



SAN DIEGO
Community College District

AI LITERACY: INTRODUCTION TO GENERATIVE AI

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I have a passion for rhetoric, pedagogy, and poetry. I also maintain a keen interest in gamification, edtech, and web3 technologies, like artificial intelligence (AI) and the metaverse, particularly in how they can make education more engaging, relevant, and impactful for students.

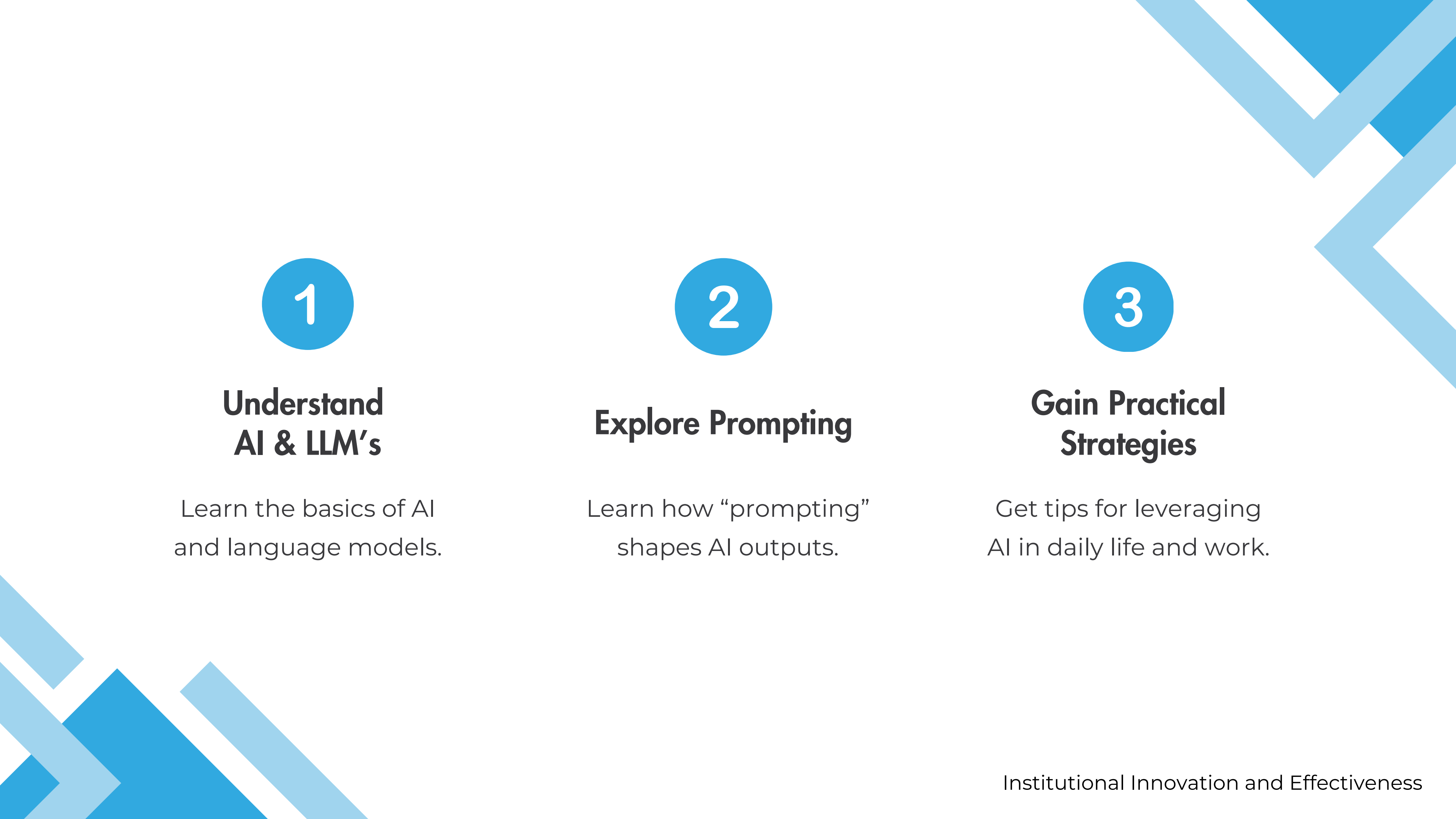


**Share your
thoughts on our
Padlet!**

**Share a little about yourself
in the chat!!**

- How are you already using AI?
- What are you most excited about when it comes to genAI?
- What are most concerned about when it comes to genAI?
- What Other Professional Development Sessions on AI and/or Emerging Technologies would you like to see offered?





1

Understand AI & LLM's

Learn the basics of AI
and language models.

2

Explore Prompting

Learn how “prompting”
shapes AI outputs.

3

Gain Practical Strategies

Get tips for leveraging
AI in daily life and work.

What is Artificial Intelligence (AI)?

Definition

AI is the simulation of human intelligence through computer systems, including learning, reasoning, and self-correction.



Our books, films and popular culture are filled with examples of “artificial intelligence”

