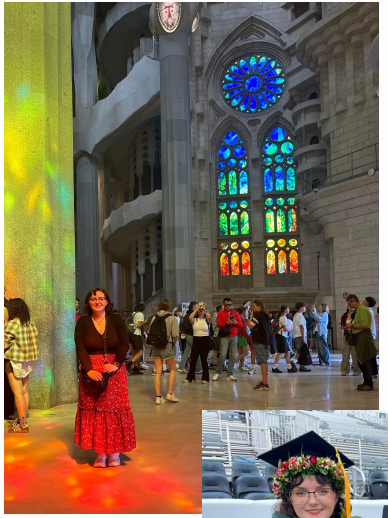
ARTIFICIAL INTELLIGENCE TRAINING

01

INTRODUCTION

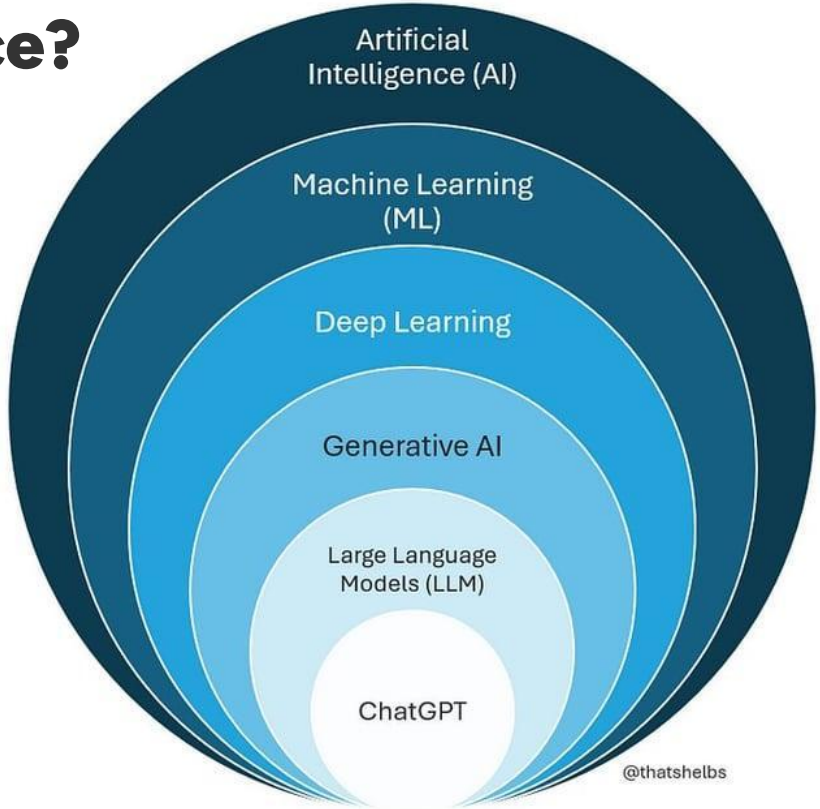
Tassia - About me

- Recently obtained my MS in Information Systems
    - My research focus is Artificial Intelligence and Information Literacy
- I worked as a TA for ICS 101 (Intro to computers) and ITM 431/631 (Computer Networks)
    - Taught over 400 students in lab
- I am created the curriculum for the AI course in the master's program at UH



What is Artificial Intelligence?

- AI has been around for a long time
  - Think Alexa, Siri, and algorithms
- If you do not know the categories within AI you might make uninformed decisions



Artificial Intelligence

- The broadest category
- Refers to any system that mimics human intelligence to perform tasks
- Can iteratively improve itself based on the information it collects.
- Examples: Rule-based systems (Siri, Alexa, Roomba)

Machine Learning

- Subset of AI
- Learns from data and improves over time
- Does not need to be explicitly programed for each task
- Examples: Autocorrect, Targeted advertising, Youtube & Spotify recommendations

Deep Learning

- Teaches computers to process data in a way inspired by the human brain
- Uses “neural networks”
- Great for image recognition
- **Examples:** Face ID, Autopilot, medical imaging, “Deepfakes”

Generative AI

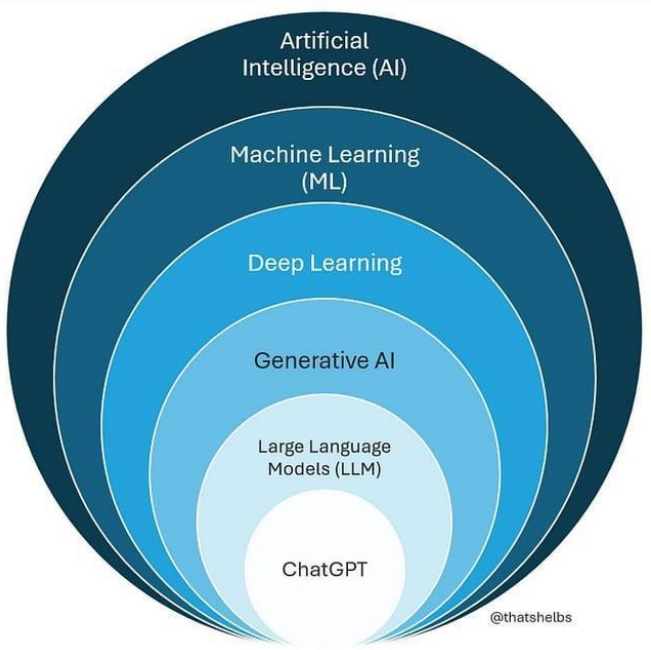
- Subset of Machine learning
- Focused on creating “new” content
- **Examples**: DALL-E

Large Language Learning Models (LLMS)

- A specific kind of generative AI trained on massive datasets to understand and generate human language
- LLMs are designed to understand and generate text like a human
- **Examples:** Chat GPT, Copilot, Claude

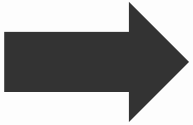
Why is this important?

- As the push to use AI increases knowing these differences can help you accurately choose what tool to use
- Most data analysis is done by Machine learning NOT generative AI
- These changes are important to keep in mind when implementing new tools



How AI works

- Imagine you have 100,000 photos of random things (flowers, people, animals, etc) and you want to look through all of the photos and find every photo that has a cat



How AI works - Continued

- You would give an algorithm a small subset of data (say 400 photos) saying “this is a cat” or “this is not a cat”
- Then through pattern recognition it finds other cat photos

NOT A CAT

IS CAT

How AI works - Nuances

- You do not tell the computer what the cat looks like - you just show it examples and let it figure it out
- This creates a “Black Box” where we do not really know *why* it thinks a photo is a cat or not