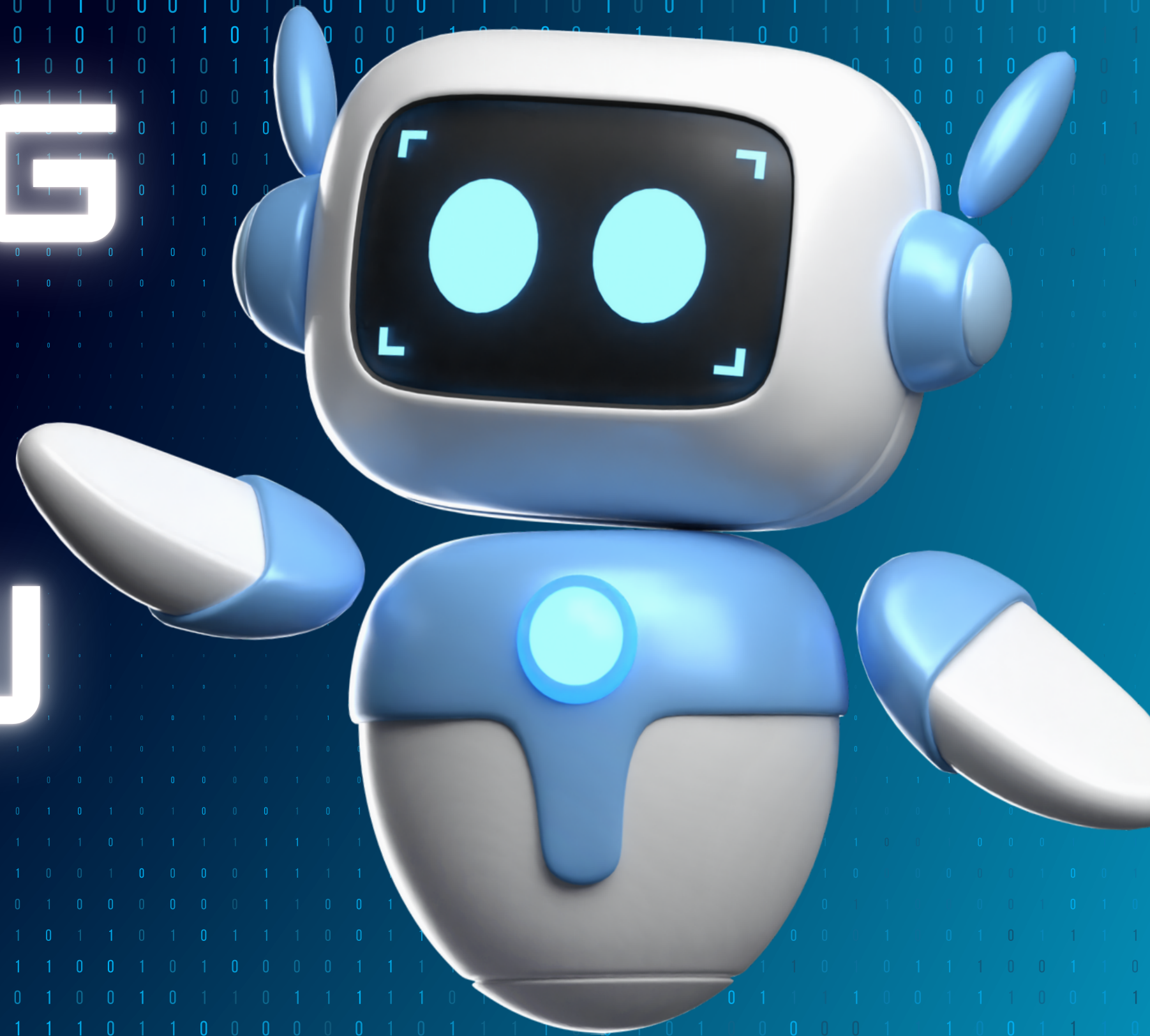


IMPROVING YOUR WORKFLOW

Using AI as your
Collaborator





Pete Just CETL
Former Science Teacher
Retired CTO/COO
Executive Director IN CTO
Recent CoSN Board
CoSN SME on AI

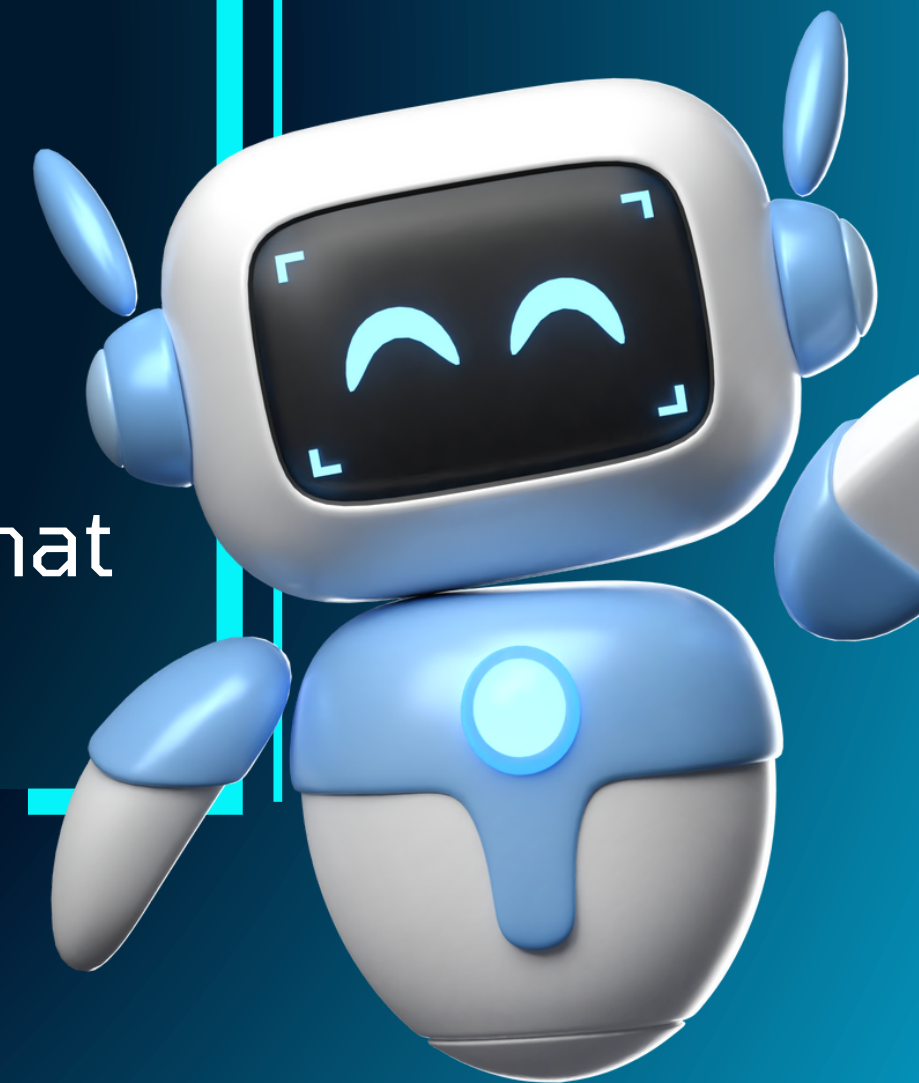




WHAT IS AI?

