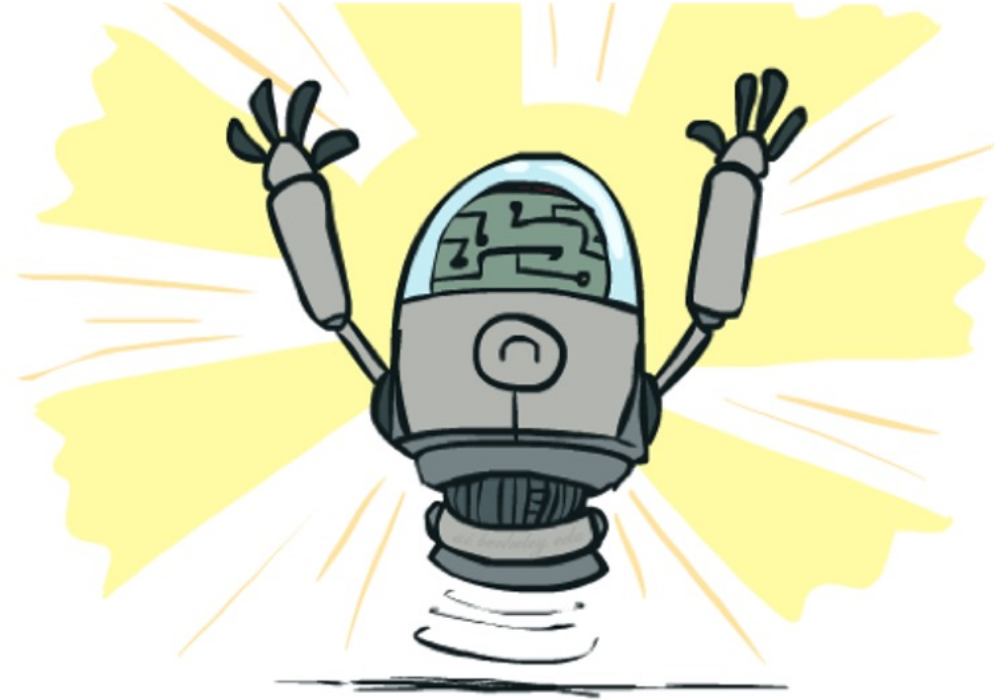


Introduction

CSE 473: Introduction to Artificial Intelligence

Overview

- Introductions
- *What is Artificial Intelligence?*
- *What is CSE 473?*
- Course Logistics
- Week 1 Preview



Illustrations by [Ketrina Yim](#)

About Me



James Weichert

Assistant Teaching Professor

he/him

- First quarter teaching CSE 473!
- **Computing interests:** CS, data, and AI education; AI ethics and policy
- **Free time activities:** traveling, cooking, playing Minecraft :)
- **Office hours:** Tue, Wed 9:30-10:30 AM (CSE 456)

Teaching Assistants



Rongwu Xu



Krish Jain

Getting to Know You

- First, **introduce yourself** to your neighbor and talk about:
 - Why you're taking CSE 473
 - Your **experiences** with and **attitudes** towards AI
- Then, fill out the **course welcome survey**
 - Gradescope: [Practice Problems: Lecture 1](#) (counts as the practice problem for Lecture 1)
 - **Part 1: About You** (non-anonymized)
 - **Part 2: AI + You** (anonymized)



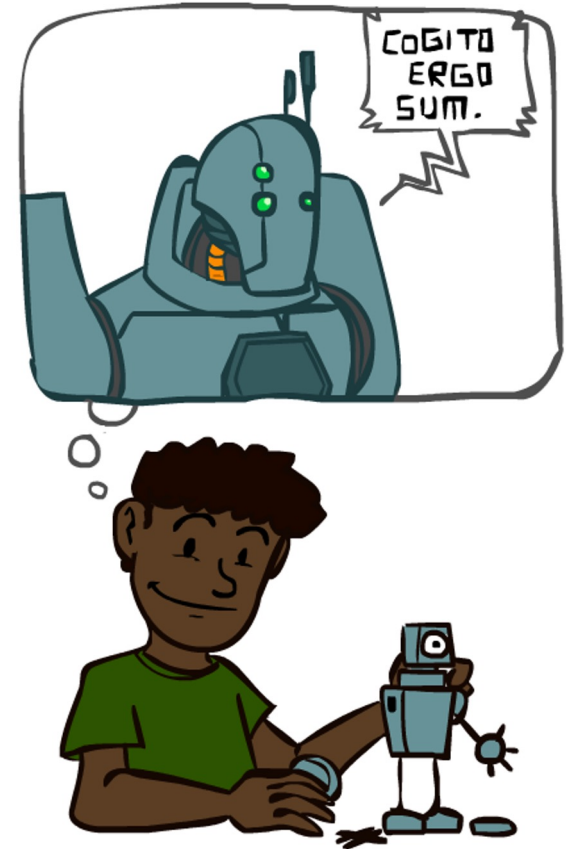
What is Artificial Intelligence?

