AI AND CHATGPT

NOTE: THIS POWERPOINT WAS NOT CREATED BY CHATGPT OR ANY OTHER FORM OF AI.

WHO REMEMBERS THE 80'S ?

Before the PC revolution:

- No email
- No World Wide Web
- No Amazon
- No social media

PC'S APPEARED AROUND MID 80'S

And touched every aspect of society. The economy, government, education, everything.

And there were surprises:

The PC revolution was not about computation

It was about communication

You cannot imagine life without them and what they spun off

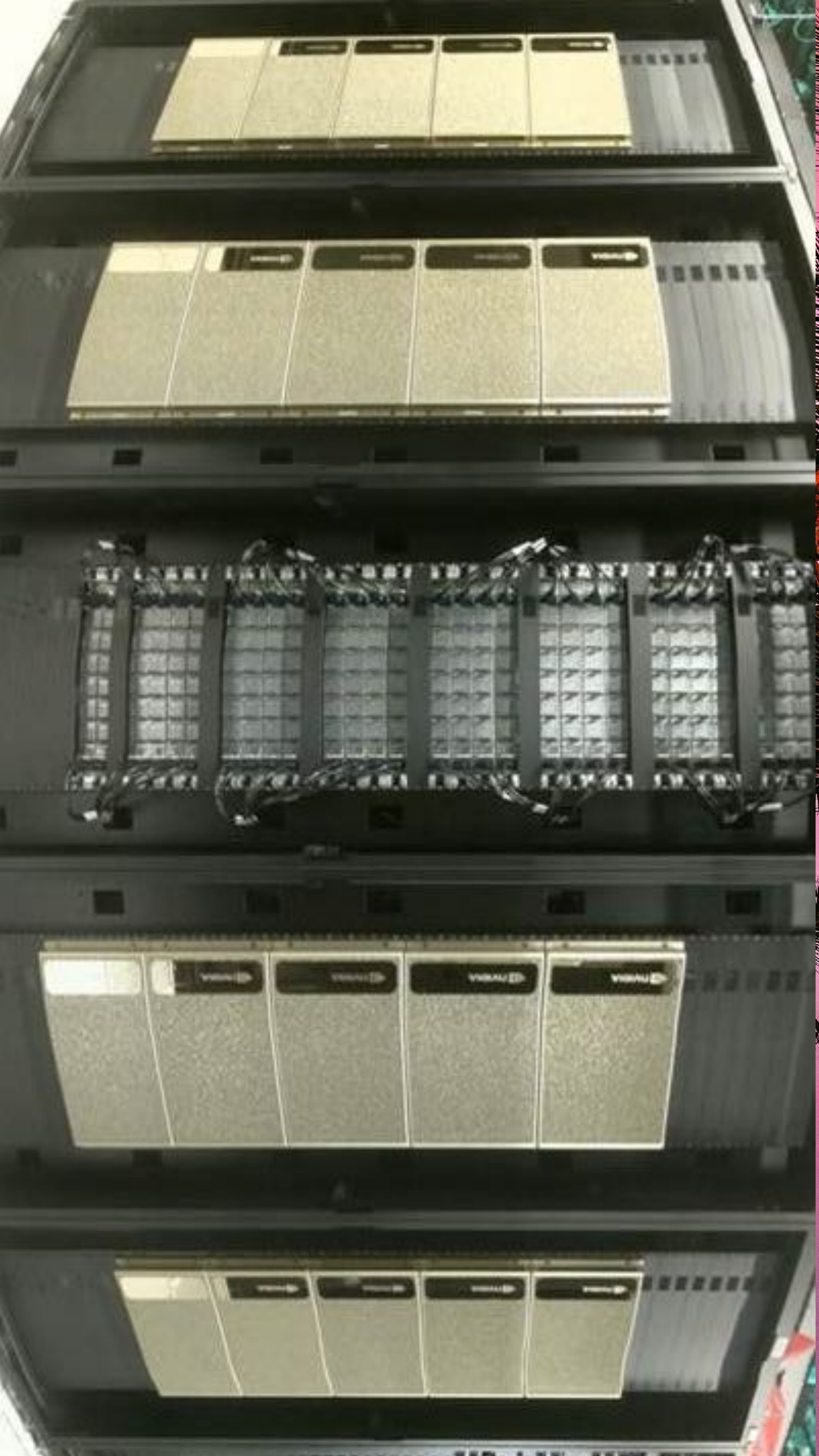
THE SAME WILL HAPPEN WITH AI

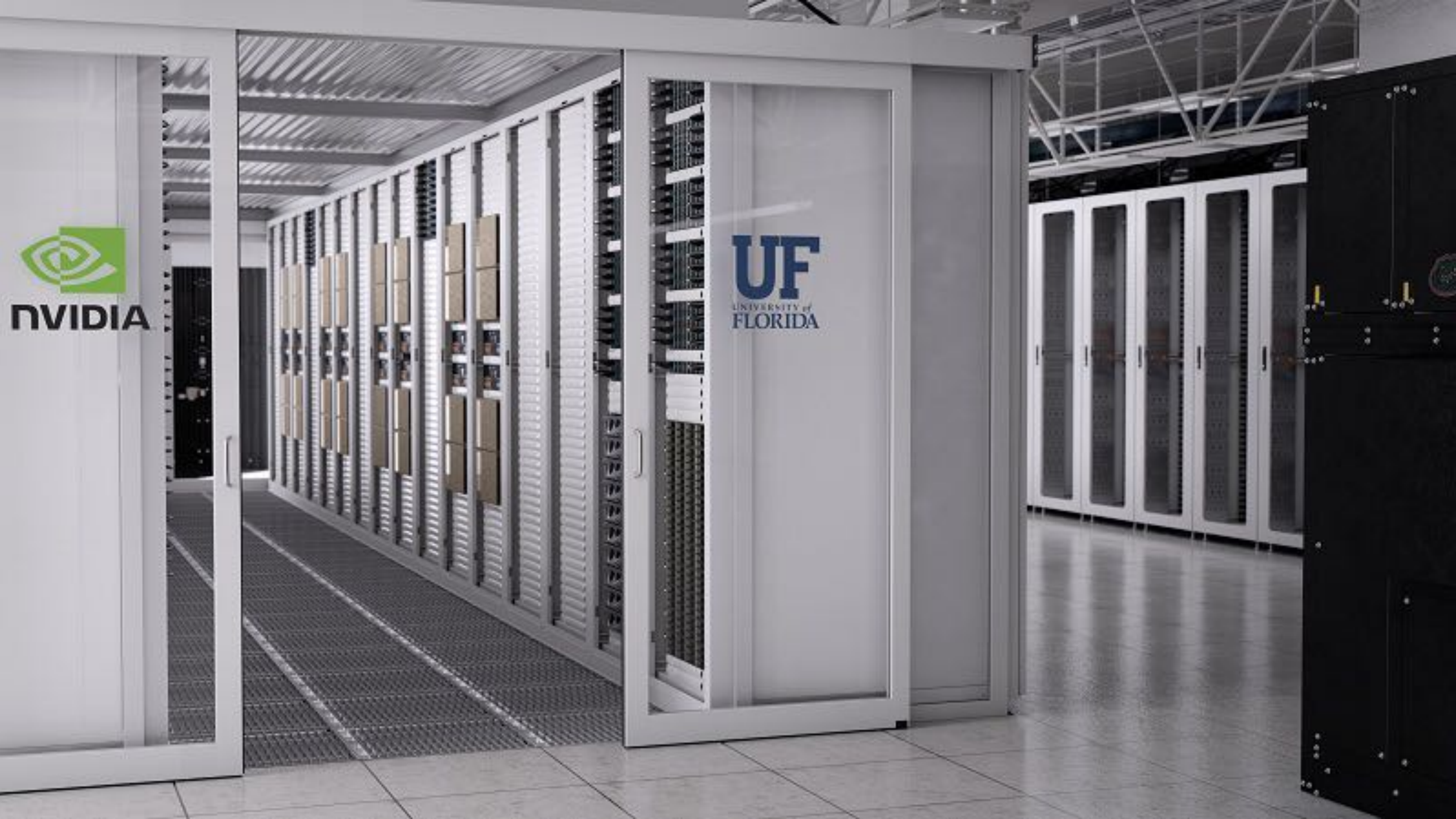
IT IS LESS OBVIOUS BECAUSE

Everyone does not get a new machine on their desk.

PCs were based on CPUs, and usually just one. Some research computers had multiple CPUs, but there is no really good science indicating how to use them effectively simultaneously.

