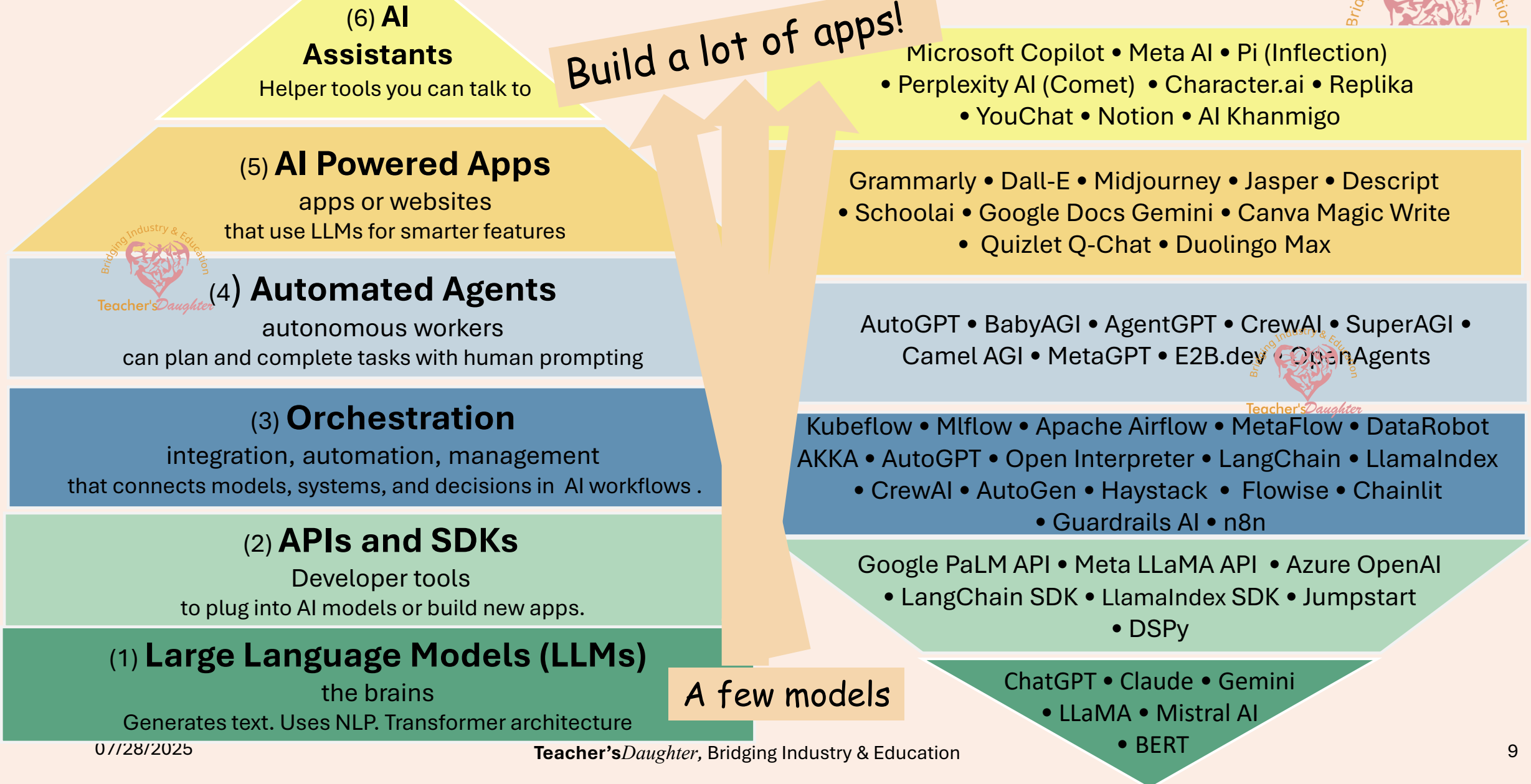
AI Models: LLM Summary



Check ev-er-y-thing (LLM typo)



AI Framework – tools from LLMs to Apps



How do we use AI tools? **Co-labor, not Replace**

Many would agree the goal with AI
("ANI")
is to empower, not replace.
The requires Governance.



