

# Introduction to CSSE 313: AI

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## Goals

- Learn how to spell AI:  
<https://www.youtube.com/shorts/xsRUk0dMJu4?feature=share>

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Source: [https://www.reddit.com/r/OpenAI/comments/12hfr38/the\\_fastest\\_things\\_on\\_earth/](https://www.reddit.com/r/OpenAI/comments/12hfr38/the_fastest_things_on_earth/)

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## Hype

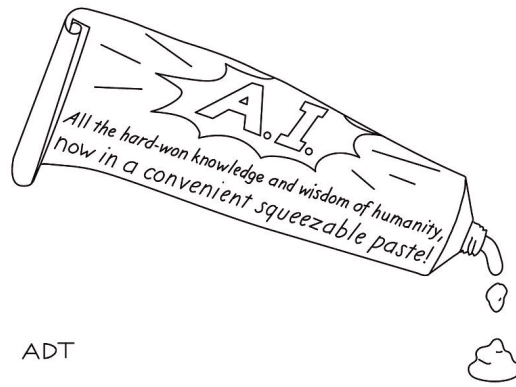
- ChatGPT-maker OpenAI has unveiled the long-awaited latest version of its artificial intelligence (AI) chatbot, GPT-5, saying it can provide PhD-level expertise.[1]
- “I felt like useless relative to the AI [...]” [2]

1) <https://www.bbc.com/news/articles/cy5prvgw0r1o>

2) <https://economictimes.indiatimes.com/news/new-updates/i-feel-useless-chatgpt-5-is-so-smart-it-has-spooked-sam-altman-the-man-who-started-the-ai-boom/articleshow/123071541.cms?from=mdr>

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## AI Sauce



Adam Douglas Thompson. The New Yorker. Nov. 20, 2023.

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## Goals

- What exactly is AI?
- What makes some artifact AI?
- Take a look under the hood, similar to PLC
- Use Java, to develop maximum understanding of the machinery of modern AI, i.e. neural networks.
- This is not primarily a course in which you learn to develop AI apps, we have plenty of them.
- It is a course that helps you make sense of AI

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## Nature of Course

- “I assume a reader who wishes to learn something new, hence wish to think for themselves.” [1]
- In the time of genAI, you need to learn and develop skills that genAI is not good at:
  - Critical thinking
  - Perspective taking
  - Developing new ideas/things
- genAI can regurgitate the common until the cows come home.

1) Karl Marx, Introduction to “Das Kapital”

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## Critical Thinking - 2025

- Students these days view college as consumers, in ways that never would have occurred to me when I was their age.
- They’ve grown up at a time when society values high-speed takes, not the slow deliberation of critical thinking.

Source: Hua Hsu. What Happens after A.I. Destroys College Writing. The New Yorker. June 30, 2025.

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## Critical Thinking – 1970's

### CRITICAL THINKING

A long-range goal for my teaching is to help students learn the importance of critical thinking and develop the skills for doing it. The day is long past when teaching was a matter of merely passing on information to a room of note-taking students looking forward to the next exam, when they will regurgitate what they have memorized. Gathering information is just the beginning of the learning process. Helping students develop their critical-thinking skills takes learning to a broader and deeper level.

Source: Jerry Apps. Once a Professor. Wisconsin Historical Society Press. 2018

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## Perspective about Knowledge

- “The fool doth think he is wise, but the wise wo/man knows her/himself to be a fool.”

[1] Shakespeare. “As You Like It”

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## State of AI and Teaching AI

- Right now, AI feels like a large construction site changing at warp speed?
- How do you teach AI?
- Students by and large do not want a history course.
- Hence a course that wants to be relevant will not be polished, but somewhat rough.
- Subbarao Kambhampati, during his AAAI/EAAI Patrick Henry Winston Outstanding Educator Award talk stated that “every time I teach AI it is a different course.”

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## State of AI and Teaching AI

- I used to teach Rose students blacksmithing.
- To be precise, I did not teach them, instead, I provided them with an opportunity to learn it (by themselves, with the odd hint on a better way of doing things.)
- Feel free to suggest better learning experiences that work for you.

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