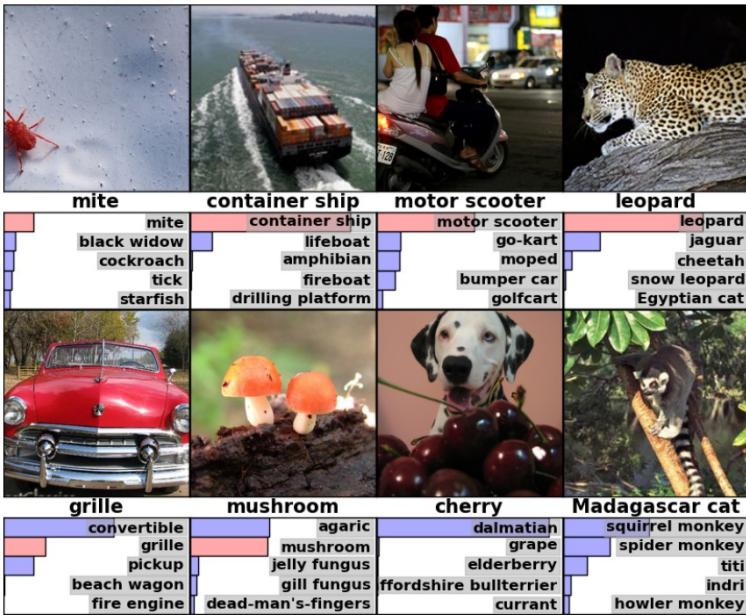
respond on sli.do #cse473

Conceptions of Intelligence

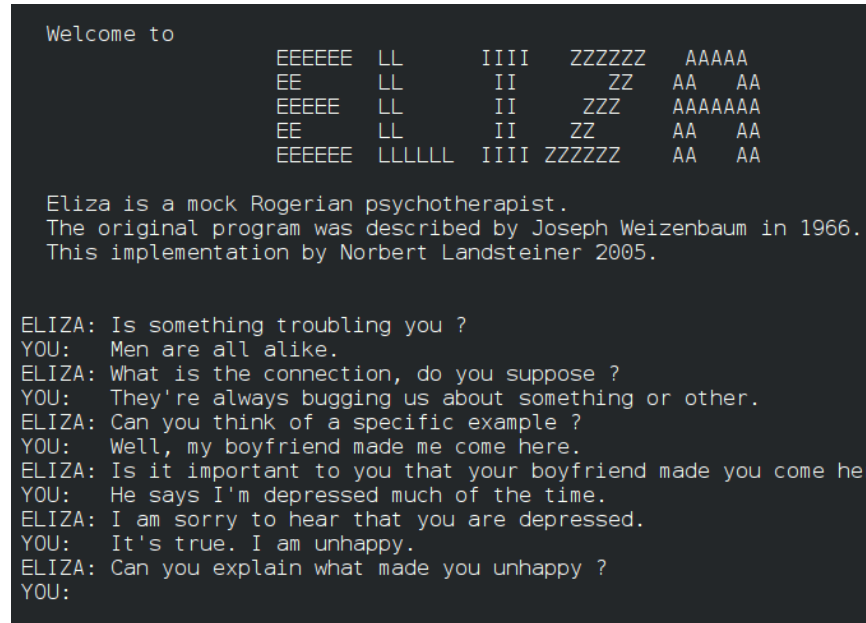
CONTEXT

- *What does it mean for X to be **intelligent**?*
 - **Philosophy** (what constitutes knowledge?)
 - **Neuroscience, Biology** (how do brains process information?)
 - **Economics** (do intelligent agents act rationally?)
 - **Psychology, Sociology** (how do agents learn and interact?)
 - **Linguistics** (how do agents communicate?)
 - **Mathematics, Computer Science** (how to represent information?)
- *So how should we define **artificial intelligence**?*





[AlexNet](#) Image Classification (2012)



[ELIZA](#) Chatbot (1966)



["Mechanical Turk"](#) Chess Player (1770)

Artificial Intelligence?