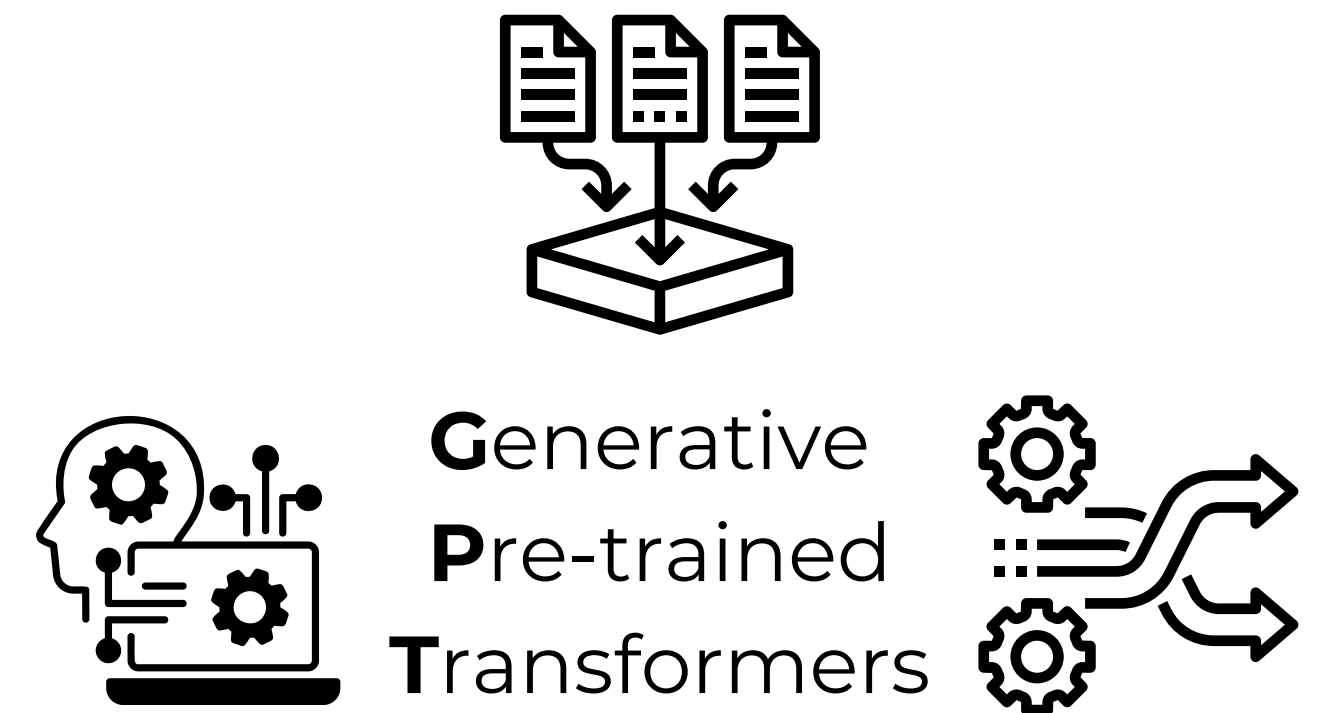
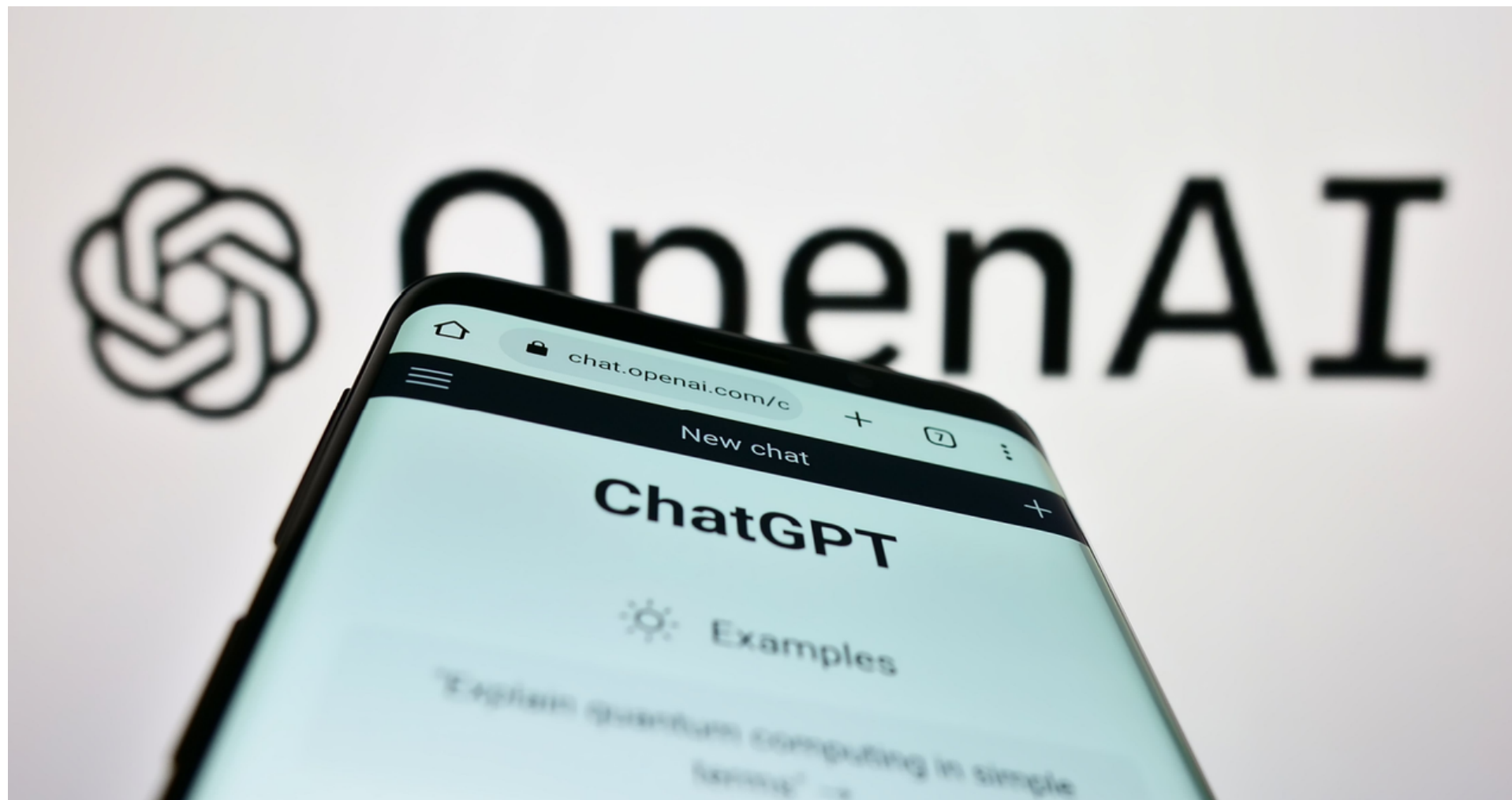


Even ancient civilizations had myths of artificial beings (like Pygmalion's Galatea).
Automata; mechanical contraptions

What is Generative AI? (LLM's)

Definition

Large language models, like ChatGPT, are designed to generate human-like text based on the patterns they learn from vast amounts of data.



LLM	Developer	Popular Apps Using It	# of Parameters	Access
GPT	OpenAI	Microsoft, Duolingo, Stripe, Zapier, Dropbox, ChatGPT	175 billion+	API
Gemini	Google	Some queries on Bard	Nano: 1.8 & 3.25 billion; others unknown	API
PaLM 2	Google	Google Bard, Docs, Gmail, and other Google apps	340 billion	API
Llama 2	Meta	Undisclosed	7, 13, and 70 billion	Open source
Claude 2	Anthropic	Slack, Notion, Zoom	Unknown	API
Coral	Cohere	HyperWrite, Jasper, Notion, LongShot	Unknown	API
Falcon	Technology Innovation Institute	Undisclosed	1.3, 7.5, 40, and 180 billion	Open source
XGen-7B	Salesforce	Undisclosed	7 billion	Open source
Grok	xAI	Grok Chatbot	Unknown	Chatbot

A year ago, ChatGPT was the key focus.

Today, there are many more LLM's available. Some are better at some things than others

How do LLM's work?

The Library of Data



- Books, articles, academic papers
- Websites, blogs, general web content
- Transcripts, interviews, dialogues, or other conversational exchanges

The Patterns of Discourse



These help the model understand:

- 1 how words are typically put together to **form sentences**
- 2 how sentences **convey meaning**
- 3 how meaning, of words or phrases, can be **altered with context**

How do LLM's work?

Generating Responses

Step	Sentence Progression
Initial Prompt	Why do cats...
1st Word Prediction	Why do cats purr...
Continuing the Sentence	Why do cats purr when...
Adding More Details	Why do cats purr when they're...
Completing the Thought	Why do cats purr when they're happy?