Artificial Intelligence (AI) refers to the simulation of human intelligence processes by machines, ***allowing them to perform tasks*** that typically require human cognitive functions.

AI systems can analyse data, learn from it, and make decisions or ***perform actions*** based on that data.



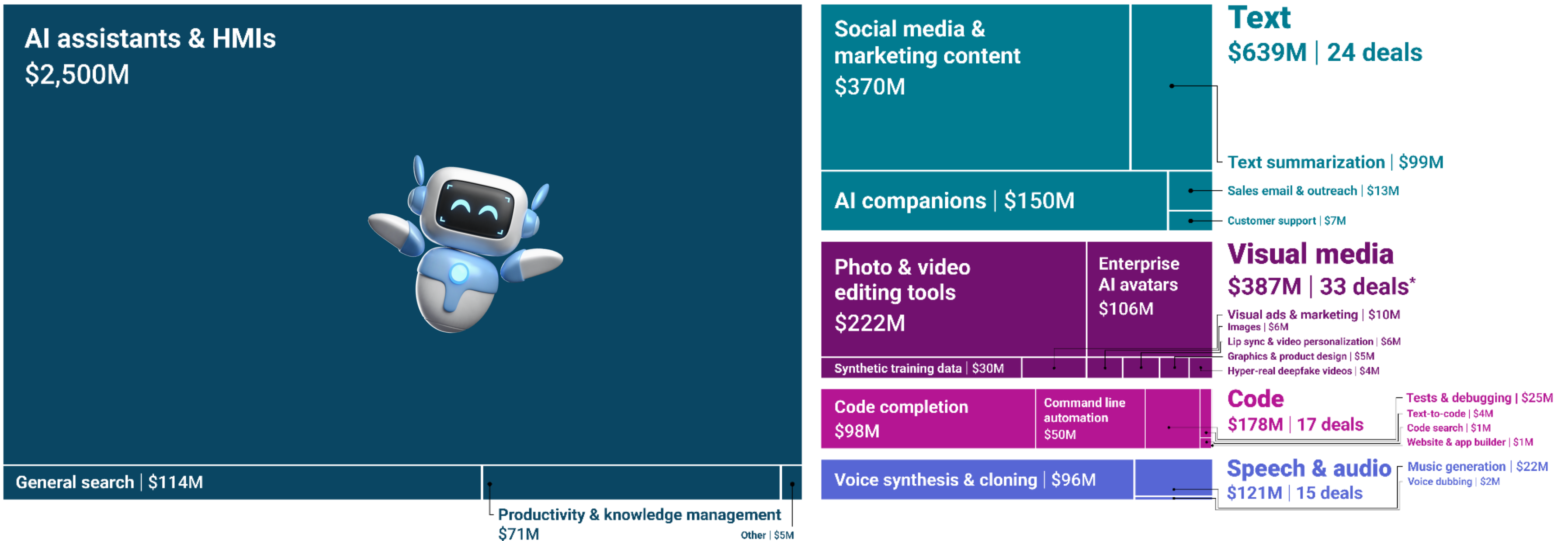


Where is all the money going in generative AI?

Distribution of generative AI funding, Q3'22 – Q2'23

Generative interfaces

\$2,690M | 23 deals



Source: CB Insights. Based on an analysis of 210+ generative AI companies building cross-industry enterprise solutions; excludes deals to industry-specific companies and model developers such as OpenAI.

*Includes 1 deal in motion capture animation and 1 deal in synthetic anonymization with undisclosed funding.

AI Literacy

The knowledge, skills, and attitudes associated with how artificial intelligence works, including its principles, concepts, and applications, as well as how to use artificial intelligence, such as its limitations, implications, and ethical considerations.

How to Use + How it Works

AI Literacy + Computer Science

With AI Literacy, I CAN:

- Personalize my learning
- Assess safety and privacy with apps and data sharing
- Properly cite AI usage when writing or creating
- Prepare for the future of work
- Act as an informed citizen

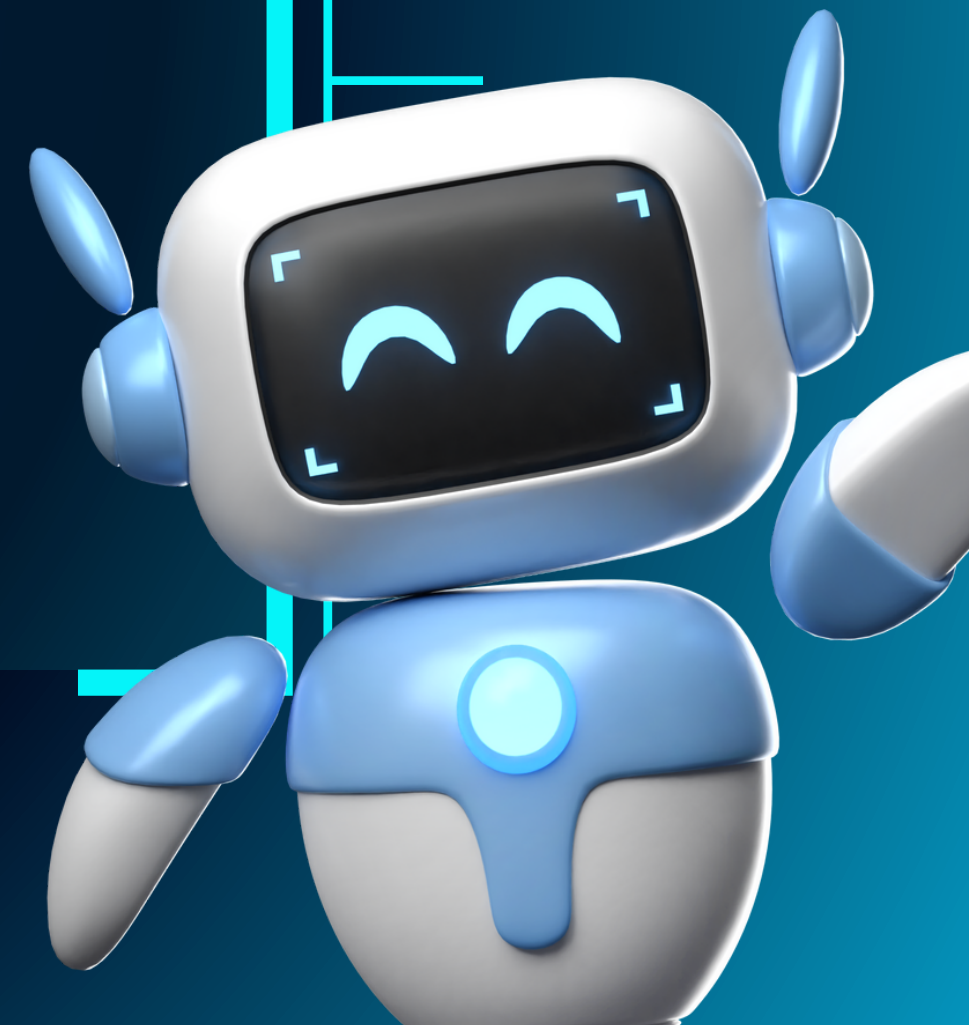
With AI/CS integration, I CAN:

- Collect data responsibly
- Break down complex problems
- Analyze data critically
- Identify patterns and trends
- Evaluate the effectiveness of solutions
- Ethically evaluate AI systems to minimize bias

1

GENERATIVE AI IS VERY GOOD AT:

- Generating new ideas and content for the “facts” (data) it has been trained on.
- Administrative tasks
- Variation on a theme



1 KNOW YOUR CHAT BOT:

- **ChatGPT** GPT 3.5 or paid 4, 2021 or older info, (8k tokens), limited responses (50)
- **Bing:** GPT-4 free, AI image generation, web informed answers, visual features, limited responses (30)
- **Bard:** Fast, Google ecosystem web informed answers, best language support, most visual elements
- **Claude 2:** processes more words (100k tokens), creates more context. 2023 and older info, file uploads



Copilot



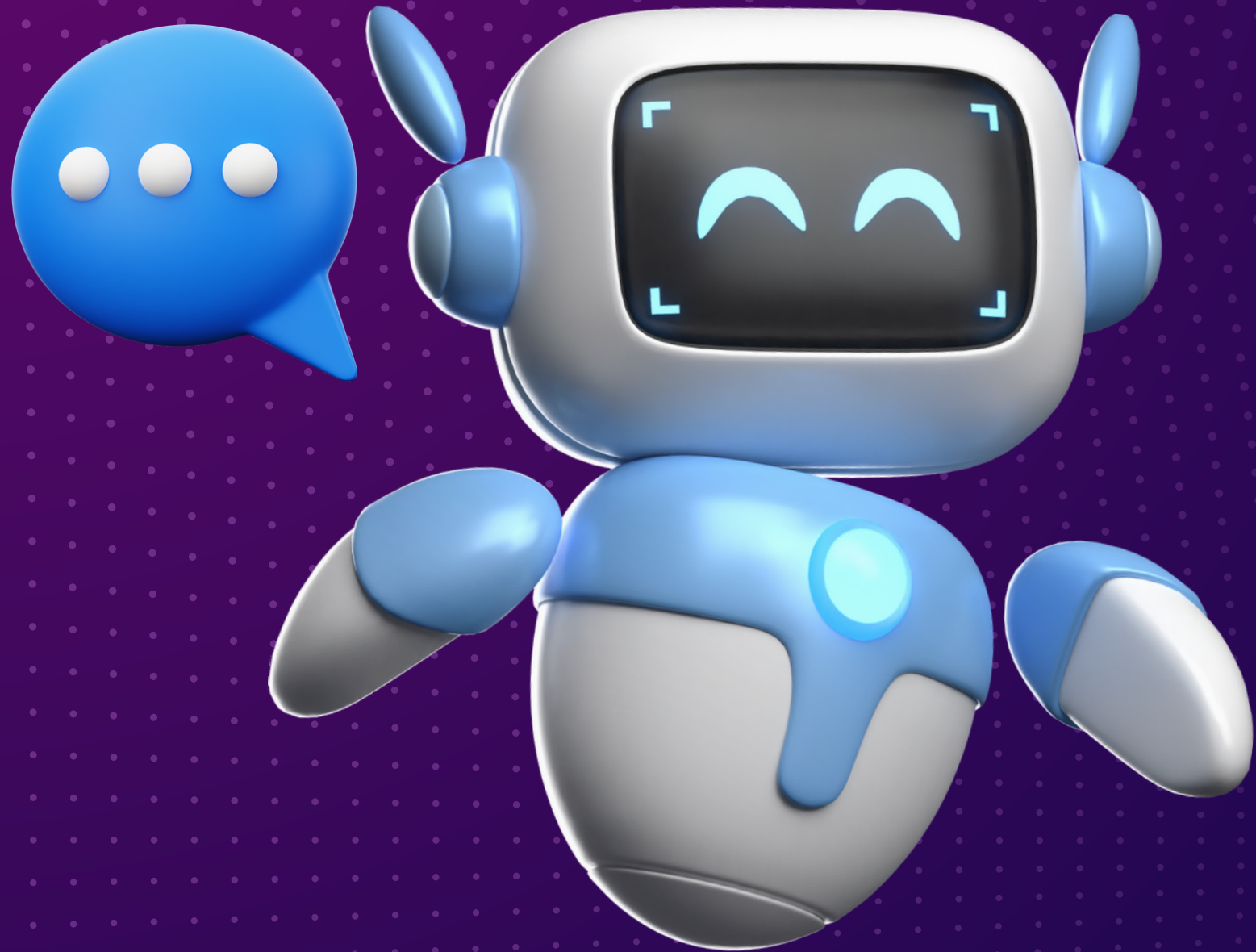
Gemini



 Claude 3



② USING A TEXT GENERATOR - TIPS!