AI Governance takes community. It is as
broad as AI itself -
across sectors, ages, and skillsets
(from communication to coding).

Examples provided are not exhaustive.

Governance

The processes, standards, and guardrails to ensure tools are safe and ethical.

1. Policy

Effective governance begins with policies. They must be principal-based and actionable.

- Look for: Acceptable Use Policy, Responsible AI charter.
 - For Educators: eric.ed.gov – Dept of Ed AI Toolkit
- Global AI (per the VDOE DLI) [U.S.](#), [EU AI Act](#), [China](#), [Canada](#)

2. Tools

Lifecycle management, risk management, model validation, bias detection, audits, etc.

- [OECD - Catalogue of Tools & Metrics for Trustworthy AI](#)
- [Partnership on AI](#), [Algorithmic Justice League](#)
- Corporate: IBM Watsonx.governance, Microsoft Responsible AI, Google Vertex AI.

3. Collaborative Design

The teams responsible for AI governance must be as diverse and multidisciplinary as the challenges being addressed.

- AI ethics boards and councils.

How do we teach with AI? **AI in Education**

VDOE Guidelines for AI Integration

...we must empower teachers with deeper practical knowledge



English majors, not coders, have an advantage with generative AI.

The ability to craft compelling stories and clearly articulate ideas in plain English is becoming more valuable than the ability to write code.



ADVANCING ARTIFICIAL INTELLIGENCE EDUCATION FOR AMERICAN YOUTH

Executive Orders | April 23, 2025



AI in Education: **VDOE Standards by Subject**



VDOE Standard	Description	How the Standard Is Used in AI or LLMs
ENGLISH, READING, & LITERACY (K–12)	2024 English Standards progression across Language Usage, Communication and Multi-Modal Literacies, and Research	• An understanding of language structure is essential for precise LLM prompting and refinement. • Communication with effective expression and audience awareness helps ensure prompts are clear, contextually appropriate, with appropriate tone and style. • Research involves critical thinking, needed to assess the reliability of LLM output and synthesize it effectively.
HISTORY & SOCIAL SCIENCE (K–12)	K–3: social studies 4 strands: history, geography, civics, and economics. 4–6: Virginia Studies, United States History. 7–8: Civics and Economics, World Geography. 9–12: World, Virginia, and United States History and Government. Emergence of a Global Age, Age of Revolutions, Global Interactions, Era of Global Wars.	Students express higher motivation and deeper understanding of historical data when digital media is used in the classroom. • Evaluate the reliability and bias of resources, AI or man-made. • Engage in deep analysis with focus on present-day implications, then create new forms of historical expression that AI cannot replicate—prioritizing creativity and discernment (Trust & Maloy, 2023). • <i>“Banning generative AI is not a long-term solution; cultivating AI literacy is”.</i> (AHA Council, July 29, 2025).