“An attempt will be made to find **how to make machines use language, form abstractions and concepts, solve kinds of problems now reserved for humans**, and improve themselves.
We think that a significant advance can be made if we work on it together for a summer.”

*McCarthy, Minsky, Rochester, and Shannon
[Dartmouth Workshop Proposal \(1955\)](#)*

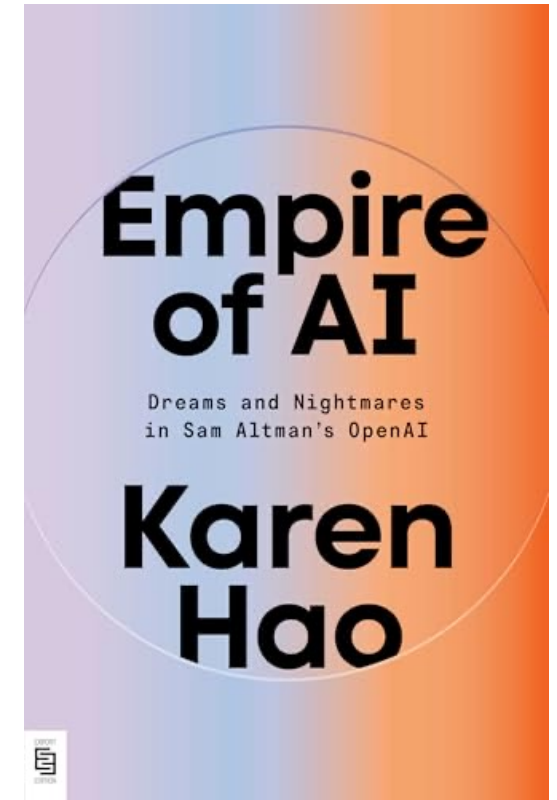
1956: The Birth of “Artificial Intelligence”

A Short History of Artificial Intelligence



CONTEXT

- **1940s - 1950s: Beginnings**
 - 1943: McCulloch and Pitts: Boolean circuit model of the brain (early neural networks)
 - 1950: Turing publishes "Computing Machinery and Intelligence" (Turing Test)
- **1956 - 1960s: Birth of "AI", Early Days**
 - 1950s: Early AI programs: chess, checkers, theorem proving
 - 1956: Dartmouth workshop on AI
- **1970s - 1980s: AI Winter, Knowledge-Based Approaches**
 - 1960s: Research on perceptrons, machine translation plateaus
 - 1970s: Funding for AI research dries up, industry turns to knowledge-based systems
- **1990s - 2010s: Statistical Approaches**
 - 1990s - : Focus on uncertainty, probabilistic approaches
- **2012 - Present: Big Data, Big Compute**
 - 2010s: Research (e.g. "AlexNet") shows GPUs can be used to make neural networks effective
 - 2017: Vaswani et al. publish "Attention Is All You Need" (transformer architecture)
 - 2022: OpenAI publishes ChatGPT



Recommended Reading:
Karen Hao, [Empire of AI](#) (Ch. 4)

Get started / Overview / OpenClaw Copy page

Overview

OpenClaw

"EXFOLIATE! EXFOLIATE!" – A space lobster, probably

Any OS gateway for AI agents across Discord, Google Chat, iMessage, Matrix, Microsoft Teams, Signal, Slack, Telegram, WhatsApp, Zalo, and more.

Send a message, get an agent response from your pocket. Run one Gateway across built-in channels, bundled channel plugins, WebChat, and mobile nodes.

Get Started

Install OpenClaw and bring up the Gateway in minutes.

Run Onboarding

Guided setup with `openclaw onboard` and pairing flows.

Open the Control UI

Launch the browser dashboard for chat, config, and sessions.

[OpenClaw](#) (f.k.a. ClawdBot)



GPT-5.5 New

A new class of intelligence for coding and professional work.

