Marist CLS Spring 2024 – A.I. Tour Overview

April 4 stage 1

A.I. today – main applications and uses.

1. Chat GPT and related applications
2. DALL·2/3 and related applications
3. Image recognition: face recognition; radiology image analysis
4. Self-driving cars
5. Personal assistants and companions
6. Warehousing robots and manufacturing robots
7. Recommendations: books, movies, etc.; also used in criminal justice

What is "Artificial Intelligence"?
A.I. qualification based on the "Turing Test".

April 11 stage 2

A brief history (~ 80 years) of A.I.

Pioneering works: Alan Turing; Marvin Minsky; Frank Rosenblatt; Arthur Samuel; Joseph Weizenbaum

Some key milestones:
    1956 A.I. Dartmouth conference
    1989 Yann Le Cun LeNet for check identification
    1997 IBM DeepBlue chess player
    2012 IBM Watson Jeopardy winner
    2012 Fe-Fei Li ImageNet
    2016 DeepMind Go player
    2022 ChatGPT

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April 18 stage 3

Artificial Intelligence vs. Machine learning vs. Deep learning

Neural networks – What is a Neural Network? How do Neural Networks work?

The role and the importance of Big Data

Required processing power

How do Deep Neural Networks compare to the human brain (processing power; memory; energy consumption)

What if the data set for training is not "big" enough?

April 25 stage 4

A.I. and ethics

1. Deep learning training sets – material ownership, copyright, I.P.

2. Output originality, accuracy, veracity, bias

3. Fake news generated from texts, images, video clips

4. Any jobs at risk?

A.I. regulation

A.I. and geopolitics

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Artificial General Intelligence / Singularity – where is it leading us?