AI DEMYSTIFIED: NAVIGATING ETHICAL AI CHALLENGES

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Introduction

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Tell us about you!

- **Campus**
- **Title**

Add your voice to the conversation!

- **How are you using AI?**
- **What Ethical AI Q's do you have?**
- **What Other Professional Development sessions on AI would you like to see offered?**

https://bit.ly/AIEthicalChallenges

Objectives

1 **Address Key Ethical Concerns**

Address key ethical concerns such as: Climate, Bias Copyright and Privacy

2 **Understand AI's Impact**

Understand AI's impact on grading, assessments, and academic integrity.

3 **Gain Practical Strategies**

Gain practical strategies for using AI responsibly to support student success.

Generative AI & Large Language Models

Generative
Pre-trained
Transformers
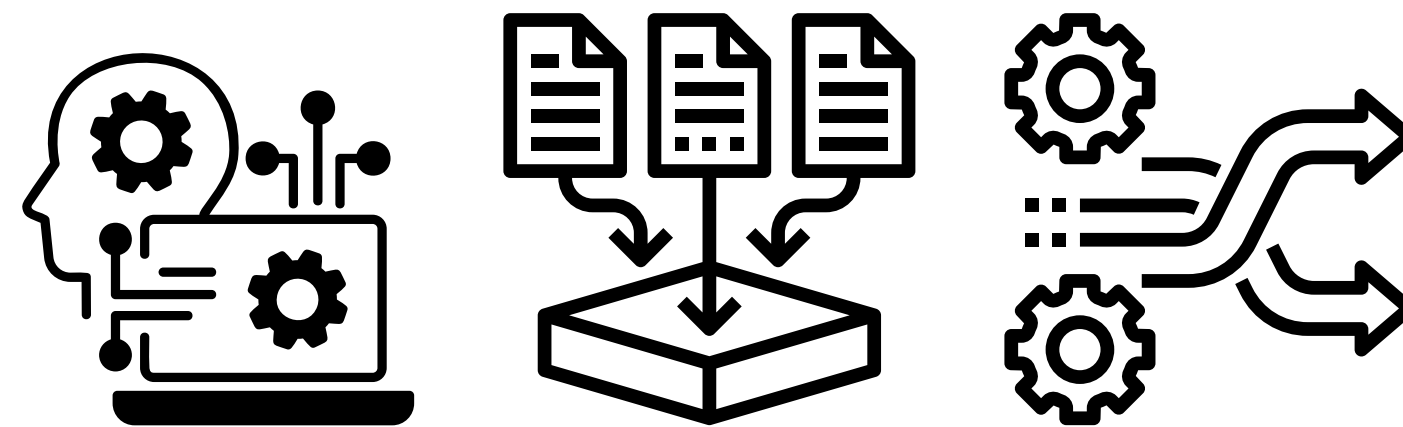
1 **Input**: You provide a text input, like a sentence or a question.

2 **Processing**: GPT reads the input, analyzes it with its layers and attention mechanisms, and predicts what word should come next based on what it learned during *pretraining*.

3 **Output**: The model generates the most likely continuation of the text based on probabilities, word by word, until it reaches the end of the response.

AI is not:

≠ Human Intelligence

≠ Infallible

≠ Autonomous

≠ Bias-Free

≠ Replacement for Human Creativity

≠ Invincible to Ethical Concerns

≠ Immune to Technological Limitations

≠ Universally Accessible

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AI Ethical Challenges

Climate Concerns

Bias and Discrimination

Copyright and Intellectual Property

Privacy

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AI Ethical Challenges

Climate Concerns

- Energy Consumption
    - It's estimated that a search driven by generative AI uses four to five times the energy of a conventional web search.
- Water Impact
    - the demand for water for AI could be half that of the United Kingdom by 2027

-From the Journal: Nature, Generative AI's environmental costs are soaring — and mostly secret. Feb. 20 2024