Artificial intelligence supercomputers are based on GPUs — think of the brain with all its brain cells




NVIDIA
UF
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WHY SHOULD WE CARE ABOUT AI?

ASIDE FROM THE FACT IT IS CHANGING EVERY ASPECT OF OUR LIVES?

Your students will need it in their skills portfolio

Your faculty will need it to pursue cutting edge research projects with the latest computational technology

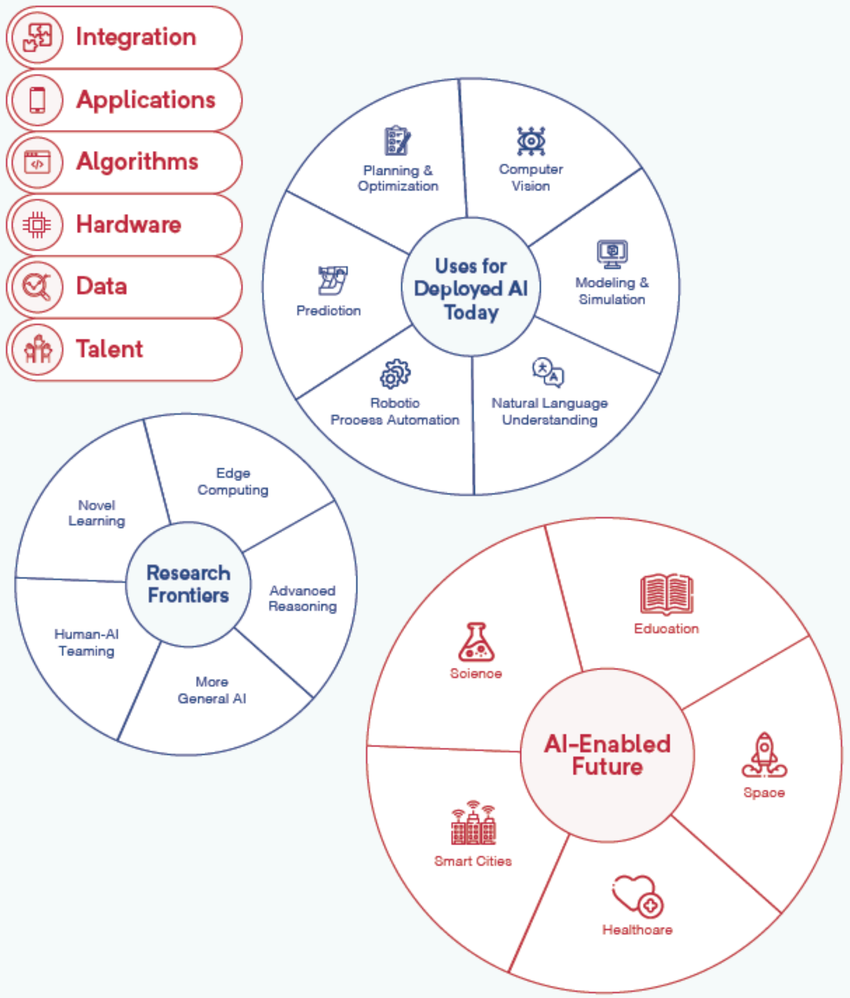
The U.S. faces a national and economic security threat

NATIONAL SECURITY COMMISSION ON AI

THE U.S. NEEDS TO CREATE A 21ST-CENTURY AI-ENABLED WORKFORCE TO COMPETE EFFECTIVELY WITH COMPETITOR NATIONS. THE SUS IS WELL POSITIONED TO CONTRIBUTE SUBSTANTIALLY TO THIS EFFORT

Artificial Intelligence in Context

Artificial intelligence (AI) is not a single piece of hardware or software, but rather a constellation of technologies that depend on interrelated elements that can be envisioned as a stack.