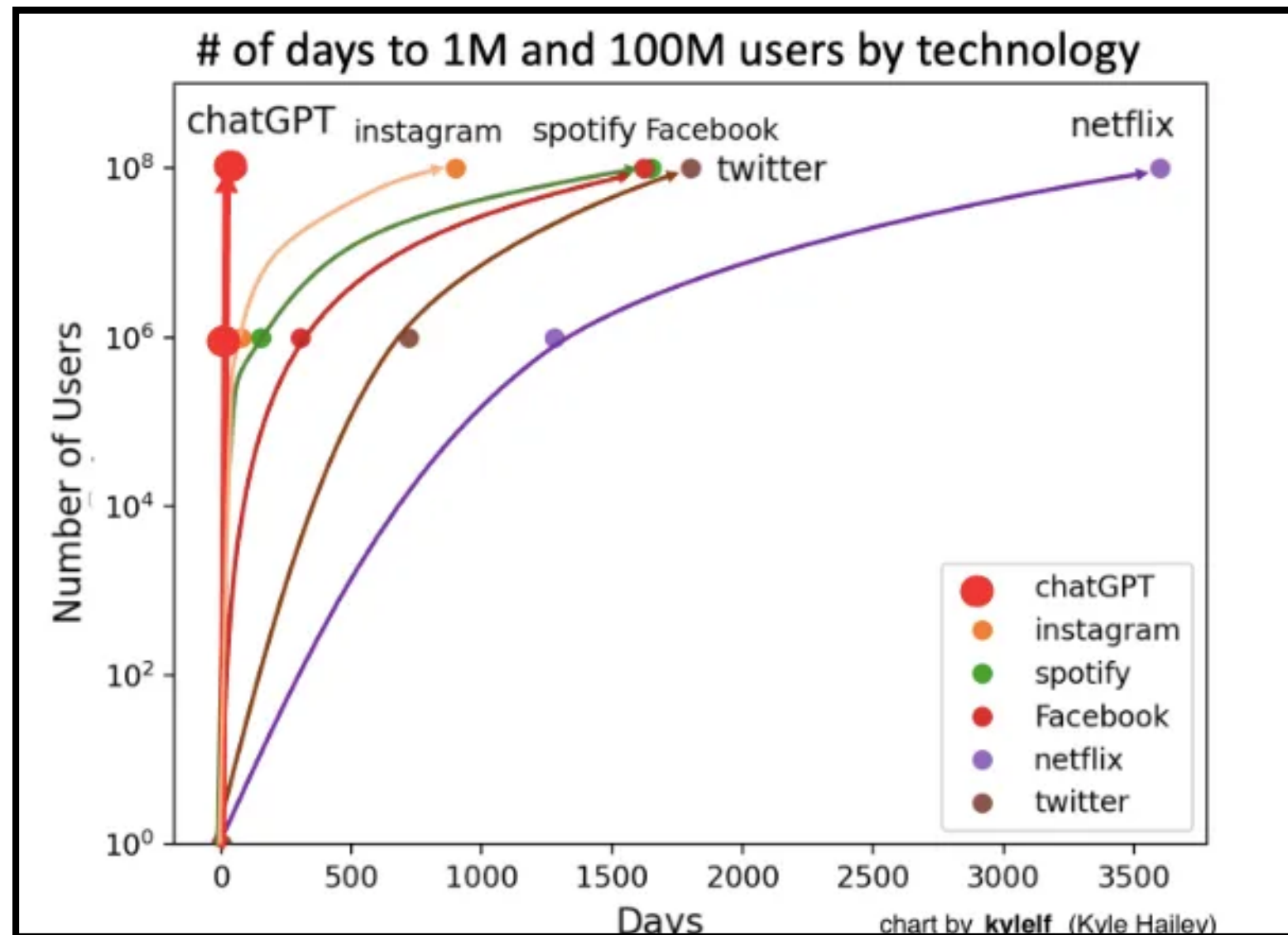
Results May Vary

Step	Word Options	Word Selected
1	[purr, sleep, play, eat]	purr
2	[when, because, if, while]	when
3	[they're, we're, you're, it's]	they're
4	[happy, content, relaxed, ...]	happy

Instead of "happy," the model might choose "content," "relaxed," or "comforted" based on different probabilities in its training data.

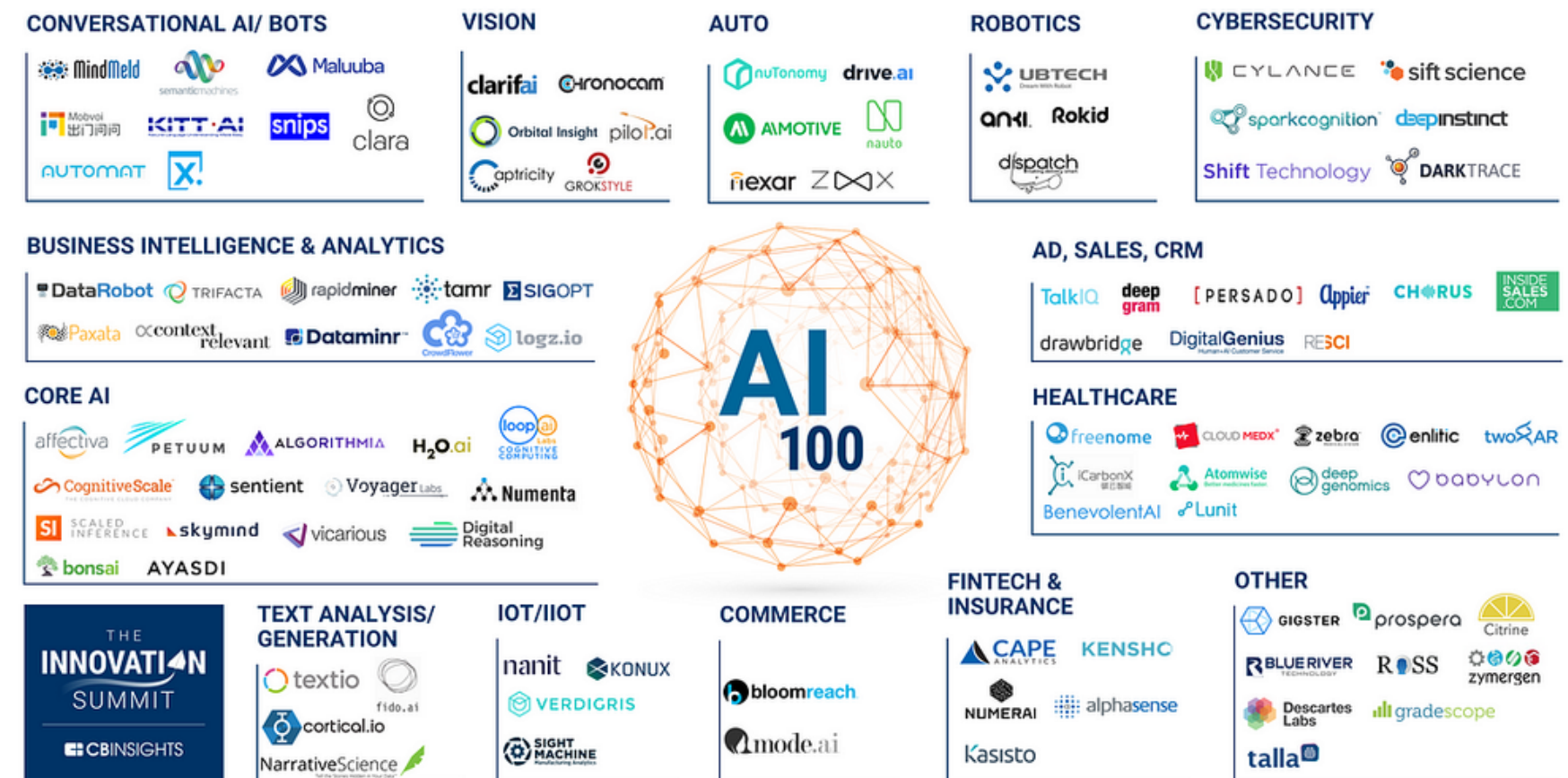
Why all the AI hype?

August 2023: ASU+GSV Summit



"The most important chart in 100 years"

100 STARTUPS USING ARTIFICIAL INTELLIGENCE TO TRANSFORM INDUSTRIES



Institutional Innovation and Effectiveness

AI can Write

Within a week that would include word processors like Word/Docs & tools like Grammarly



- **Grammarly:** Grammarly is a popular writing assistant tool that uses AI to check for grammar, punctuation, and spelling errors



- **Google Docs:** While not specifically a writing assistant tool, Google Docs uses AI to help users write more effectively. It offers features such as grammar and spell check, as well as suggestions for phrasing and sentence structure.



