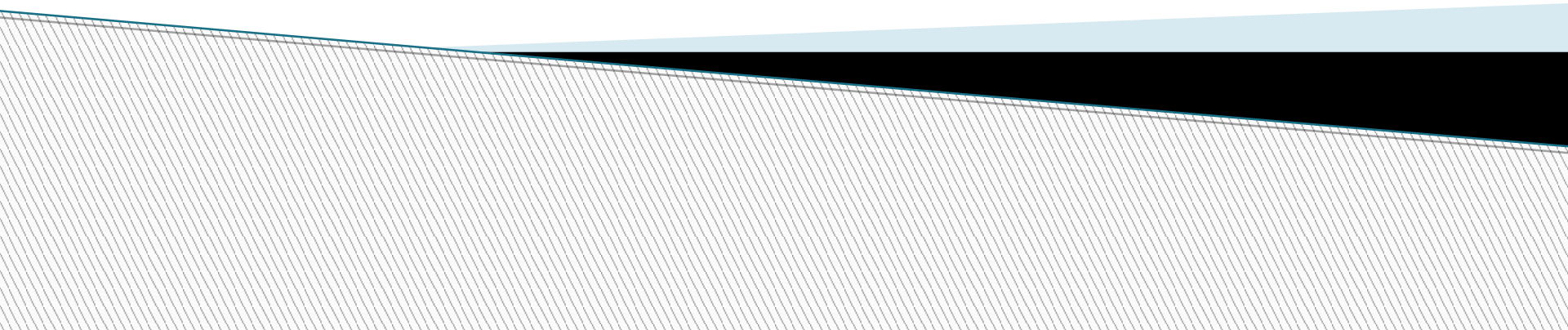


# **Academic Expectations of Artificially Intelligent Technology**

Jaime Reborn  
University of North Texas  
4/27/2019



# Defining Artificial Intelligence

## Merriam Webster's Definition of AI

- ▶ 01.) a branch of computer science dealing with the simulation of intelligent behavior in computers
- ▶ 02.) the capability of a machine to imitate intelligent human behavior



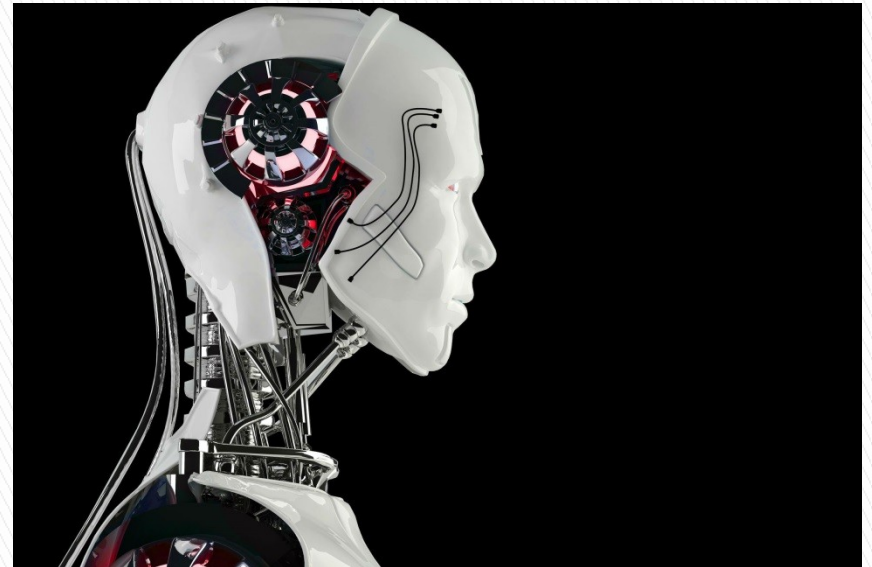
# Brief History of Artificial Intelligence

## Major Mythological Influences on AI

- ▶ **Hephaestus'** Golden Robots
- ▶ **Pygmalion's** Galatea
- ▶ Coin-operated machines in Egypt

## Major Literary Influences on AI

- ▶ **Mary Shelley's** "Frankenstein"
- ▶ **Karel Čapek's** "*R.U.R.* (*Rossum's Universal Robots*)"
- ▶ **Isaac Asimov's** "I Robot"



# Artificial Intelligence

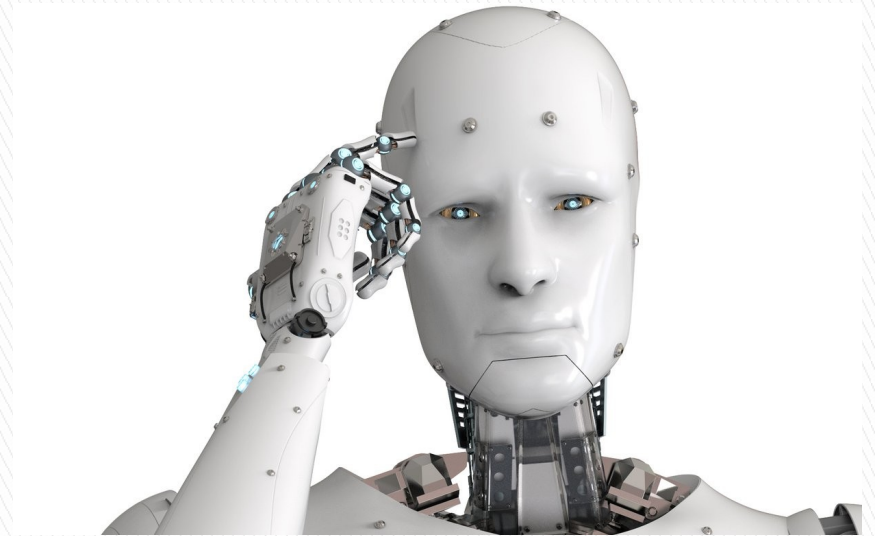
## In Popular Culture

- ▶ Pygmalion's Galatea, My Fair Lady, Her, Simone, Ex-Machina
- ▶ Pinocchio, A. I.
- ▶ Lost In Space
- ▶ 2001: A Space Odyssey
- ▶ Star Wars
- ▶ The Terminator
- ▶ The Matrix