Model ID	<code>gpt-5.5</code>
Reasoning ↗	<input type="radio"/> none <input type="radio"/> low <input type="radio"/> medium <input type="radio"/> high <input type="radio"/> xhigh
Input price	\$5 / Input MTok
Output price	\$30 / Output MTok
Latency	Fast

OpenAI [GPT 5.5](#)



What is Purple?

Purple is the University of Washington's enterprise generative AI tool. It offers a ChatGPT-like interface and allows users to interact with approved AI models. It's the University-supported alternative to publicly available AI tools, designed to align with UW's commitment to privacy and security.

What can Purple Do?

- Help draft, edit, and summarize content
- Support teaching and learning
- Assist with analysis
- Solve technical and coding challenges
- Brainstorm and problem solve
- Provide a UW-managed environment

Purple complements your expertise, helping you work more efficiently and creatively. Whether you're drafting materials, analyzing data, or exploring new ideas, Purple offers support for your work. Ready to dive in? Use the link below to launch Purple then come back and review support options found here.

[UW Purple](#)

AI in 2026

Defining “Artificial Intelligence”



DEFINITION

- In relation to human intelligence:
 - “how to make machines...solve kinds of problems now reserved for **humans**” (McCarthy et al. 1955)
 - Machines that can “think **humanly**” and/or “act **humanly**” (Russell and Norvig)
 - “AI tasks are often considered ‘intelligent’ because we can imagine **humans** doing them well; non-AI tasks are usually ones that (most) humans are terrible at.” ([UW CSE](#))
- A working definition:

A class of computer systems that demonstrate the ability to **achieve specified objectives** through **independent action**.



Questions?

live and on sli.do #cse473

CSE 473: Introduction to AI



FOUNDATIONS

Search

How to find an optimal solution?

**Reinforcement
Learning**

How to learn from experience?

Modeling

How to deal with uncertainty?

**Machine
Learning**

How to find patterns in data?

Why Take CSE 473?

Where the goblins came from

▶ Listen to article 6:05

🔗 Share

Table of contents

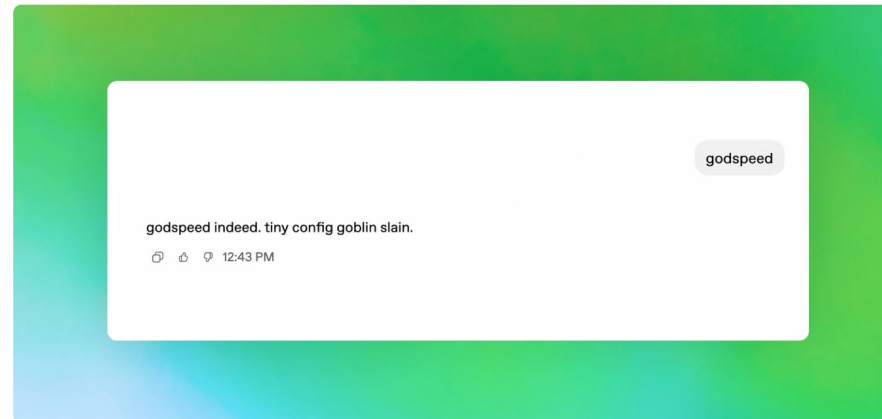
The first signs of creatures

Solving the goblin mystery

The end of the goblins

Why it matters

Starting with GPT-5.1, our models began developing a strange habit: they increasingly mentioned goblins, gremlins, and other creatures in their metaphors. Unlike model bugs that show up through a tanking eval or a spiking training metric and point back to a specific change, this one crept in subtly. A single “little goblin” in an answer could be harmless, even charming. Across model generations, though, the habit became hard to miss: the goblins kept multiplying, and we needed to figure out where they came from.



In early testing, GPT-5.5 in Codex showed an odd affinity for goblin metaphors.