AI in Education: **VDOE Standards by Subject**



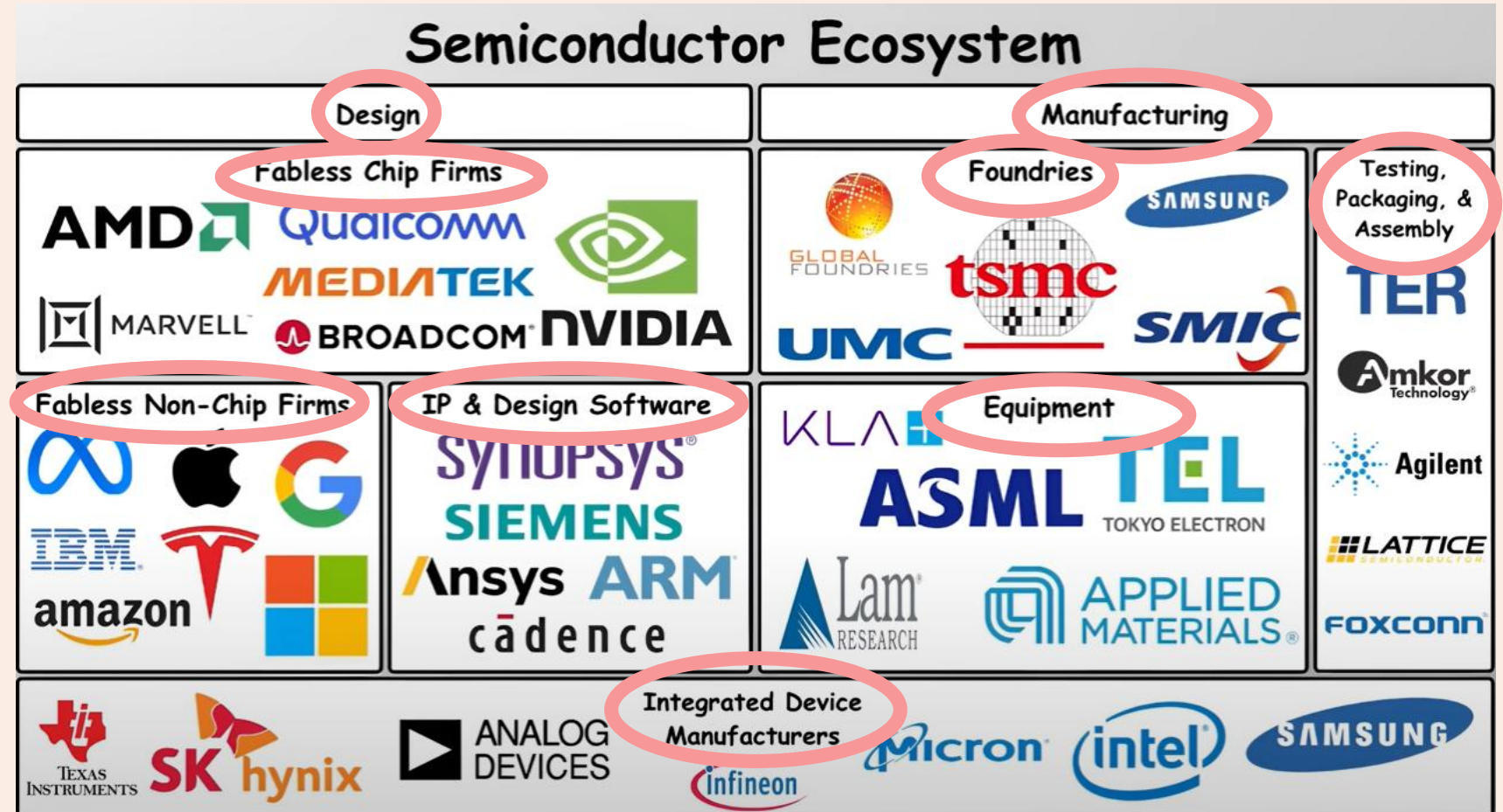
VDOE Standard	Description	How the Standard Is Used in AI or LLMs
MATHEMATICS (K- 8)	Computation and Estimation Number and Number Sense Measurement and Geometry Probability and Statistics Patterns Functions Algebra	• Converting numbers to different formats: just as $\frac{1}{2} = 0.5 = 50\%$, is how LLMs convert a word into different forms — a token (word/phrase), a vector (number), embedding (many tokens, weighted in context).
ALGEBRA 1	Expressions and Operations Functions Statistics	Algebra deals with symbolic representation of relationships. • Concepts like slopes and intercepts relate to how models weigh different features and assess a vector's context. • Boxplots help ML models with feature selection and preprocessing. • Scatterplots reveal correlations, trends, and clusters. • Statistics is the foundation for data distributions, which is part of model evaluation. Metrics include accuracy, precision, recall, and F1 score.

AI in Industry

“...AI is an excellent mechanism by which we test the upper limits of every institution we have. ...Institutions are being stressed.. .AI is helping poke holes in it...”