PROVIDE CONTEXT

CREATE A SPECIFIC "ASK" OR
PROMPT

FOLLOW THE PATH
WITH FOLLOW UP Q'S



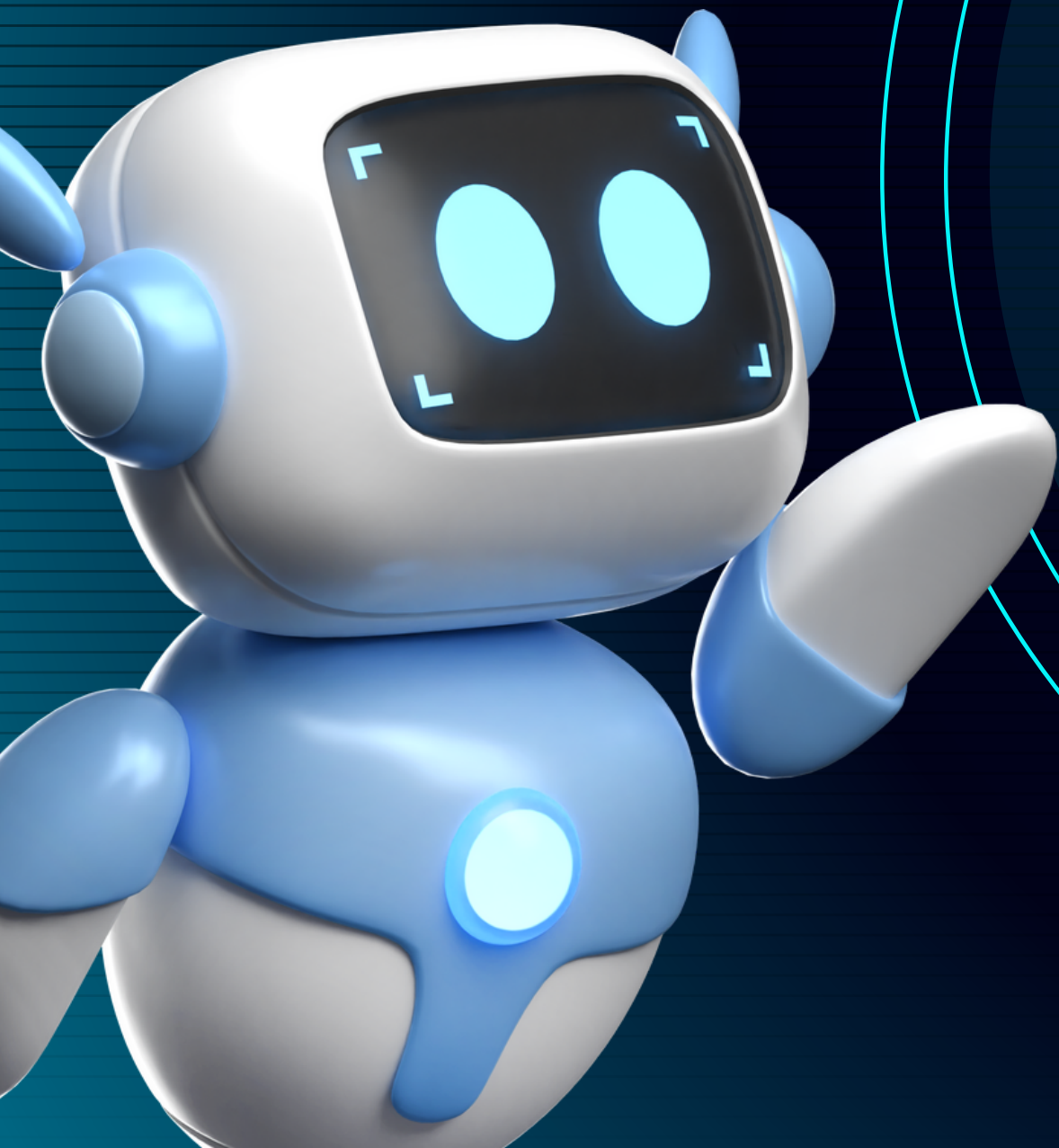
GETTING STARTED W/ APPS

- ① Consider registering with a "throw away" email account
- ② Use this account specifically for marketing and other promotions
- ③ Provide as little information as possible
- ④ Limit you interactions with spammy emails

Prompt

Formula

TASK-
CONTEXT-
EXEMPLAR-
PERSONA-
FORMAT-
TONE

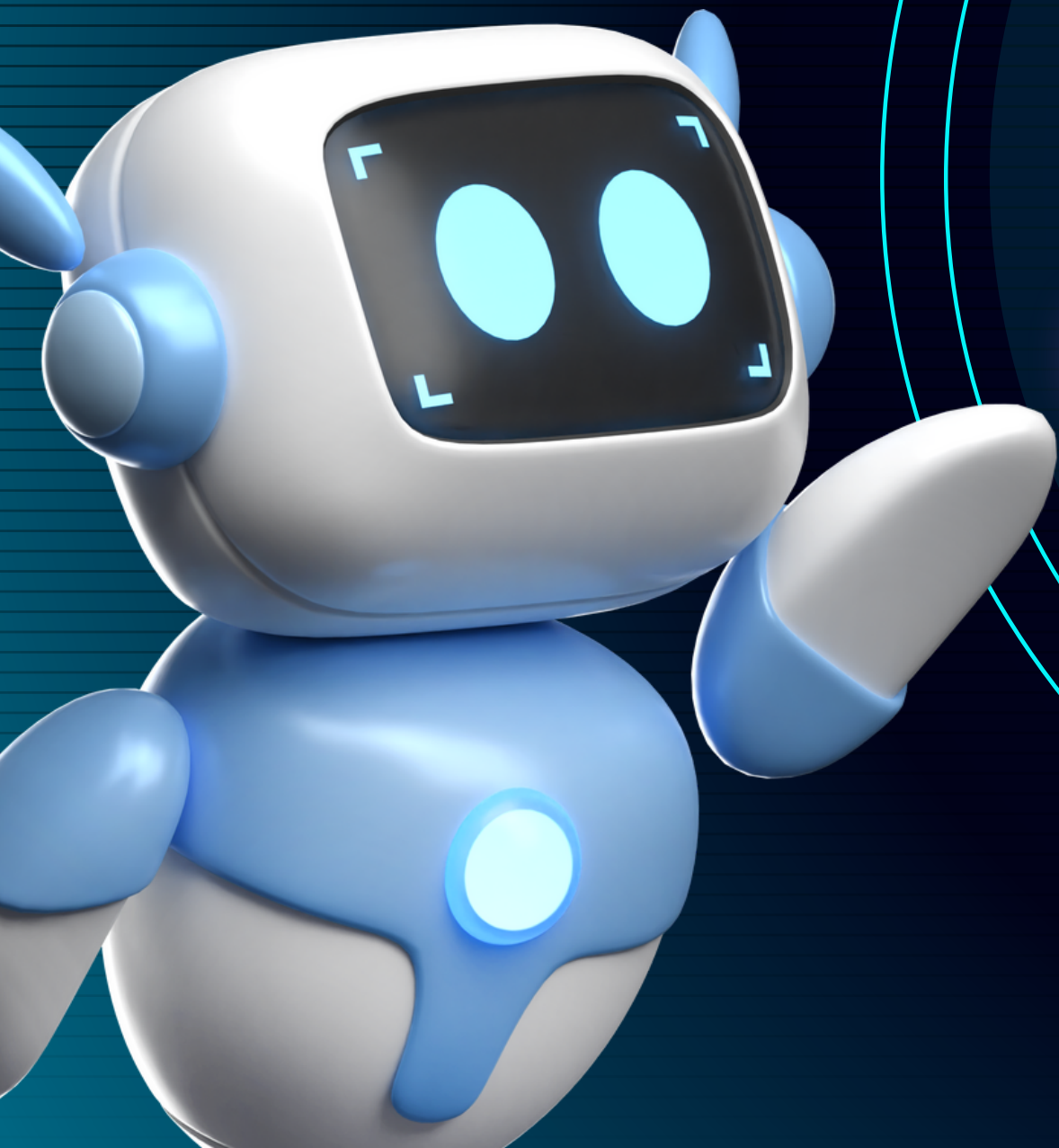


Use:

-ACTION VERBS-

-CONTEXT
CONSTRAINTS-

-EXAMPLES-



The Perfect Prompt

You are an individual who has adopted a healthier lifestyle over the past year, resulting in better physical and mental well-being. Inspired by your journey, a few friends have asked for advice on starting their own health journeys.

Write a message to share in a group chat with interested friends.

The message should outline the steps you took, share some challenges and how you overcame them, and offer to support them as they embark on their own journeys.

Use motivational and empathetic language.

[task]

[context]

[examples]

[persona]

[format]

[tone]

PROMPT WRITING TIPS- IMAGE GENERATION:



Exemplar

Context

Persona

Format

You are an illustrator for an architecture firm known for modern cutting edge designs. Create a creative conceptual illustration of a high school campus in Indiana that features areas for academics, sports, and club activities similar to what might be seen at Notre Dame University



Bing Image Creator | 1024 x 1024 jpg | Created now

Share

Save

Download

Customize

Content credentials

Generated with AI · November 7, 2023 at 1:51 PM



Tone

Task

PROMPT WRITING TIPS:

You are an illustrator for **an architecture firm** known for **modern cutting edge designs**. **Create a creative conceptual illustration of a high school campus in Indiana** that features areas for academics, sports, and club activities similar to **what might be seen at Notre Dame University**