# AI Programming Concepts

- ▶ **Gottfried Leibniz (17<sup>th</sup> century)**
  - theorized that human thinking could be applied to machines
- ▶ **Charles Babbage (19<sup>th</sup> Century)** -
  - Difference Engine
  - Analytical Engine (punch cards)
- ▶ **Ada Lovelace (19<sup>th</sup> century)** -
  - introduced programming concepts
- ▶ **Alan Turing (20<sup>th</sup> century)** -
  - designed test to measure artificial intelligence







# “Jane Watson”

- ▶ In 2016 Professor Ashok Goel used an AI named “Jill Watson” (after IBM’s Watson) as a teaching assistant.
- ▶ “Jill” was mostly effective in answering questions but some students were suspicious.



# Ethical Concerns of AI in Education

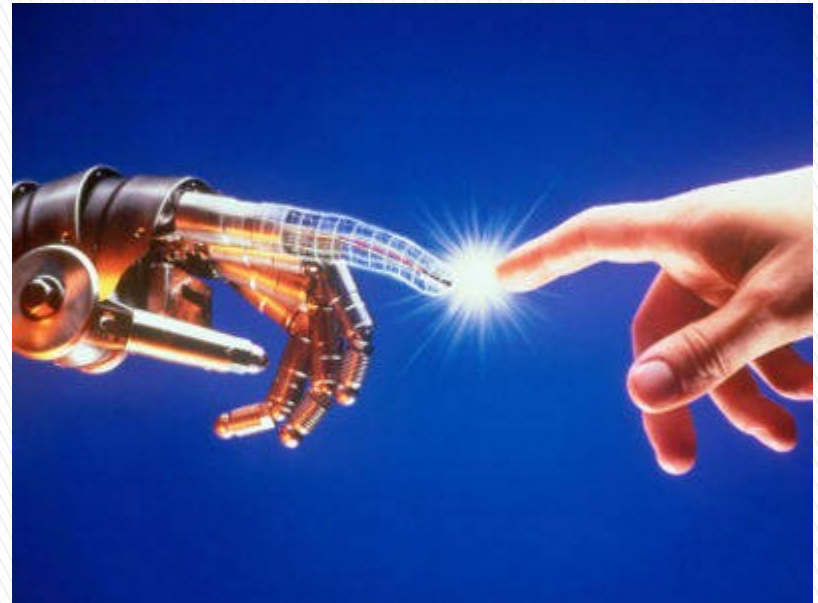
- ▶ 01.) Should AI be used without informing students?
- ▶ 02.) Can an AI replace a human instructor?
- ▶ 03.) Should AI be used to simulate human behavior?





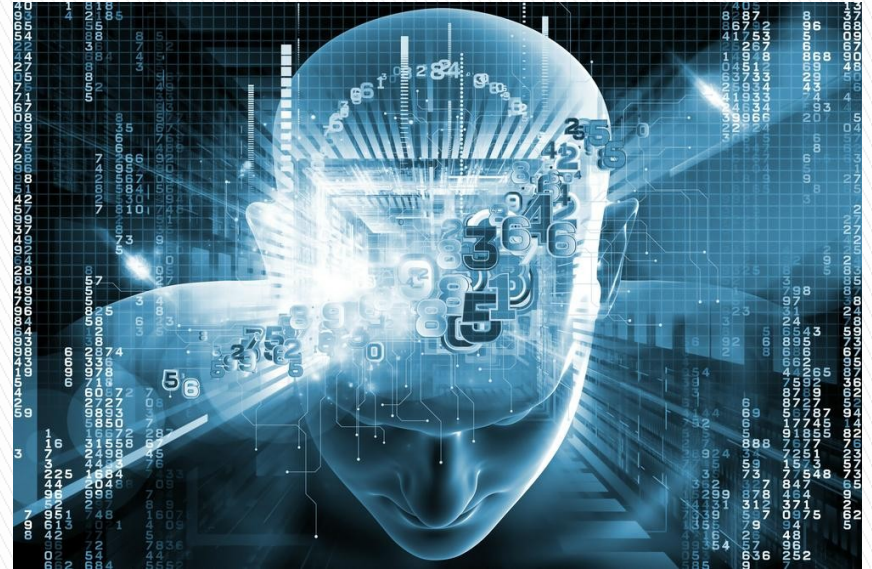
# Possible Uses of AI in Education

- ▶ Automated Grading
- ▶ Detection of Trends
- ▶ Tutoring
- ▶ VR Simulation
- ▶ Research Assistance



# AI Efficiency/Effectiveness

- ▶ Technological Goals for AI
- ▶ Student Academic Goals for AI



# Questions?

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