Artificial Intelligence (AI) is not a single piece of hardware or software, but rather a constellation of technologies. To address such a broad topic, the Commission's legislative mandate provided guidance on how to scope its work to include technologies that solve tasks requiring human-like perception, cognition, planning, learning, communication, or physical action; and technologies that may learn and act autonomously, whether in the form of software agents or embodied robots.[1]

Successful development and fielding of AI technologies depends on a number of interrelated elements that can be envisioned as a stack.[2] AI requires talent, data, hardware, algorithms, applications, and integration. We regard talent as the most essential requirement because it drives the creation and management of all the other elements. Data is critical for most AI systems.[3] Labeled and curated data enables much of current machine learning (ML) used to create new applications and improve the performance of existing AI applications. The underlying hardware provides the computing power to analyze ever-growing data pools and run applications. This hardware layer includes cloud-based compute and storage, supported by a networking and communications backbone, instrumental for connecting smart sensors and devices at the network edge. Algorithms are the mathematical operations that tell the system how to navigate the data to provide answers in response to specific questions. An application makes the answers useful for specific tasks. Integration of these elements is critical to fielding a successful end-to-end AI system. This requires significant engineering talent and investment to integrate existing data flows, decision pipelines, legacy equipment, testing designs, etc. This task of integration can be daunting and historically has been underestimated.[4]

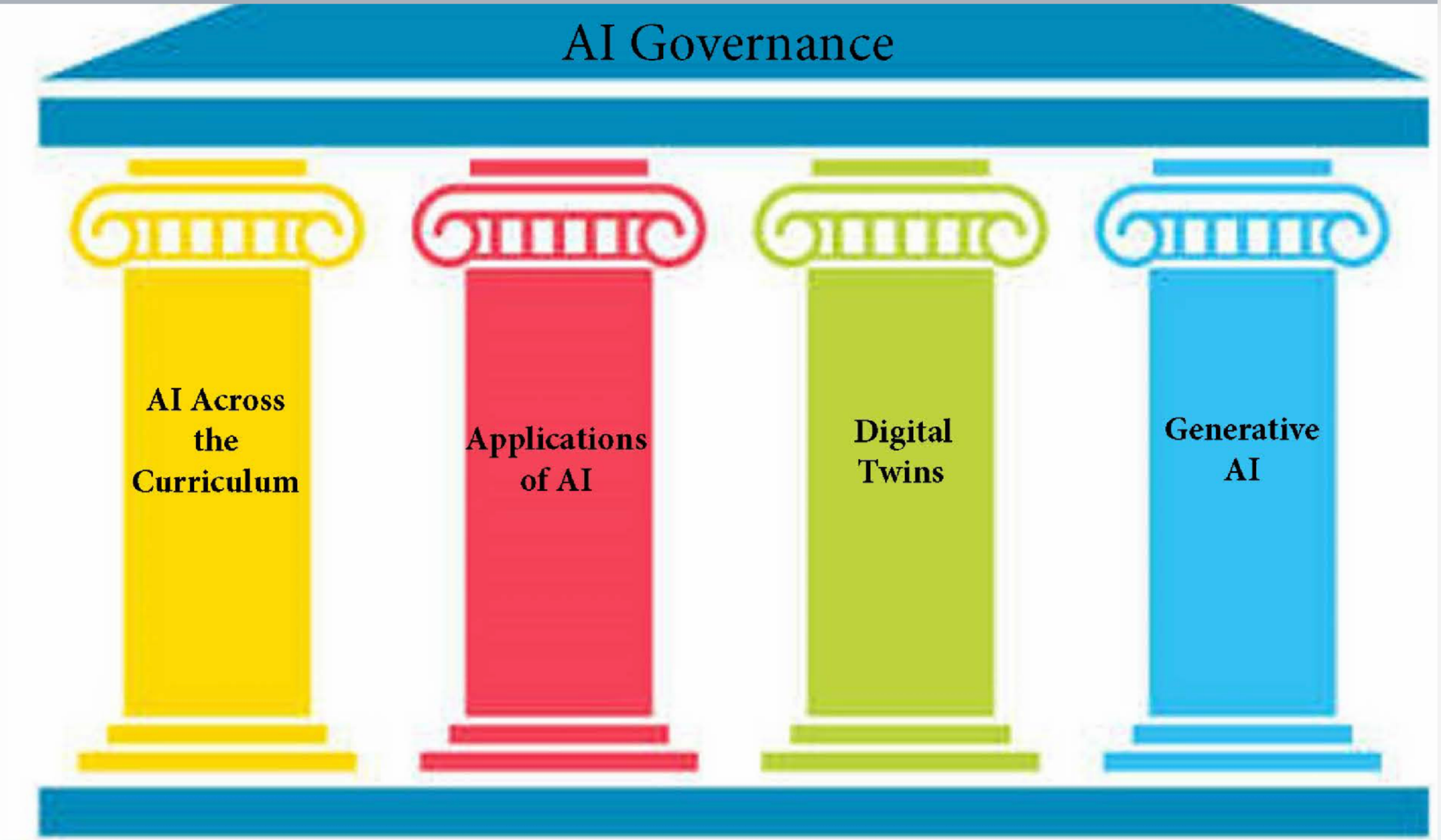
AI technologies and applications such as pattern recognition, ML, computer vision, natural language understanding, and speech recognition have evolved for many decades. In the early years of AI, the period the Defense Advanced Research Projects Agency (DARPA) describes as the "first wave," researchers explored many approaches, including symbolic logic, expert systems, and planning. Some of the most effective results were based on "handcrafted knowledge" defined by humans and then used by the machine for reasoning and interacting.[5]