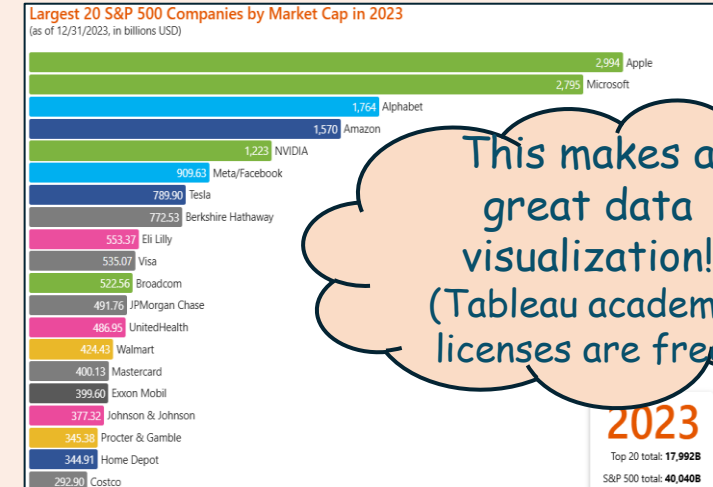
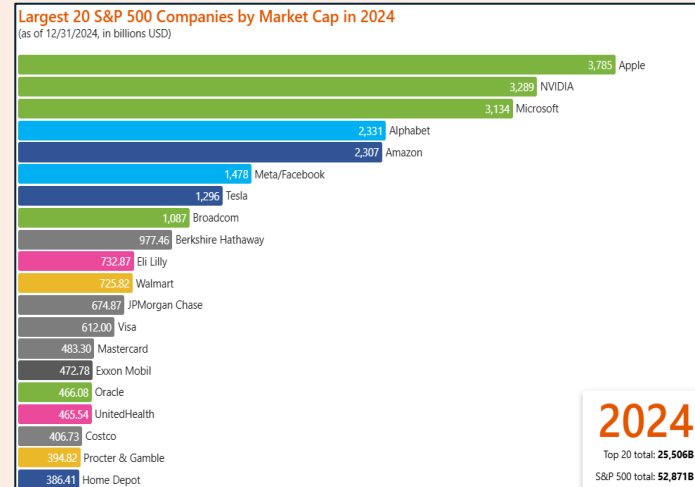
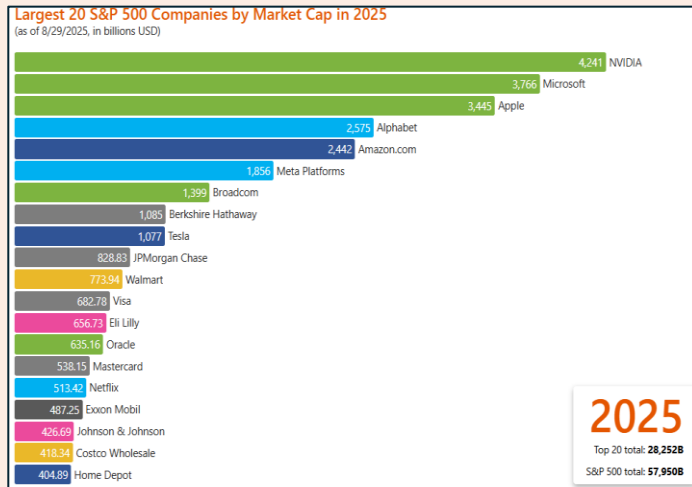
-- Dr. Rumman Chowdhury

- pioneered the first-ever **AI bias bounty** program.
- CEO and co-founder of **Humane Intelligence**.
- Former Engineering Director, ML Ethics, **Twitter**