Exemplar

Context

Format

Persona

Tone

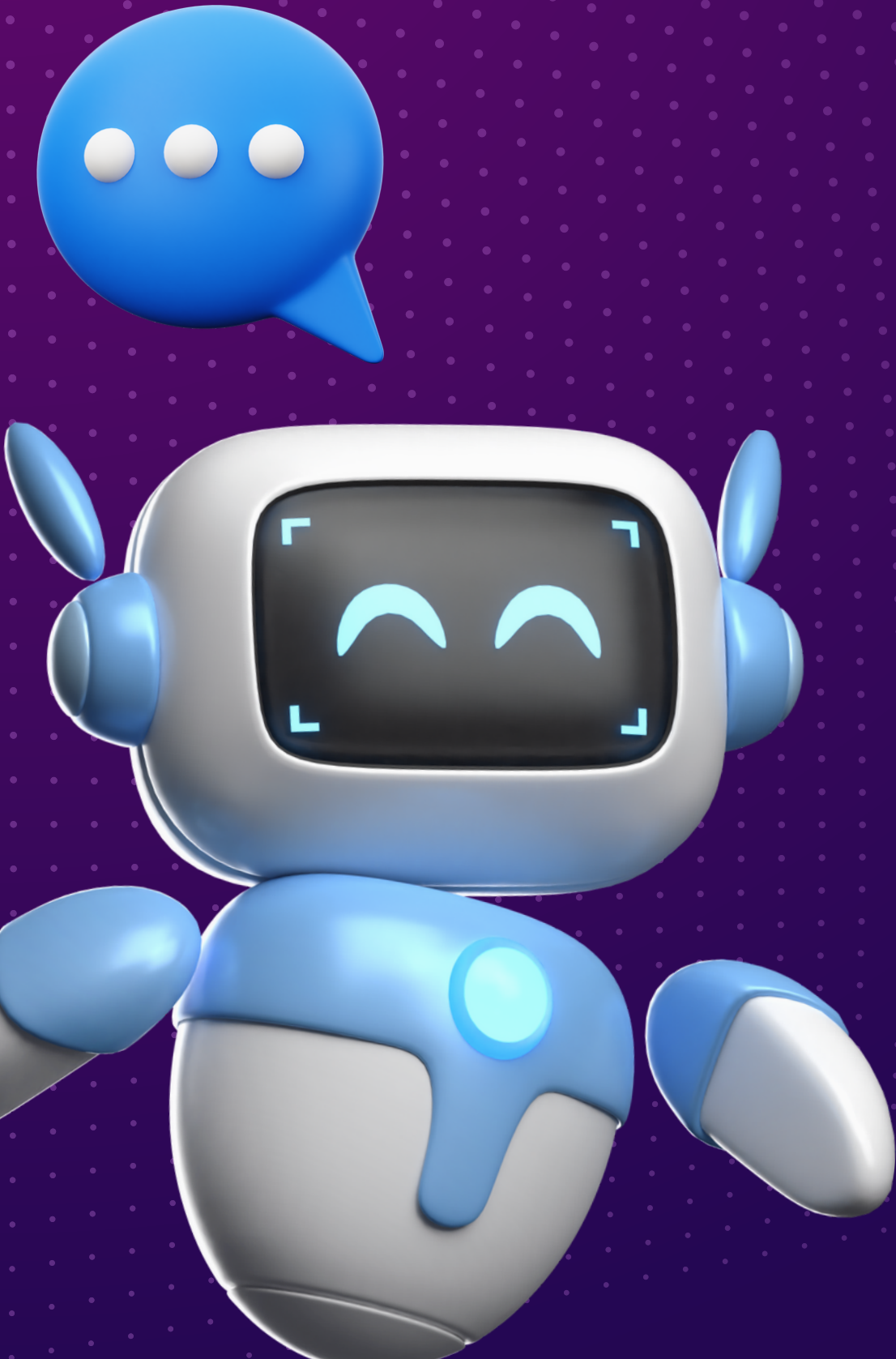
Task

TIPS FOR YOUR OWN USE OF GEN AI



**STABLE DIFFUSION: DIFFERENT
RESULT- SAME PROMPT**

PROMPTING TOOLS



Specifically direct the model to be more “creative” or “out of the box”.



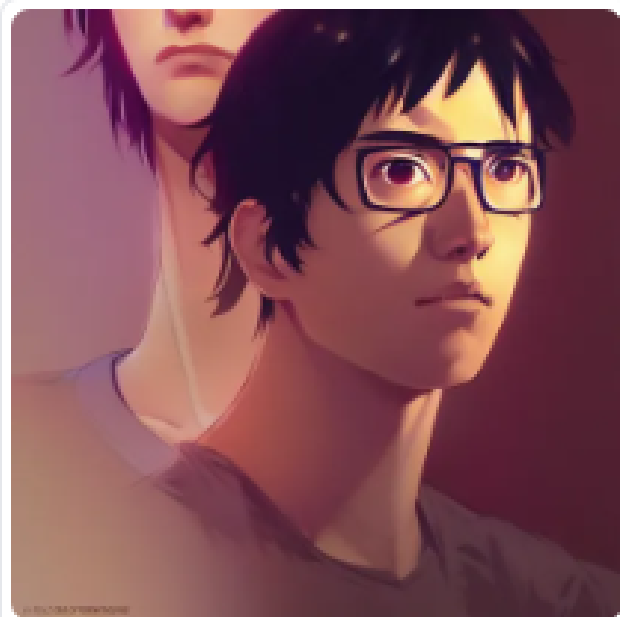
Guide the model towards specific features you want it to explore or extract, such as specific themes of a text or items for a meeting agenda.



Iterate on prompts until you find the one that works best for your use case.



fantastic four movie poster



pablo pascal portrait as manga boy, realistic shaded perfect face, fine details. anime. realistic shaded lighting poster by ilya kuvshinov katsuhiko otomo ghost - in - the - shell, magali villeneuve, artgerm, jeremy lipkin and michael garmash and rob rey



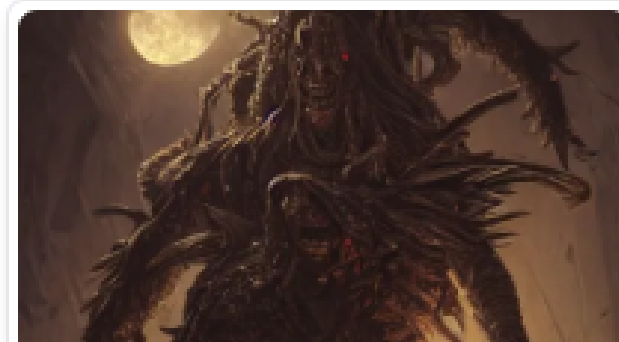
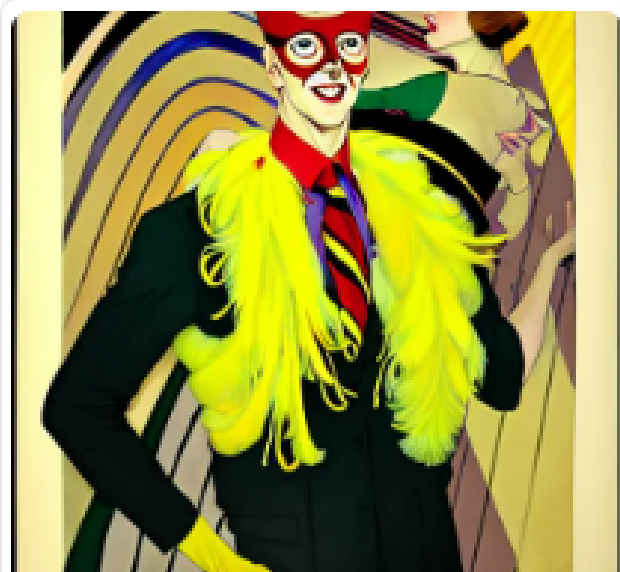
Twin Peaks poster artwork by Michael Whelan, Bob Larkin and Tomer Hanuka, Karol Bak of portrait of Taika Waititi & Benicio del Toro dressed as WWII sailors, from scene from Twin Peaks, simple illustration, domestic, nostalgic, from scene from Twin Peaks, clean