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AI Ethical Challenges

Bias and Discrimination

A portrait photo of a productive person

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- Data Bias
  - The training data contains bias, so the output contains bias
- Algorithmic Bias
  - Reinforced Learning
    - LLM's learn from the training data and iterations of responses called a "feedback loop"
- Prompt Engineering
  - Bias prompt phrasing can create biased results

AI Ethical Challenges

Copyright and Intellectual Property

- Copyright Infringement
  - Ownership and Fair Use
  - Original Content
    - Is AI generated content original or derivative?
  - Citing the generative AI tool as a source

AI Ethical Challenges

Privacy

- Data Privacy
  - Original training data
  - User prompt data
- Data Security
  - Access and misuse of data that is in the LLM

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Ethical Challenges of AI in Education

AI's Growing Role

AI tools like GPT-4 are transforming education, especially online. Uses include content generation, personalized learning support, and teaching/grading assistance.

Why It Matters

AI is changing the way students learn and how educators assess them. Educators need to understand AI's capabilities and its implications.

Transparency in AI Usage

Teachers encouraged to use AI

Teachers use AI to streamline tasks like grading and provide personalized feedback, freeing time for creativity and critical thinking. It's seen as a tool to enhance educational quality and efficiency

YES

NO

Students discouraged/punished for using AI

Students are discouraged from using AI because it can hinder skill development and raise concerns about cheating or relying too much on shortcuts, undermining genuine learning

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AI and Academic Integrity

"AI can enhance learning by supporting creativity and critical thinking, but only when used with a clear understanding of its limitations."

– Bowen & Watson

Teaching AI Literacy

Equip students with the skills to use AI responsibly, ethically, and in ways that support their learning.

Cheating / Plagiarism

AI tools to generate work that mimics human writing, making academic dishonesty a growing concern.

AI as a Learning Tool

AI should be seen as a tool to assist & enhance learning, not replace it.

Detection Tools

AI detectors are innaccurate and produce false positives

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Key Concerns: AI in Education

Educators

42%	34%	23%	22%	20%
Increase in plagiarism and cheating	Potential for **becoming overly dependent** on AI tools	**Privacy and security concerns** related to student and staff data	**Lack of clear policies and regulations** to use AI in educational settings	**Ethical concerns**, such as impact on human autonomy and responsibility for AI-driven actions

Students

52%	48%	30%	28%	21%
Potential to be accused of plagiarism or cheating	Potential for **becoming overly dependent** on AI tools	**Misinformation** leading to inaccurate use or interpretation of AI-generated content	**Job loss** due to automation in future career paths	**Privacy and security concerns** related to my data

Source: AI in Education Microsoft Study (November 2023)
Survey question: Please select the top 3 reasons why you may be concerned about AI usage within your school/district/university.

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Key Uses: AI in Education

Educators

24%	22%	20%	19%	18%
To create or update lesson plans, supporting materials, and assignments	**To brainstorm new ideas** for lesson plans, supporting materials, and assignments	**To simplify complex topics** for students	**To free up my time** to reinvest in more valuable areas	**To differentiate instruction** to address students' needs

Students

35%	32%	29%	26%	24%
To summarize information for me	**To help me get started** and brainstorm on my assignments	**To get the answers** or information I need more quickly	**To get initial feedback** on my work	**To improve** my writing skills

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Why Do We Need Clear AI Policies & Guidelines?

Syllabus Statements

Clear AI Policy and Academic Integrity statements on your syllabus are needed to help students understand when and how AI can be used in your classes.

Assignment Guidelines

Clear assignment guidelines ensure students understand to what extent they may rely on AI tools for specific tasks.

