# AI Overview

## What is AI?

A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments (from National Artificial Intelligence Act of 2020)

## Discriminative AI

Relies on EXISTING data
Analyzes patterns and makes predictions

- Spam blockers
- Image recognition
- OCR (readable scans)
- Siri and Alexa
- Medical diagnostic tools

## Generative AI

Creates NEW content
Learns patterns from large amounts of data, and creates content based on these patterns

- Chatbots (ChatGPT, Copilot, Gemini)
- Media creation
- Product development and design

**The focus of today's class is Generative AI**

## How does it work?

**Machine Learning:**

- Models learn and improve based on input data. AI makes predictions, recognizes patterns and solves problems *without* specific instructions
- Patterns, not rules
- Possibilities, not absolutes

**Large Language Models (LLM):**

- Natural language
- Patterns and relationships are learned from gigantic datasets
- Focuses on natural language expression

## Pros

- Saves time doing tasks that would take a human much longer
- Creates content that doesn't require specialized skills
- Assists with brainstorming

## Cons

- Lacks common sense, etc.
- Hallucinates (an average of 3-30%)
- May be out of date
- Can be used unethically to create propaganda and disinformation
- Content originators may not be compensated properly
- Your information may not be private

## Truth in AI: SIFT

- Stop
- Investigate
- Find Better Coverage
- Trace Claims

Still not sure?
Call or write the Library!

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## ChatGPT

chatgpt.com

- Free version (GPT-4o) is ungrounded
- Paid version (GPT 4.5) is grounded
- ChatGPT was created by **OpenAI**
- GPT: Generative Pre-trained Transformer
- Trained on Internet data

## MS Copilot

copilot.microsoft.com

- Works well with MS Office
- Can provide references and citation links
- Runs on OpenAI GPT4
- Free version limited to 5 responses per conversation
- Can include links to sources
- Has an image generator, analyzes existing images

## Google Gemini

gemini.google.com

- Paid version includes Google One services
- Integrated with web and Google services
  - YouTube
  - Maps
  - Flights
- No limit to the number of conversations

## Additional AI Options

- Canva: canva.com (requires free account)
- PerplexityAI: perplexity.ai
- Elicit: elicit.com (for research)
- HeyGen: heygen.com (video translation)
- Researchrabbit: Researchrabbit.ai
- Claude: claude.ai

## Image/Video Generation:

- Google Gemini
- MS Copilot
- ChatGPT
- Dall-E
- MS Designer
- MidJourney ($)
- Stable Diffusion ($)
- Adobe Firefly ($)
- Google Veo ($)

## Prompts

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- Provide an ingredients list and ask for a recipe
- Ask for a summary of your favorite book (best results from older titles)
- Write a poem, love song, or cheesy ballad about the topic of your choice
- Trivia questions or party games about your favorite topic or historical figure
- Travel routes with specific destinations
- Assume a persona (field expert, super hero, historical figure)
- Have it draw something (login required)

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