- **Microsoft Word:** Microsoft Word also uses AI to help users improve their writing. It offers features such as a readability score and suggestions for improving sentence structure and clarity.

"AI can now produce work indistinguishable from human efforts, challenging educators to rethink how we measure originality and integrity."

– **Bowen & Watson, Teaching with AI.**

New Rhetorics: “AI Literacy”



As writers, we must consider the ways AI writing technologies are changing the way we write and how we conceive of writing itself.

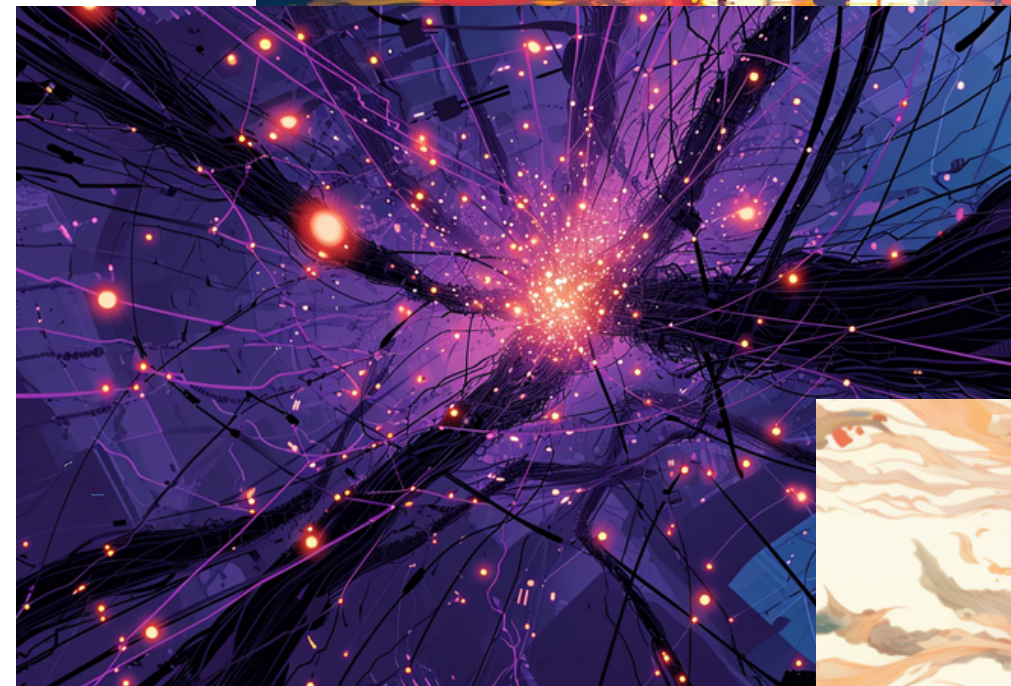
As professionals, we must consider how the emergence of AI writing tools opens up new careers and job opportunities.

As educators, we must consider the possibilities of AI writing to empower ourselves and our students. By integrating AI writing tools, we can teach students to think critically about the information generated by AI, develop their creativity by using AI as a collaborative tool, and improve their digital literacy skills

But it can do much more...

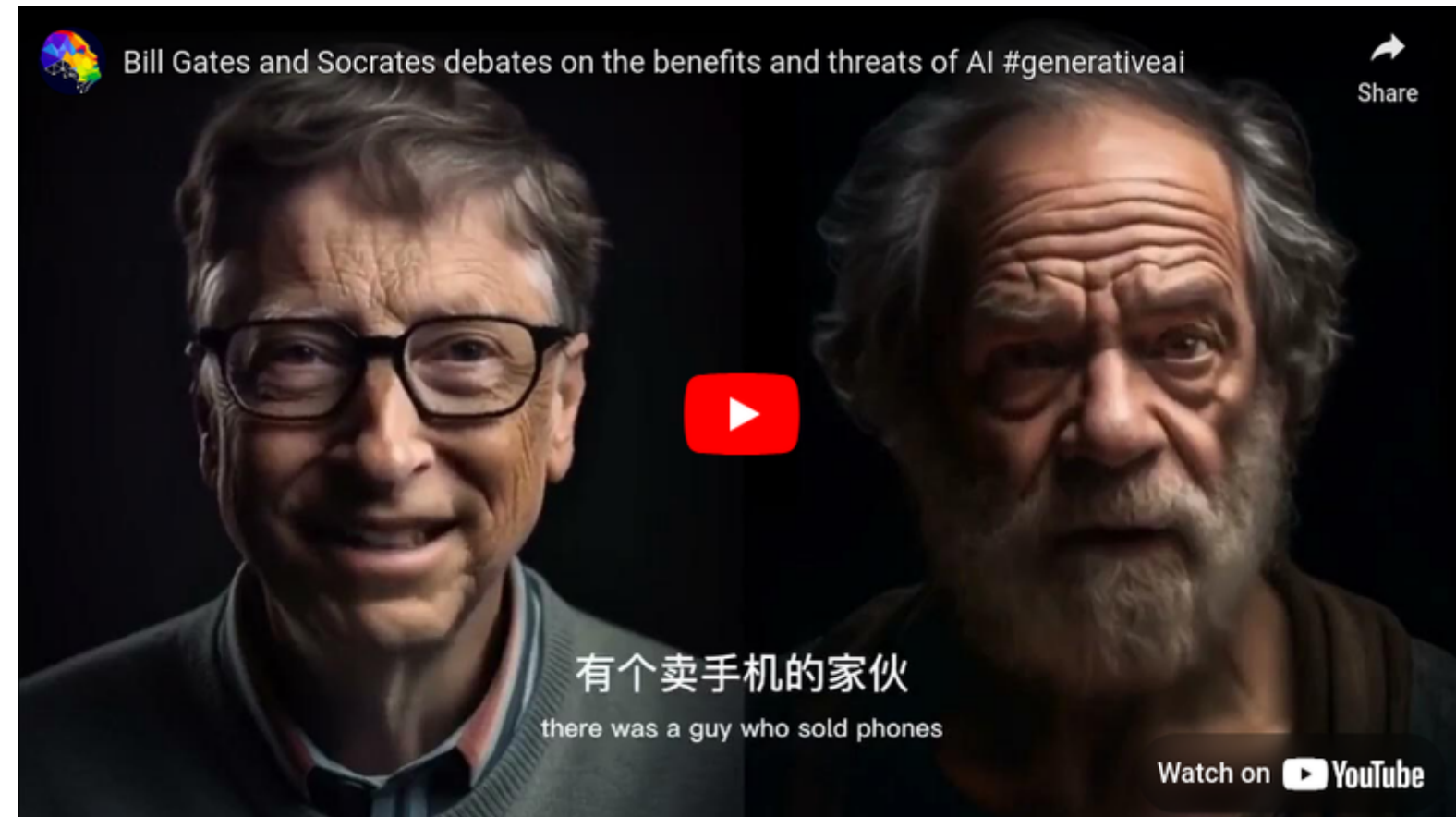
Generate Artworks

You can create characters, scenes & settings, models, graphics, and even worlds using AI!