Can I Use AI on this Assignment?
Generative AI Acceptable Use Scale

Generative AI refers to any of the thousands of Artificial Intelligence tools in which the model generates new content (text, images, audio, video, code,etc)
This includes, but is not limited to, Large Language Models/ LLMs such as ChatGPT, Google Gemini,etc, Image creators such as Dall-E3, Adobe Firefly, and any tools with built in generative AI capabilities such as Microsoft CoPilot, Google Duet, Canva, etc etc)

	Level of AI Use	Full Description	Disclosure Requirements
0	NO AI Use	This assessment is completed entirely without AI assistance. AI Must not be used at any point during the assessment. This level ensured that student rely solely on their own knowledge, understanding, and skills.	No AI disclosure required May require an academic honesty pledge that AI was not used.
1	AI-Assisted Idea Generation and Structuring	No AI content is allowed in the final submission. AI can be used in the assessment for brainstorming, creating structures, and generating ideas for improving work.	AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission.
2	AI-Assisted Editing	No new content can be created using AI. AI can be used to make improvements to the clarity or quality of student created work to improve the final output.	AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission.
3	AI for Specified Task Completion	AI is used to complete certain elements of the task, as specified by the teacher. This level requires critical engagement with AI generated content and evaluating its output. You are responsible for providing human oversight and evaluation of all AI generated content.	All AI created content must be cited using proper MLA citation. Link(s) to AI chat(s) must be submitted with final submission.
4	Full AI Use with Human Oversight	You may use AI throughout your assessment to support your own work in any way you deem necessary. AI should be a 'co-pilot' to enhance human creativity. You are responsible for providing human oversight and evaluation of all AI generated content.	You must cite the use of AI using proper MLA or APA citation. Link(s) to AI chat(s) must be submitted with final submission.

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Redesigning Assessments

1 Create AI-Resistant Assignments

Develop assignments that encourage deep engagement, critical thinking, and personal insights.

2 Citing & Documenting AI Usage

Establish guidelines for AI usage, including citing AI generated content and require documentation of usage.

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AI Equity (the digital divide)

We must also ensure that students with less access to AI tools are not disadvantaged or left behind.
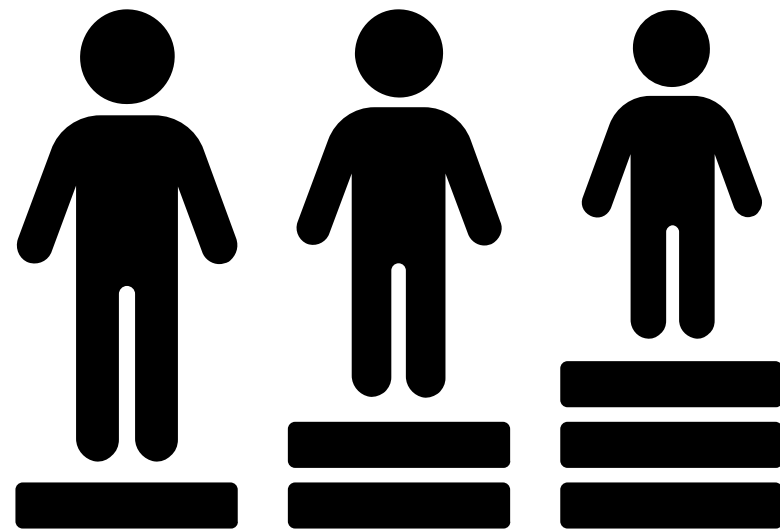
Equity & Fair Access

We must emphasize the need for equitable access to AI resources, advocating for institutional support, open-access tools, and community programs to bridge the gap

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Conclusion & Q&A

Recap

- AI is reshaping grading, assessments, and academic integrity.

- We need to address ethical concerns like data privacy, equity, and transparency.

- We also need to develop strategies to responsibly integrate AI to support student success.

"AI is here to stay, and it's up to educators to ensure it is used to enhance learning, not detract from it."

– Bowen & Watson

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THANK YOU

San Diego City College

San Diego Mesa College

San Diego Miramar College

San Diego College of Continuing Education

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SAN DIEGO
Community College District