Within the past 10 years, we have witnessed a "second wave" of AI, propelled by large-scale statistical ML that enables engineers to create models that can be trained to specific problem domains if given exemplar data or simulated interactions. Learning from data, these systems are designed to solve specific tasks and achieve particular goals with competencies that, in some respects, parallel the cognitive processes of humans: perceiving, reasoning, learning, communicating, deciding, and acting. Today most fielded large-scale AI systems employ elements of both first- and second-wave AI approaches.

AT UF, WE ARE IMPLEMENTING AI ACROSS THE CURRICULUM

THE UF QEP: AI ACROSS THE CURRICULUM

Every student in every major at every level has the opportunity to become AI-literate, -proficient, or -expert through separate courses or embedded coursework.


AI Governance
AI Across the Curriculum
Applications of AI
Digital Twins
Generative AI
4 Pillars of AI

A digital twin is a virtual model designed to accurately reflect a physical object. The object being studied—for example, a wind turbine—is outfitted with various sensors related to vital areas of functionality. These sensors produce data about different aspects of the physical object's performance, such as energy output, temperature, weather conditions and more. This data is then relayed to a processing system and applied to the digital copy.

Once informed with such data, the virtual model can be used to run simulations, study performance issues and generate possible improvements, all with the goal of generating valuable insights—which can then be applied back to the original physical object