Shiba Inu cosmonaut, 60s poster, in the style of a music poster 1969



a man walking on a side walk, in the style of a wes anderson poster, movie poster, flat



PII SHOULD NEVER GO INTO AN AI PROMPT

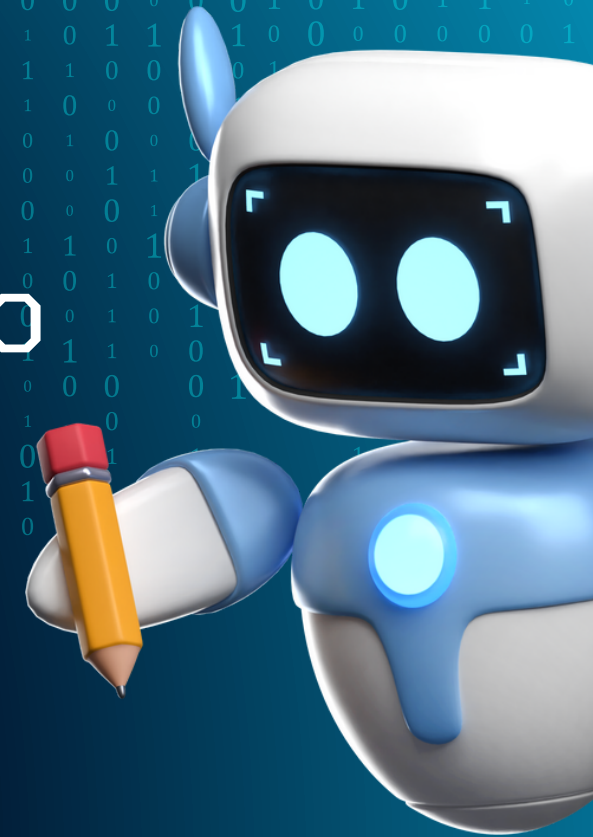
- **Full student names, dates of birth, addresses, SSNs, contact information, etc.**
- **Schoolwork Product Details:**
 - Copies of students' assignments, test answers, essay text, grades, etc.
- **Student Behavioral Data:**
 - Specific incidents of behavior violations, criminal records, bullying/harassment issues or other disciplinary records
- **Student Health Information:**
 - Any medical and health history of students, diagnoses, therapy needs, etc.
- **Student Learning Information:**
 - Individual Education/504 Plan details, IEP records, special needs assessments and psychological reports
- **Other Confidential Information:**
 - Circumstances around foster care, homelessness or other sensitive life details



DATA SET CAUTIONS

Chat bot Accuracy:

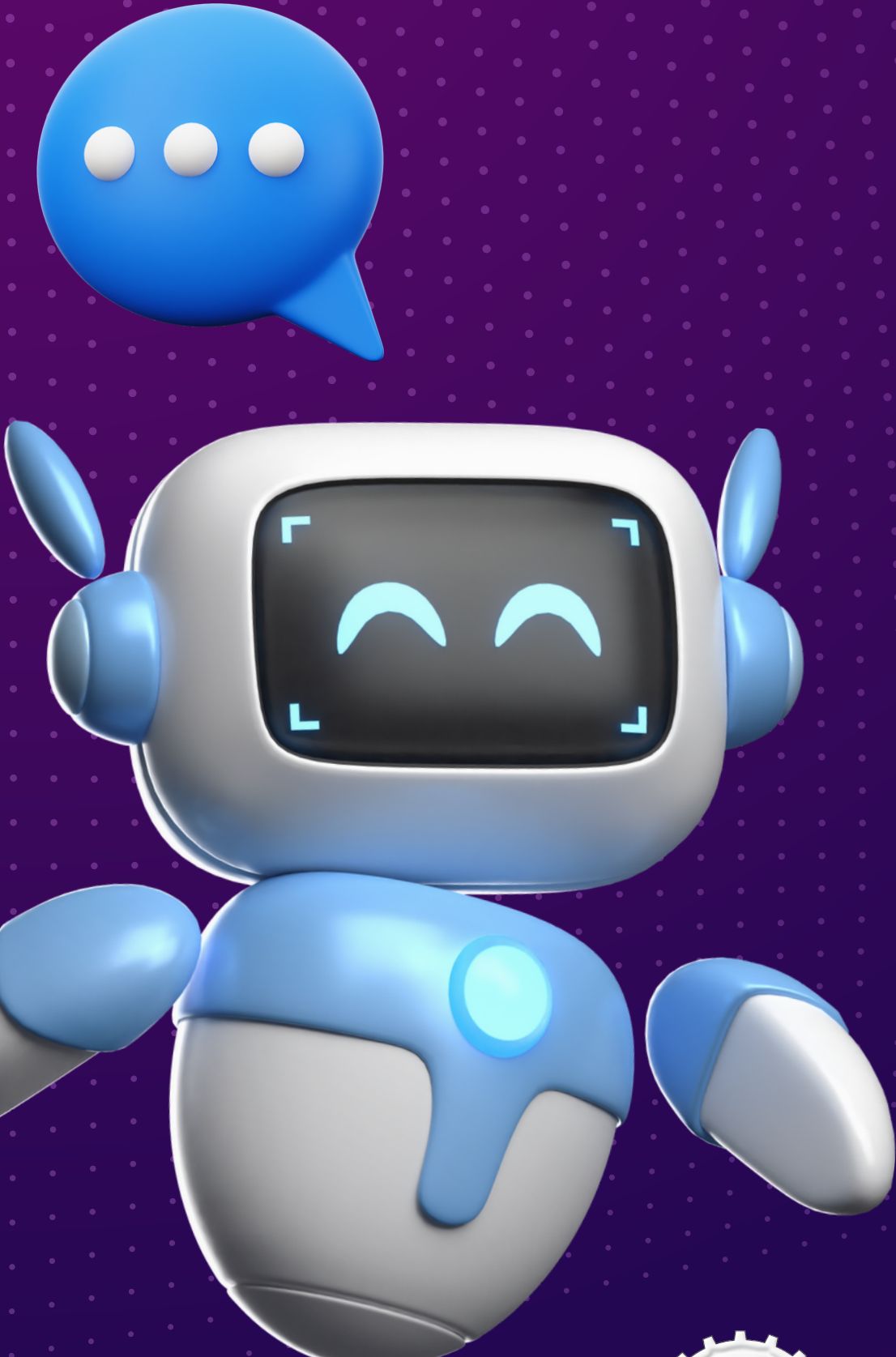
Use critical thinking to evaluate prompt information prior to prompting & all results



Data set cautions:

- Bias and Representation Risks- AI systems reflect the data they're trained on.
- Student Privacy and Consent- Even non-PII data carries privacy risks- via potential re-identification or unintended exposure
- Data Security- Chatbots may/will "memorize" snippets of sensitive data if provided

