



Generative AI Overview and Implications

April 2, 2024



Let's Explore the Possibilities

Chat GPT Prompts

- Give me a writing prompt that AI cannot answer
- Write a lesson plan to teach SKILL to a GRADE grader who is interested in INTEREST

AI Won't Replace Humans - But
Humans Who Can Leverage AI
Will Replace Humans Who
Cannot Leverage AI

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AI Presents Incredible...

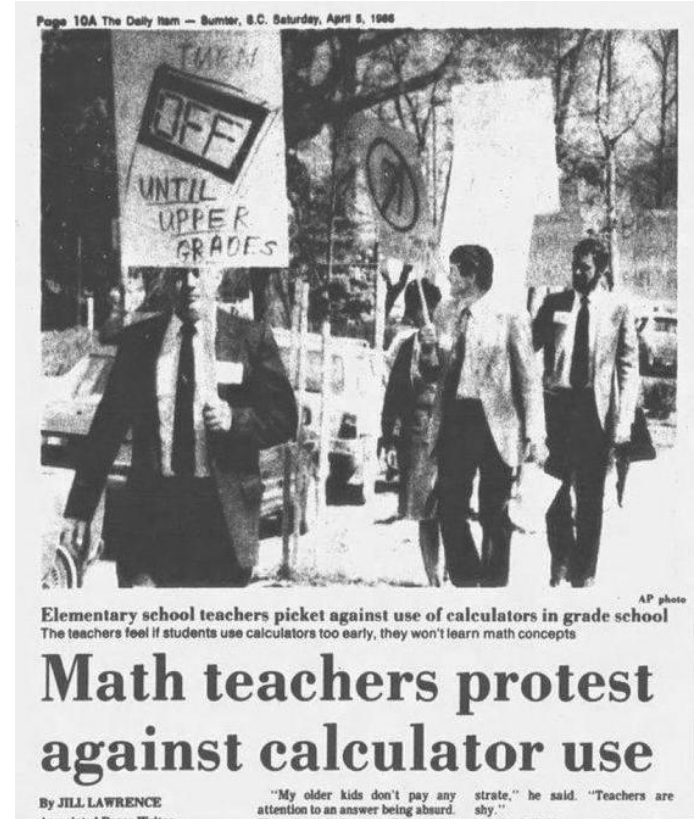
Opportunities

- Students
- Teachers
- Administrators
- Workforce

Risks

- Plagiarism
- Privacy
- Writing Skills
- Bias/False Info
- “Deepfakes”

The key is to maximize the opportunities while mitigating the risks.



Opportunities for Students

- Personalized Learning
- Enhanced Learning Environment
- Interactive Learning Tools
- STEM Education
- Critical Thinking and Problem Solving
- Creativity and Innovation
- Workforce Preparation

Opportunities for Teachers and Staff

- Personalized Instruction
- Professional Development
- Time-Saving Tools (Grading, Assessment, Lesson Planning)
- Data-Driven Decision-Making
- Accessibility and Inclusion
- Collaborative Learning Communities
- Innovative Teaching Strategies
- Admin Support (Master Scheduling, etc.)

AI Will Impact Workforce Readiness Skills

McKinsey & Company Research on Workforce Readiness Skills in an AI World



Cognitive	
Critical thinking <ul style="list-style-type: none"> ● Structured problem solving ● Logical reasoning ● Understanding biases ● Seeking relevant information 	Planning and ways of working <ul style="list-style-type: none"> ● Work-plan development ● Time management and prioritization ● Agile thinking
Communication <ul style="list-style-type: none"> ● Storytelling and public speaking ● Asking the right questions ● Synthesizing messages ● Active listening 	Mental flexibility <ul style="list-style-type: none"> ● Creativity and imagination ● Translating knowledge to different contexts ● Adopting a different perspective ● Adaptability ● Ability to learn