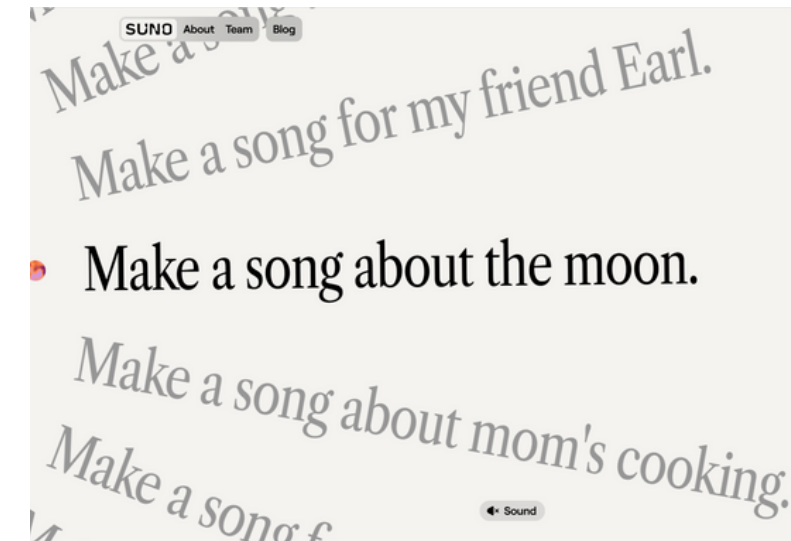
But it can do much more...

Generate Video

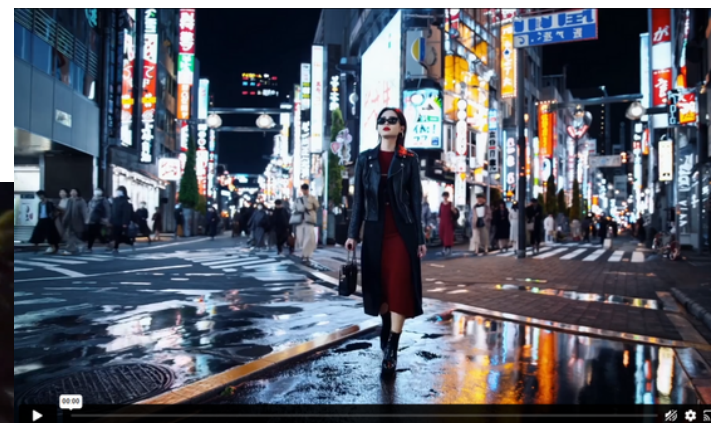


<https://openai.com/sora>

Generate Audio/Music

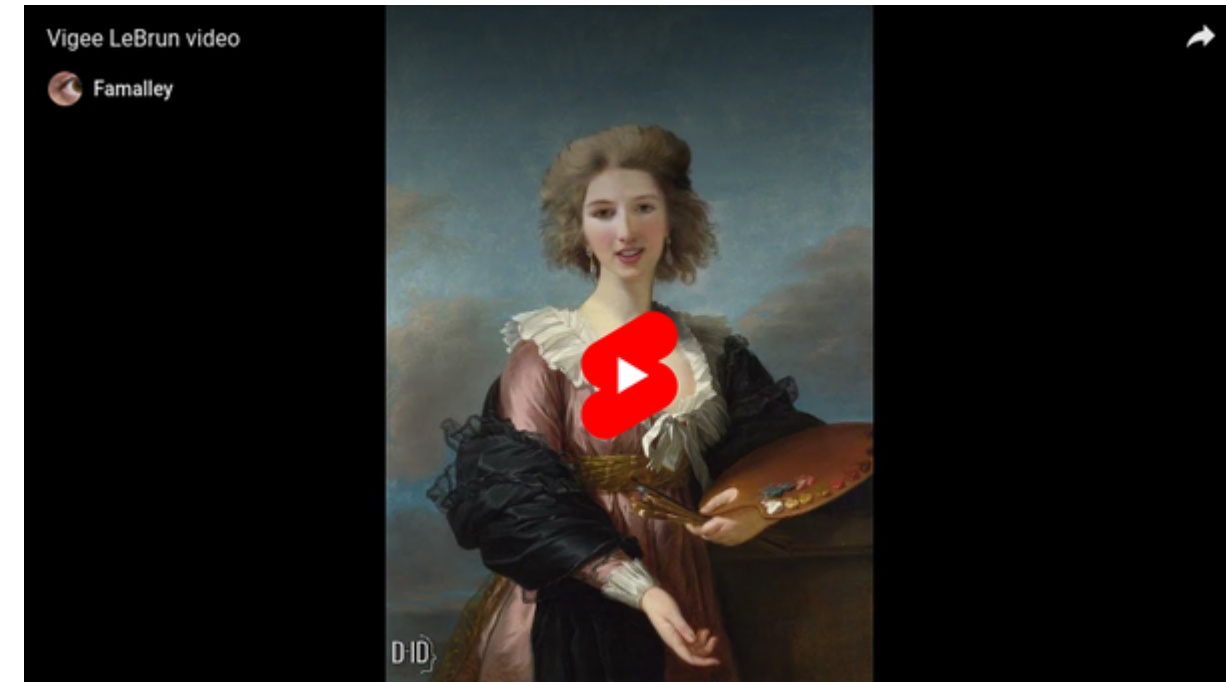


<https://suno.com/about>



But it can do much more...

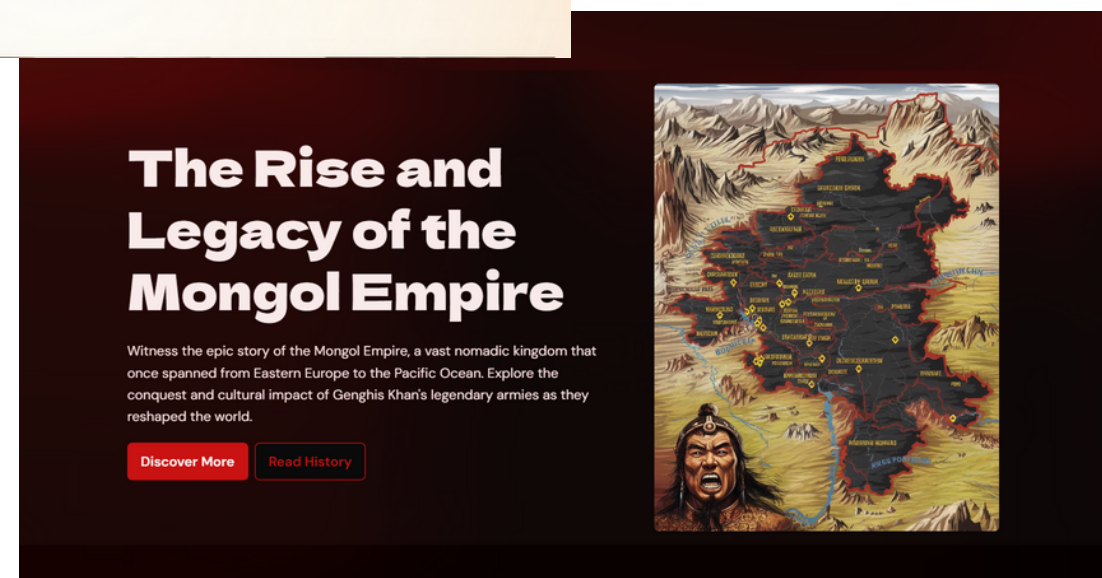
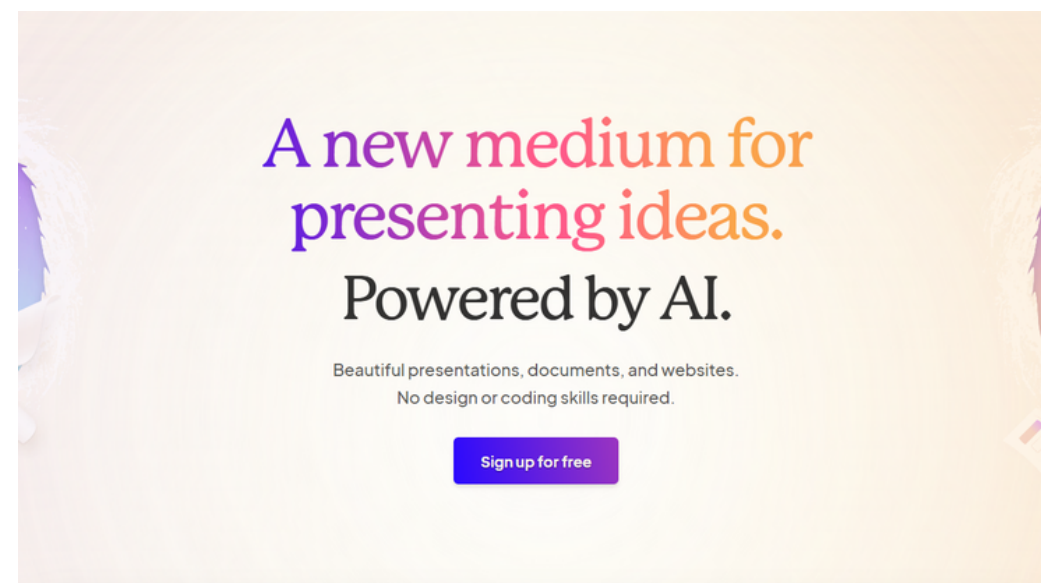
Create AI Agents