ADVANCED PROMPTING TOOLS

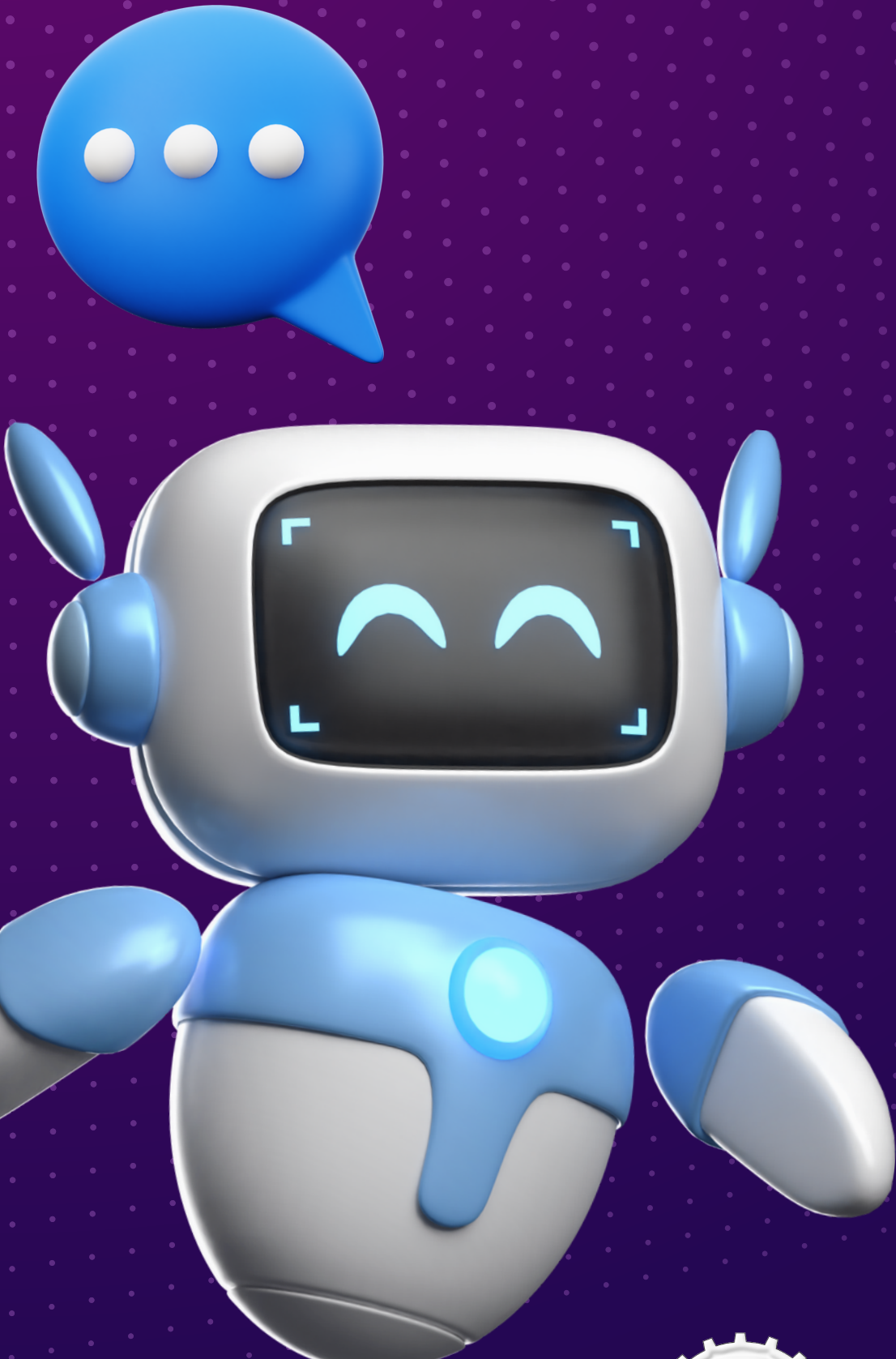


Provide more clarity and context for the model using a longer prompt. For example, you might specify the tone, length, or audience.



Use delimiters like quotes (" ") or angle brackets (< >) to refer to different parts of your prompt and avoid confusion.

ADVANCED PROMPTING TOOLS



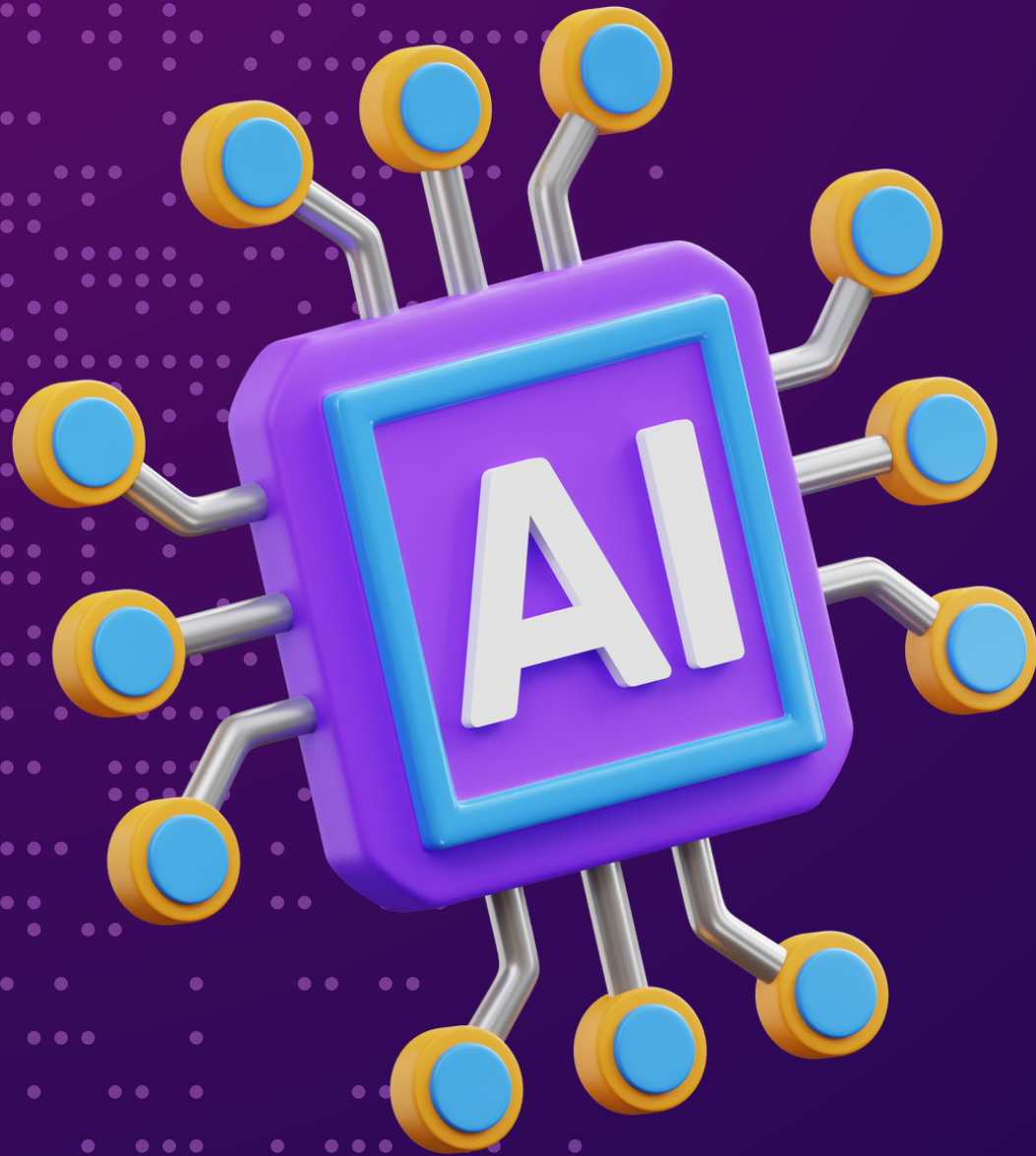
Provide the model with one or more successful completions of the task before telling it what to do.