Self-leadership	
Self-awareness and self-management <ul style="list-style-type: none"> ● Understanding own emotions and triggers ● Self-control and regulation ● Understanding own strengths ● Integrity ● Self-motivation and wellness ● Self-confidence 	
Entrepreneurship <ul style="list-style-type: none"> ● Courage and risk-taking ● Driving change and innovation ● Energy, passion, and optimism ● Breaking orthodoxies 	
Goals achievement <ul style="list-style-type: none"> ● Ownership and decisiveness ● Achievement orientation ● Grit and persistence ● Coping with uncertainty ● Self-development 	

Interpersonal	
Mobilizing systems <ul style="list-style-type: none"> ● Role modeling ● Win-win negotiations ● Crafting an inspiring vision ● Organizational awareness 	Developing relationships <ul style="list-style-type: none"> ● Empathy ● Inspiring trust ● Humility ● Sociability
Teamwork effectiveness <ul style="list-style-type: none"> ● Fostering inclusiveness ● Motivating different personalities ● Resolving conflicts ● Collaboration ● Coaching ● Empowering 	

Digital	
Digital fluency and citizenship <ul style="list-style-type: none"> ● Digital literacy ● Digital learning ● Digital collaboration ● Digital ethics 	
Software use and development <ul style="list-style-type: none"> ● Programming literacy ● Data analysis and statistics ● Computational and algorithmic thinking 	
Understanding digital systems <ul style="list-style-type: none"> ● Data literacy ● Smart systems ● Cybersecurity literacy ● Tech translation and enablement 	

Intro to Generative AI

- **Generative AI** - Generative artificial intelligence (AI) describes algorithms (such as ChatGPT) that can be used to create new content, including audio, code, images, text, simulations, and videos.

From - [What is ChatGPT, DALL-E, and generative AI? | McKinsey](#)