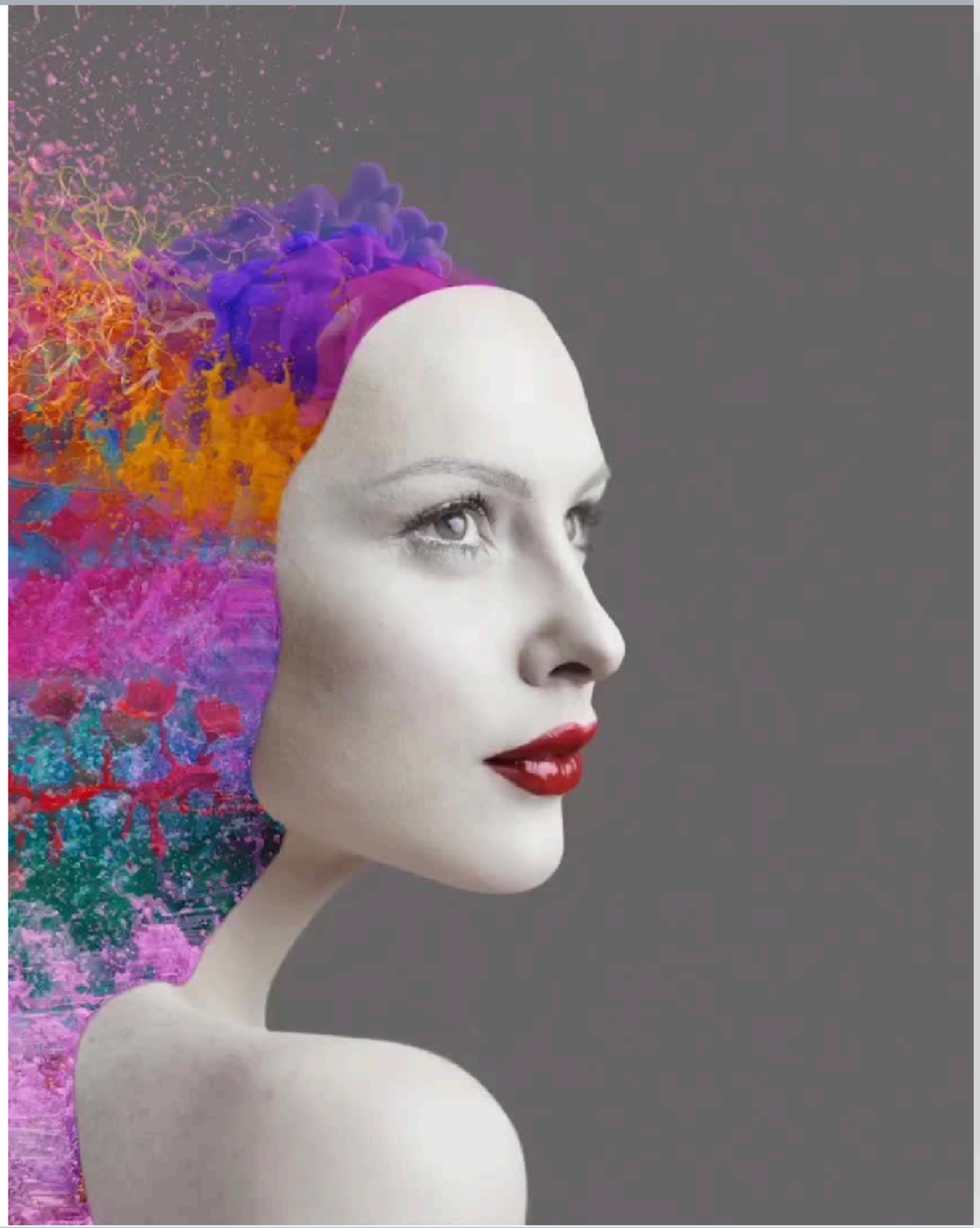
LET'S SEE A DIGITAL TWIN IN ACTION

HTTPS://WWW.YOUTUBE.COM/WATCH?V=NUT_U1AQZ3G.

Generative AI (think ChatGPT and Dall-E)

- **Generative AI refers to a category of AI algorithms that generate new outputs based on the data they have been trained on**
- **In short order, most web content will be generated by these algorithms**

- Generative AI has a wide range of applications, including:
- **Images:** Generative AI can create new images based on existing ones, such as creating a new portrait based on a person's face or a new landscape based on existing scenery
- **Text:** Generative AI can be used to write news articles, poetry, and even scripts. It can also be used to translate text from one language to another
- **Audio:** Generative AI can generate new music tracks, sound effects, and even voice acting



Here's What Happens When Your Lawyer Uses ChatGPT

A lawyer representing a man who sued an airline relied on artificial intelligence to help prepare a court filing. It did not go well.

As an Avianca flight approached Kennedy International Airport in New York, a serving cart collision began a legal saga, prompting the question: Is artificial intelligence so smart? Nicolas Economou/NurPhoto, via Getty Images

Roberto Mata sued the airline Avianca, saying he was injured when a metal serving cart struck his knee during a flight to Kennedy International Airport in New York.

When Avianca asked a Manhattan federal judge to toss out the case, Mr. Mata's lawyers vehemently objected, submitting a 10-page brief that cited more than half a dozen relevant court decisions. There was Martinez v. Delta Air Lines, Zicherman v. Korean Air Lines and, of course, Varghese v. China Southern Airlines, with its learned discussion of federal law and "the tolling effect of the automatic stay on a statute of limitations."

There was just one hitch: No one — not the airline's lawyers, not even the judge himself — could find the decisions or the quotations cited and summarized in the brief.

That was because ChatGPT had invented everything.

The lawyer who created the brief, Steven A. Schwartz of the firm Levidow, Levidow & Oberman, threw himself on the mercy of the court on Thursday, saying in an

GOLDEN PROMPTS

1. Leave out personal/private details
2. Don’t share confidential data
3. Hallucinations
4. “Act as if …”

    Act as if your are a tutor for the SAT; Act as if you are a personal trainer

5. “Tell me what else you need to do this….”
6. Thread your chatbot conversations.

CONSEQUENCES FOR HIGHER ED

Help or hindrance?

Death of the humanities?

Let’s all plagiarize?

Composers or copy editors

Does ChatGPT really write like (or better than) you do?