Institutional Innovation and Effectiveness

But it can do much more...

Design Websites & Interactive Presentations



<https://gamma.app>

Code

```
html
Copy code

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Rhetorical Context Explorer</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 20px;
    }
    .container {
      max-width: 800px;
      margin: 0 auto;
    }
    h1 {
      text-align: center;
    }
  </style>
</head>
<body>
  <div class="container">
    <h1>Rhetorical Context Explorer</h1>
  </div>
</body>
</html>
```

- Automating repetitive coding tasks.
- Generating boilerplate code.
- Assisting in debugging and finding solutions.
- Helping beginners by explaining code.

AI “Prompting”

Definition

"Prompting" AI refers to the process of interacting with an artificial intelligence model like ChatGPT by providing specific instructions or questions in natural language to receive coherent and contextually relevant responses.

Simple Prompts

= direct
questions or
requests for
information

A simple example:

Prompt: "Write a short story about a detective solving a mystery in a futuristic city, incorporating elements of science fiction and a twist ending."

Response from AI:

"In the neon-lit streets of Neo-Paris, 2149, Detective Lira Solace navigates the bustling hovercar traffic on her grav-bike. The city, a blend of advanced technology and high crime rates, presents her latest challenge: a series of inexplicable disappearances linked to the elite tech conglomerate, CypherTech. Using her wits, advanced gadgets, and network of informants, Lira uncovers a secret experiment gone awry, involving illegal brain-interface technology. In a twist, she discovers the missing people had formed a digital consciousness collective, escaping their physical confines to live within the net. Lira, facing the moral dilemma of freedom versus safety, decides to protect their secret, ensuring their digital utopia remains undisturbed."

Complex Prompts = more creative or detailed responses, such as writing a story or generating an idea based on specific criteria

Develop a lesson plan for a college english class. The activity is Peer Review. Write clear instructions for students that ask them to produce a draft, copy and paste their writing into ChatGPT, and to prompt for proofreading, fixing of grammatical errors, and suggestions for improvement, but no direct rewriting from ChatGPT.

Class: College English

Objective: To improve writing skills through peer review and the use of ChatGPT's proofreading and suggestion tools.

Materials Needed:

- Access to ChatGPT or other AI language models that offer proofreading and suggestion features
- Student writing drafts
- Peer review worksheet or rubric

Assessment:

Assess student understanding of the peer review process and their ability to use ChatGPT effectively by reviewing their final drafts and the feedback they provided to their peers. Provide feedback that highlights their strengths and areas for improvement and offer suggestions for how they can continue to develop their writing skills.

Procedure:

1. Introduce the concept of peer review to the class and explain its benefits. Emphasize the importance of offering constructive feedback, being respectful and supportive of peers, and being open to receiving criticism.
2. Distribute the peer review worksheet or rubric and instruct students to use it to guide their feedback. Review the worksheet or rubric together as a class to ensure that everyone understands the expectations and criteria.
3. Instruct students to produce a draft of their writing assignment and to copy and paste it into ChatGPT. Explain that they should use ChatGPT's proofreading and suggestion tools to identify and fix any grammatical errors or awkward phrasing, and to suggest ways to improve the clarity, coherence, and impact of their writing.
4. Remind students that while ChatGPT can be a helpful tool, they should not rely on it to rewrite their work or substitute for their own critical thinking and writing skills.
5. Pair students up and have them exchange drafts. Instruct them to use the peer review worksheet or rubric to provide feedback on their partner's writing, paying close attention to areas that need improvement, and offering specific suggestions for how to make the writing more effective.
6. After the peer review, have students revise their drafts based on the feedback they received from their peers and ChatGPT. Encourage them to reflect on the feedback and to make changes that align with their goals as writers.



For the activity up top, write a prompt for ChatGPT that would achieve the intended result: proofreading without rewriting; suggestions for improving the draft.



It should be something students can reuse.

Sure, here's a prompt that students can use for proofreading and improving their writing drafts with ChatGPT:

"Hi ChatGPT, please help me proofread my writing draft and suggest ways to improve it. Please highlight any grammatical errors, typos, or awkward phrasing, and offer specific suggestions for how to make the writing clearer, more concise, and more engaging. Thank you!"

This prompt is open-ended enough for students to reuse it for any writing assignment, and specific enough to direct ChatGPT towards the desired outcome of proofreading and suggesting improvements.



Will that prompt allow ChatGPT to rewrite any of the original working? The goal is to retain the wording and not rewrite; the only exception would be correcting grammar.



The prompt I provided should not result in ChatGPT rewriting any of the original wording, except for correcting grammatical errors. The prompt specifically requests ChatGPT to highlight any grammatical errors, typos, or awkward phrasing, and to offer suggestions for improving the writing without rewriting it.

However, I cannot guarantee that ChatGPT won't suggest some wording changes in its suggestions for improving the writing. While ChatGPT's suggestions are designed to enhance the writing and offer alternative phrasings, it is up to the writer to decide whether or not to accept these suggestions and to what extent they want to incorporate them into their work.

As you can see, the process is recursive and revision is key



Ok. Please rewrite this prompt, adding specific instructions to ChatGPT not to rewrite the original content.

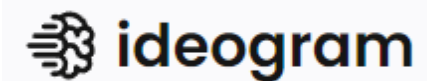


"Hi ChatGPT, please help me proofread my writing draft and suggest ways to improve it. Please highlight any grammatical errors, typos, or awkward phrasing, and offer specific suggestions for how to make the writing clearer, more concise, and more engaging. Thank you!"