- **Text Generating Tools**

- ChatGPT
- Bard
- Claude
- MS Copilot

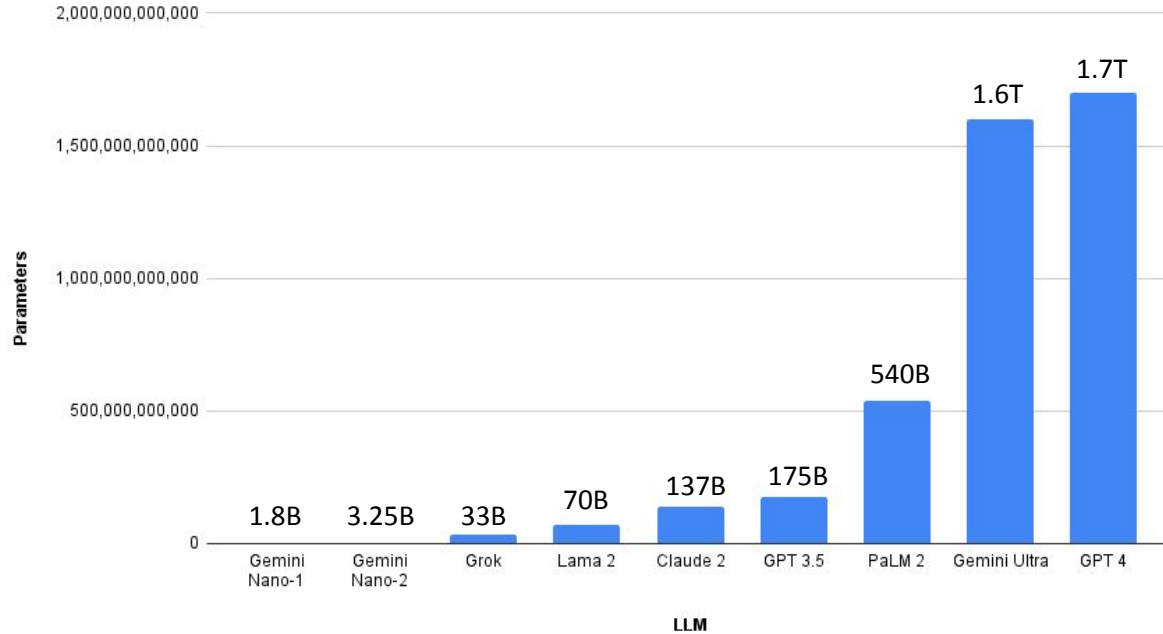
- **Image Generating Tools**

- DALL-E
- Midjourney
- Stable Diffusion

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Intro to Generative AI

Parameters vs. LLM



Seconds	Years
1.8B	57
175B	5,549
1.7T	53,907

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Image Generating Tools

Playground AI

The screenshot displays the Playground AI interface with the following sections:

- Board / Canvas:** Toggle at the top.
- Filter:** A section for applying styles, currently set to "None".
- Prompt:** A text area for entering prompts. Example: "Tiny underwater complete world in large glass bowl, water, omnilight, Sharp, detailed and intricate environment".
- Exclude From Image:** A dropdown menu set to "Remove Common Issues".
- Image to Image:** A section for uploading or drawing an image for inspiration.
- Generate:** A button at the bottom left to start the generation process.
- Filter (Grid):** A grid of 15 image filters, including "Deliberate", "Dreamshaper", "RPG 4", "Realistic Vision 2", "ReVAnimated", "Counterfelt 3", "Protogen Photorealism 5.3", "Protogen Anime 2.2", "Protogen Photorealism 3.4", "Geometrieva style", "Colorpop", "Instaport", "Playtoon", "Polymode", and "Spider-Man".
- Columns:** A slider to adjust the number of columns.
- Model:** A dropdown menu set to "Stable Diffusion 1.5".
- Image Dimensions:** A grid of size options: 512 x 512, 1024 x 1024, 640 x 384, 384 x 640, 768 x 512 (selected), and 512 x 768.
- Prompt Guidance:** A slider set to 10.
- Quality & Details:** A slider set to 50.
- Seed:** A field for entering a seed value.

Image Generating Tools

Leonardo AI

The screenshot displays the Leonardo AI interface for the AI Generation Tool. At the top, the user's profile is 'Leonardo.Ai' and the tool is identified as 'AI Generation Tool'. The main prompt area contains the text 'octopus on a coral reef'. Below the prompt, there are several controls: a 'Generate' button, a 'Finetuned Model' dropdown set to 'DreamShaper v7', a resolution of '640x832', a 'Dynamic' mode selector, and an 'Add Negative Prompt' toggle. A notification indicates 'This will use 20 tokens. 150 tokens remaining.' On the left sidebar, there are settings for 'Number of Images' (set to 4), 'Prompt Magic' (set to V3 BETA), 'Prompt Magic Strength' (set to 0.55), 'RAW Mode' (disabled), 'Alchemy' (set to BETA), 'High Resolution' (disabled), 'Final Resolution' (768 x 1152), 'Contrast Boost' (set to 0.5), 'Resonance' (set to 15), 'Public Images' (disabled), and 'Input Dimensions' (set to 512 x 768). The main area shows a grid of 24 generated images, each with a title and a brief description. The images include various styles such as 'SDXL 0.9', '3D Animation Style', 'DreamShaper v7', 'Absolute Reality v1.6', 'DreamShaper v6', 'DreamShaper v5', 'Leonardo Diffusion', 'RPD 4.0', 'Deliberate 1.1', 'Vintage Style Photography', 'DreamShaper 5.2', 'Leonardo Select', 'Leonardo Creative', 'Battle Axes', 'Pixel Art', 'Magic Items', 'Crystal Deposits', 'Chest Armor', 'Character Portraits', 'Magic Potions', and 'Isometric Fantasy'.