“Where the goblins come from” ([OpenAI](#))



Questions?

live and on sli.do #cse473

Course Components



Lectures

- Introduce concepts
- Establish context
- Provide examples
- Check your understanding with **practice problems**

Homeworks

- Assess your understanding of key concepts
- Hosted on **Gradescope**
- Due approximately two weeks after release

Projects

- Apply your knowledge
- Specifications on [course website](#), submissions through **Gradescope**
- Fully autograded

Tests

- Assess your ability to apply fundamentals to new problems
- **Test 1:** Friday, July 10
- **Test 2:** Friday, August 7
- Higher test score weighs more

Course Policies

Read the syllabus! (cs.uw.edu/473/syllabus)



• Course Infrastructure

- cs.uw.edu/473 for course information
- [EdStem](#) for communications and Q&A
- [Gradescope](#) for assignments
- [Panopto](#) for lecture recordings

• Textbook (pdf on EdStem)

- *Artificial Intelligence: A Modern Approach*

• Late Work

- Homeworks and projects may be submitted up to 2 days late without penalty
- **Late penalty of 20%** for each additional day



• Grading

- **40%:** Homework Assignments (x4)
- **30%:** Projects (x4)
- **20%:** Higher Test Score
- **10%:** Lower Test Score

+ up to 4% extra from practice problem completion

Collaboration and AI Use



The goal of this course is to cultivate and assess your ability to understand and apply core concepts in AI.

- Collaboration

- *Encouraged* towards understanding course concepts
- All **assignments must be completed individually** – all work must be your own
- Sharing or accessing solutions (including code) is *prohibited*

- AI Use

Prohibited on practice problems, homework assignments, or tests.

* Any student work found by CSSC to be in violation of course policies will receive a score of 0 (0.0 for the course for repeated violations)

Permitted on projects to understand or debug—but not copy—code.

* All tools and sources must be cited and accompanied by a short AI usage reflection.

Support and Accommodations



- **Disability Accommodations**
 - Established via [Disability Resources for Students \(DRS\)](#)
 - Email James (jpw@cs) to discuss accommodations
- **Religious Accommodations**
 - Requested within the first two weeks using the [Religious Accommodations Request Form](#)
- **General Support**
 - Having questions or getting stuck is expected! Use [OH](#), [Ed](#), and your peers as a first stop
 - If you have **extenuating circumstances**, make a private Ed post or email James (jpw@cs)



Questions?

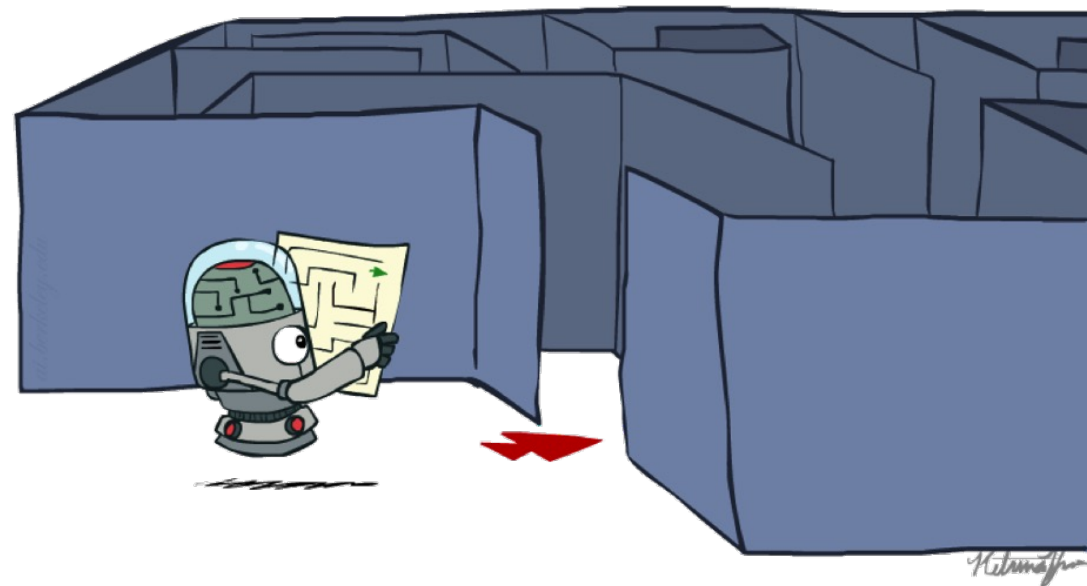
live and on sli.do #cse473

Preview: Search

EXAMPLE

How to find an optimal solution...

- *...efficiently?*
- *...with imperfect information?*



that's it for today!

SUMMARY

- *What is AI?*
- *Why Take CSE 473?*
- Course Logistics

UPCOMING

- Agents and Environments
- Search Problems
- Search Algorithms

REMINDERS

- **Fill out welcome survey!**
- Check Ed, Gradescope access
- Project 0 (optional) released