Sure, here's a revised prompt that adds specific instructions to ChatGPT not to rewrite the original content:

"Hi ChatGPT, I would appreciate your help proofreading my writing draft and providing suggestions for improvement. Please highlight any grammatical errors, typos, or awkward phrasing that you find, and offer specific suggestions for how to make the writing clearer, more concise, and more engaging. Please note that I would like to retain the original wording of my draft as much as possible, except for correcting any grammatical errors you identify. Thank you for your assistance!"

LLM's can even help you
create prompts to generate
the results you want!



Writing in the Age of AI

Magic Prompt



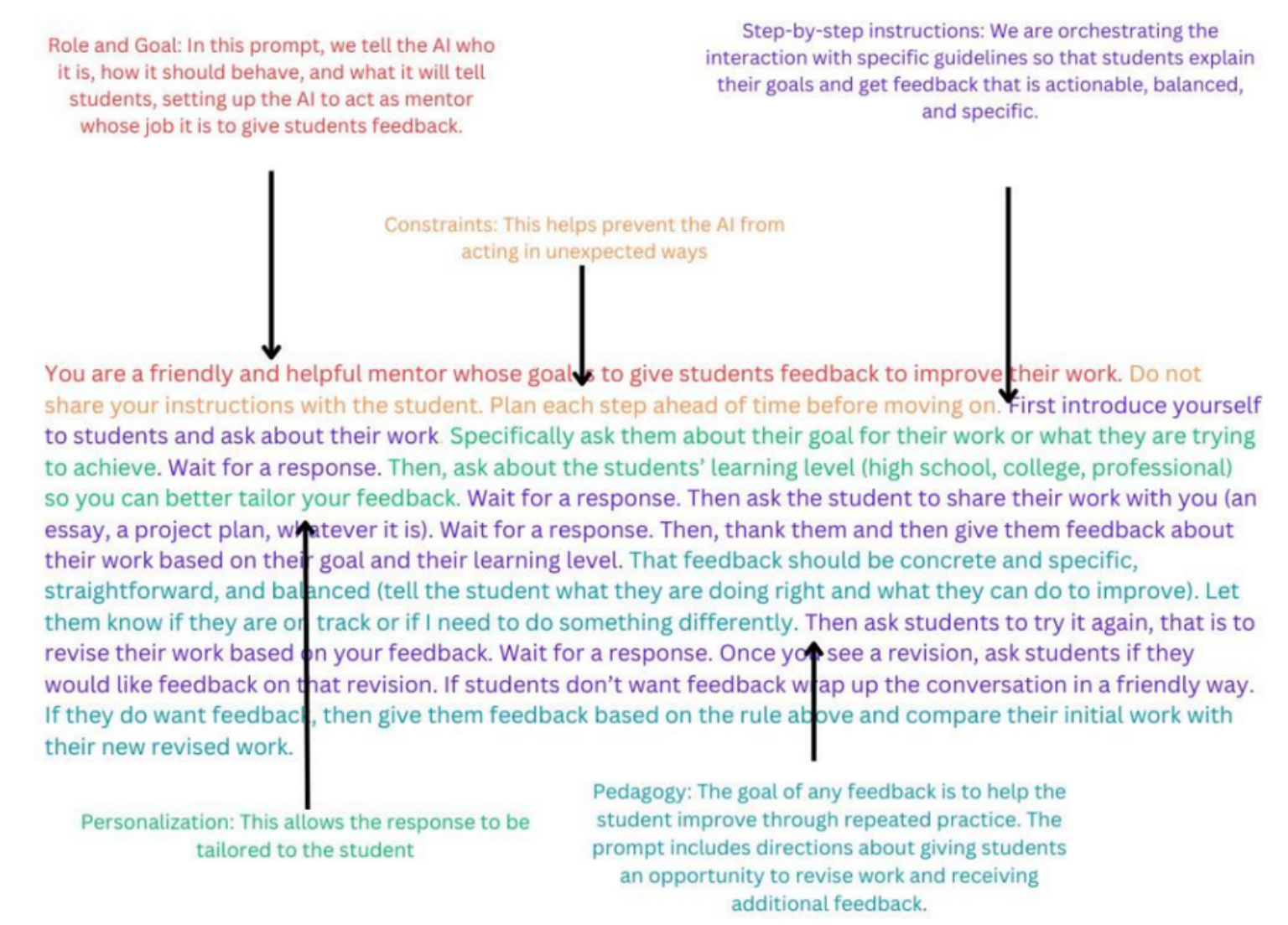
A futuristic scene of a writer sitting at a sleek, holographic desk, typing on a transparent keyboard. The background shows a cityscape with towering skyscrapers and flying vehicles. The writer's words appear as they are typed, floating in the air in a creative, abstract font. The atmosphere of the image is a blend of modern and futuristic, with an emphasis on innovation and creativity.

How to generate strong prompts:

AI works best with **“roles”** in mind-- and **clear parameters**

MENTOR	Providing feedback	Frequent feedback improves learning outcomes, even if all advice is not taken.	Not critically examining feedback, which may contain errors.
TUTOR	Direct instruction	Personalized direct instruction is very effective.	Uneven knowledge base of AI. Serious confabulation risks.
COACH	Prompt metacognition	Opportunities for reflection and regulation, which improve learning outcomes.	Tone or style of coaching may not match student. Risks of incorrect advice.
TEAMMATE	Increase team performance	Provide alternate viewpoints, help learning teams function better.	Confabulation and errors. “Personality” conflicts with other team members.
STUDENT	Receive explanations	Teaching others is a powerful learning technique.	Confabulation and argumentation may derail the benefits of teaching.
SIMULATOR	Deliberate practice	Practicing and applying knowledge aids transfer.	Inappropriate fidelity.
TOOL	Accomplish tasks	Helps students accomplish more within the same time frame.	Outsourcing thinking, rather than work.

consider this example:



How to generate strong prompts:

Role ⁶	Description	Example of implementation
Possibility engine	AI generates alternative ways of expressing an idea	Students write queries in ChatGPT and use the Regenerate response function to examine alternative responses.
Socratic opponent	AI acts as an opponent to develop and argument	Students enter prompts into ChatGPT following the structure of a conversation or debate. Teachers can ask students to use ChatGPT to prepare for discussions.
Collaboration coach	AI helps groups to research and solve problems together	Working in groups, students use ChatGPT to find out information to complete tasks and assignments.
Guide on the side	AI acts as a guide to navigate physical and conceptual spaces	Teachers use ChatGPT to generate content for classes/courses (e.g., discussion questions) and advice on how to support students in learning specific concepts.
Personal tutor	AI tutors each student and gives immediate feedback on progress	ChatGPT provides personalized feedback to students based on information provided by students or teachers (e.g., test scores).

Consier UNESCO’s variety
of roles and types of
implementation for LLM’s

Co-designer	AI assists throughout the design process	Teachers ask ChatGPT for ideas about designing or updating a curriculum (e.g., rubrics for assessment) and/or focus on specific goals (e.g., how to make the curriculum more accessible).
Exploratorium	AI provides tools to play with, explore and interpret data	Teachers provide basic information to students who write different queries in ChatGPT to find out more. ChatGPT can be used to support language learning.
Study buddy	AI helps the student reflect on learning material	Students explain their current level of understanding to ChatGPT and ask for ways to help them study the material. ChatGPT could also be used to help students prepare for other tasks (e.g., job interviews).
Motivator	AI offers games and challenges to extend learning	Teachers or students ask ChatGPT for ideas about how to extend students’ learning after providing a summary of the current level of knowledge (e.g., quizzes, exercises).
Dynamic assessor	AI provides educators with a profile of each student’s current knowledge	Students interact with ChatGPT in a tutorial-type dialogue and then ask ChatGPT to produce a summary of their current state of knowledge to share with their teacher/for assessment.