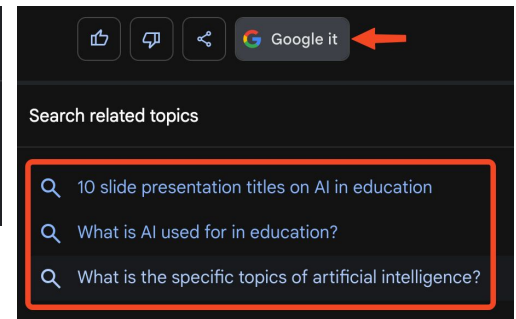
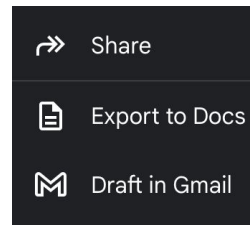
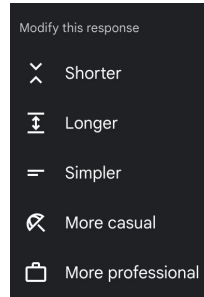
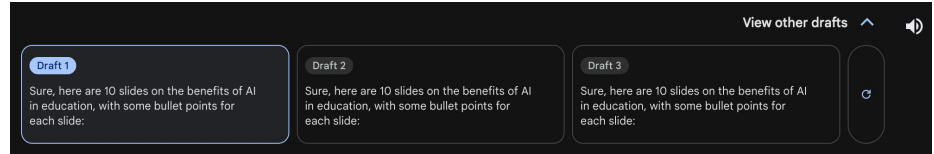
Text Generating Tools

ChatGPT

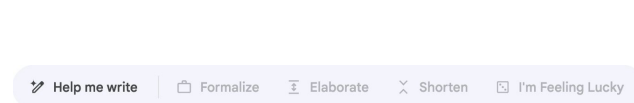
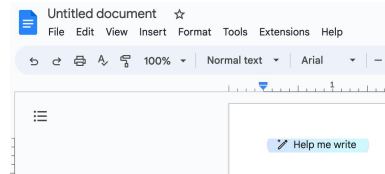


↻ Regenerate response

Gemini/Bard



Example Responses from AI Chat Bots



bit.ly/01aiedu

Exploration Stage

- We are working to be at the forefront of AI adoption in school districts.
- We have done tremendous research and have engaged our school leaders.
- We are exploring a district partnership with Khan Academy
- We will be “dipping our toe in” through a Khanmingo Pilot Program - 28 schools volunteered to pilot for 2024-2025

The key is to maximize the opportunities while mitigating the risks.

Khanmigo from Khan Academy

For Students

Chat

Chat with a literary character >

Chat with a historical figure >

Play

Play: Word architect >

Play: Word safari >

Tutor Me

Tutor me: Math and science >

Tutor me: Humanities >

What should I learn next? >

Help me focus **NEW** >

Help me prepare for the National Civics Bee® >

Write

Give feedback on my academic essay **NEW** >

Craft a story >

Brainstorm an admissions essay >

Check for problems in my admissions essay >

Debate

Debate: Elementary school topics and beyond >

Debate: Middle school topics and beyond >

Debate: High school topics and beyond >

For Teachers

Teacher Tools

Refresh my knowledge >

Create a lesson plan **NEW** >

Create a lesson hook >

Write learning objectives >

Write exit ticket questions >

Co-create a rubric >

Write a class newsletter >



Write a recommendation letter >

Create a fun class summary poem >

Chat with GPT-4 >



give me the answer to $-5y+3=2(4y+12)$



I see you're eager to find the answer! But let's work on this together. What happens if we distribute the 2 on the right side of the equation?


[Leave feedback](#) Rate this response  

I don't understand, just give me the answer

I understand this might be a bit tricky. Let's take a step back. When we have something like $2(4y + 12)$, we can multiply the 2 with each term inside the parentheses. Can you try that?

[Leave feedback](#) Rate this response  

Ask away...  

$-x$
 $+ =$ 

Next Steps

- Khanmingo Pilot Program
- Formation of an AI Task Force
- Engagement
- Continue research and participate in state and national-level conversations
- Begin the efforts to provide a bank of resources and training.
- AI (and everything we learn) will be a key component of our strategic planning moving forward

The key is to maximize the opportunities while mitigating the risks.



Questions?