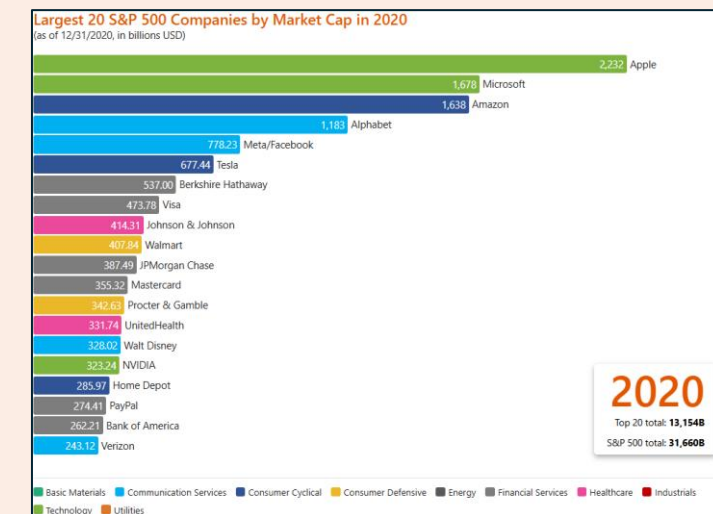
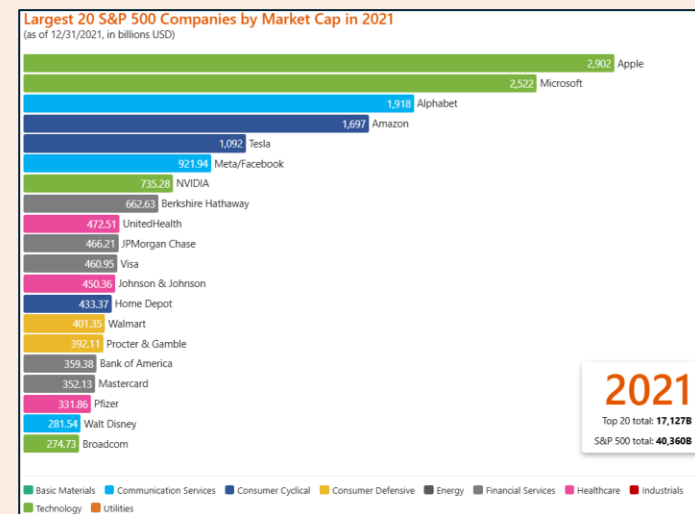
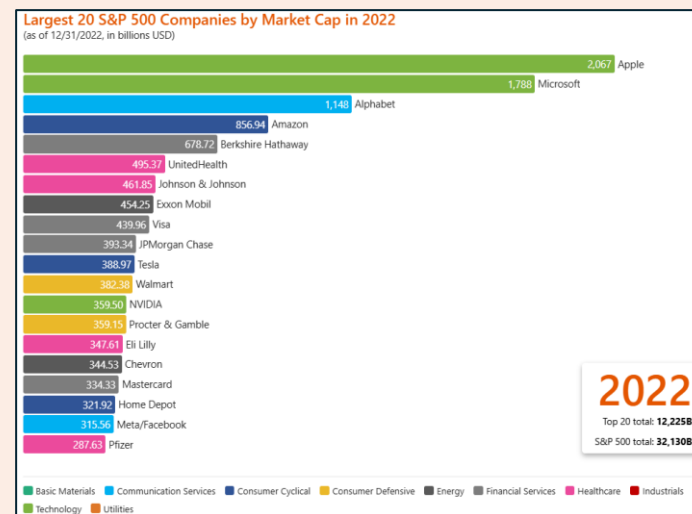


AI in Industry: S&P 500 Top Companies → Recent Years (YOY)

Zoom in. For recent years, what are the top companies? What sector are they in?



This makes a great data visualization!
(Tableau academic licenses are free)



From Chalkboards To Chatbots ... To...?

Society evolves.
So do educator tools.

And some concepts stay with us from kindergarten.

Learn some
& work some
& draw & paint ...

It's okay, you can
divide me by 1.
I'll be the same.

Hold hands
and stick together

Help shape AI's impact!
Explore tools updates,
Standards alignment, & creative uplifts at
TeachersDaughter.org