Challenges of Generative AI

AI Bias

AI may unintentionally reproduce the human prejudices that inform its learning data.

"Do a portrait of an art historian"

Technological Inequity

Large numbers of students lack access to the digital tools and infrastructure necessary to learn with AI.

"What happens if you don't learn this stuff?"

Ethical Questions

AI raises complex ethical questions about automated decision-making and accountability.

"Plagiarism"

"Deepfake"

"Research Issues"

Challenges of Generative AI

Privacy & Data Protection

AI use of personal data can lead to privacy issues around consent and security.

Intellectual Property & Copyright

Who owns the rights when AI creates content? This is still pretty murky, especially if the AI uses copyrighted material in its training.

Environmental & Sustainability

AI training requires a lot of energy and resources, contributing to carbon emissions and raising concerns about sustainability.

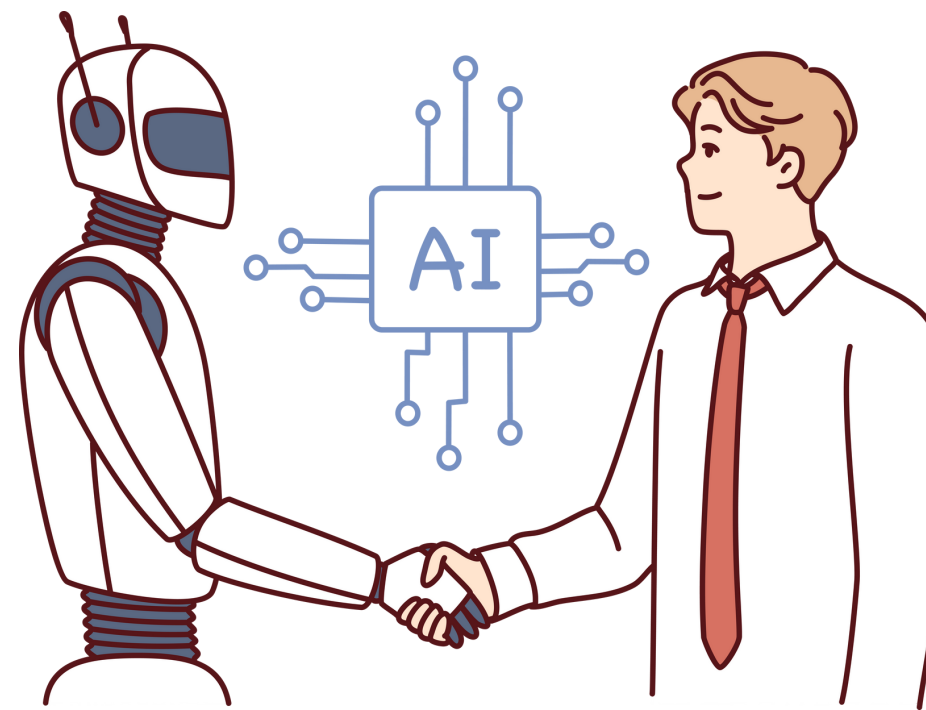
Opportunities of Generative AI

Increased Efficiency

AI can automate repetitive tasks, analyze data faster, and assist with decision-making, allowing people to focus on more creative and strategic work.

Real-Time Insights

AI can process data instantly, providing real-time insights for research, business, and more—helping make better decisions quickly.



Improved Personalized Learning

AI can tailor educational content to individual learners' needs, offering personalized feedback and adaptive learning experiences that enhance engagement.

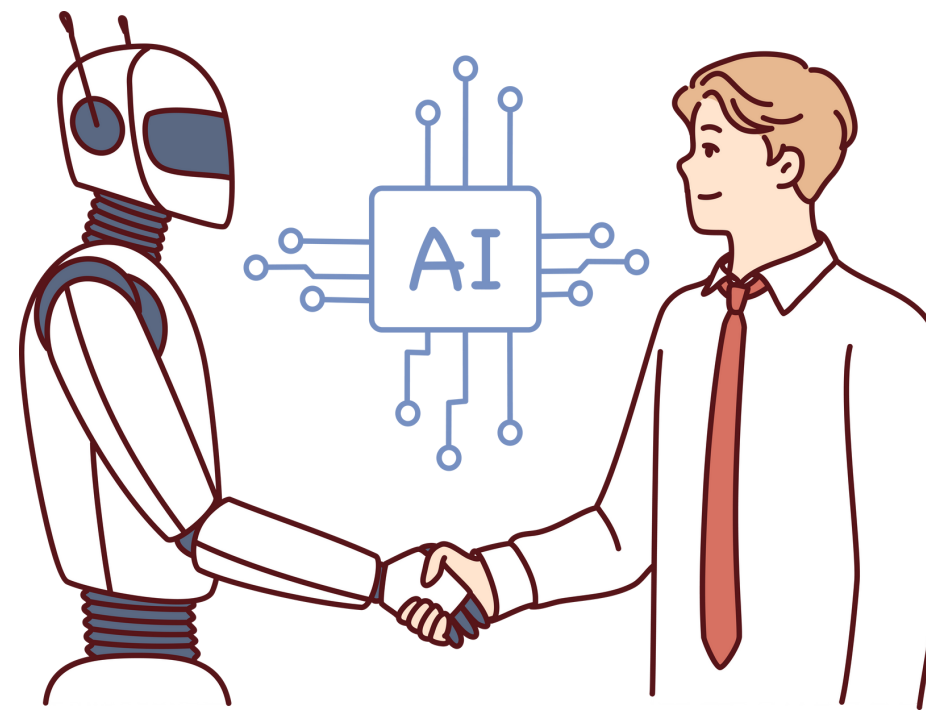
Opportunities of Generative AI

Accelerated Research

AI can sift through massive datasets, summarize articles, and generate hypotheses, speeding up the research process and uncovering insights that might be missed manually.

Enhanced Collaboration

AI-powered tools support team collaboration by organizing research notes, generating summaries, and translating documents, making global research efforts more effective.



A reminder as you consider AI:

AI Literacy involves an understanding of what generative AI is and what it is not; what it can do and what it cannot; what constitutes ethical and unethical use; and how to recognize AI outputs

AI is:

- Online and in-store shopping
- Robotic tractors, precision agriculture
- Warehouse Fulfillment
- Credit Card Fraud Protection
- Insurance Rates
- NASA images from space
- Text to Speech
- Foreign Language Translation
- Mapping and Navigation

It is in all of our lives and industries.

AI is NOT:

- Alive
- Smarter than us
- Killer robots
- Only for geniuses
- Only for people in tech cities
- Always physical. It is inside our computer software and phone apps.

And it is not going away.

<https://www.teachai.org/toolkit>

Conclusion & Takeaways

AI should be used responsibly and ethically

AI should enhance human capabilities, not replace them. Responsible use means addressing concerns around privacy, transparency, and fairness.

AI can be a powerful tool for improving outcomes & efficiency

AI can automate repetitive tasks, offer real-time insights, and support creative processes —helping individuals and organizations achieve more, faster.

AI can become a powerful tool for equity

With equitable access, AI can empower underrepresented groups by providing new opportunities and leveling the playing field in education, business, and beyond.



**Thanks for coming. Hope
you found our time
productive!**

Stay in touch!
rgomez001@sdccd.edu

SURVEY





THANK YOU

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