Tell the model your desired **format**, including options **like markdown, HTML, JSON, and more.**

HOW TO IMPROVE WORKFLOW

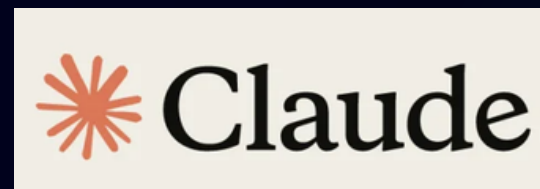
With Generative AI Apps



- ① Idea Generation
- ② Bust Writer's Block
- ③ Create rough drafts of formal letters & emails
- ④ Paraphrase & Rewrite
- ⑤ Create Rubrics

SUMMARIZE A YOUTUBE VIDEO

Apps:



ChatGPT



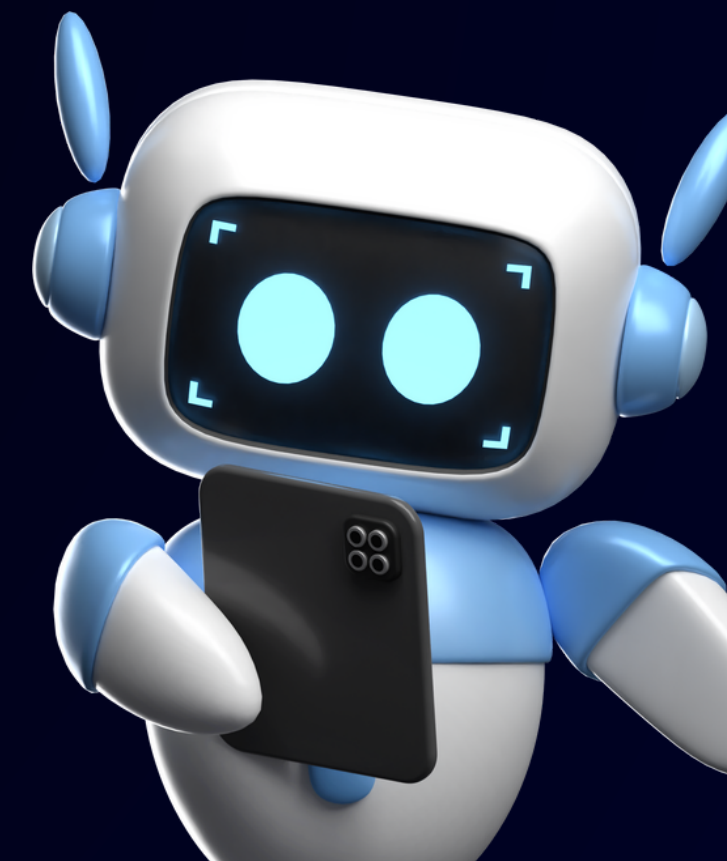
Copilot



Prompt:

“Use this YouTube transcript to offer 10 bulleted points of the main items discussed [insert transcript details]”

0:00
0:02 So anyone who's been paying attention for the last few months
0:04 has been seeing headlines like this,
0:06 especially in education.
0:08 The thesis has been:
0:10 students are going to be using ChatGPT and other forms of AI
0:12 to cheat, do their assignments.
0:14 They're not going to learn.
0:16 And it's going to completely undermine education as we know it.
0:18 Now, what I'm going to argue today
0:20 is not only are there ways to mitigate all of that,
0:22 if we put the right guardrails, we do the right things,
0:24 we can mitigate it.
0:26 But I think we're at the cusp of using AI
0:28 for probably the biggest positive transformation
0:30 that education has ever seen.
0:32 And the way we're going to do that
0:34 is by giving every student on the planet
0:36 an artificially intelligent but amazing personal tutor.
0:38 And we're going to give every teacher on the planet an
0:40 amazing,
0:42 artificially intelligent teaching assistant.
0:44 The Two Sigma Problem
0:46 And just to appreciate how big of a deal it would be
0:48 to give everyone a personal tutor,
0:50 I show you this clip
0:52 from Benjamin Bloom's 1984 2 sigma study.
0:54 or he called it the "2 sigma problem."
0:56 The 2 sigma comes from two standard deviation,
0:58 sigma, the symbol for standard deviation.
1:00 And he had good data that showed that look, a normal
1:02 distribution,
1:04 that's the one that you see in the traditional bell curve
1:06 right in the middle, that's how the world kind of sorts itself out,
1:08 that if you were to give personal 1-to-1 tutoring for students,
1:10 then you could actually get a distribution that looks like that
1:12 right.
1:14 It says tutorial 1-to-1 with the asterisks,
1:16 like, that right distribution,
1:18 a two standard-deviation improvement.
1:20 Just to put that in plain language,
1:22 that could take your average student and turn them into an
1:24 exceptional student.
1:26 It can take your below-average student
1:28 and turn them into an above-average student.
1:30 Now the reason why he framed it as a problem, was he said,



GENERATE INFOGRAPHICS

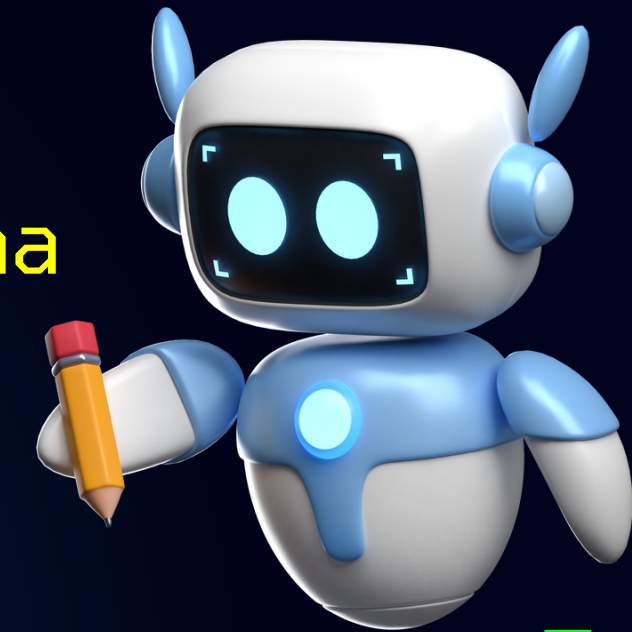
Apps:



Exemplar

Context

Persona



Format

Tone

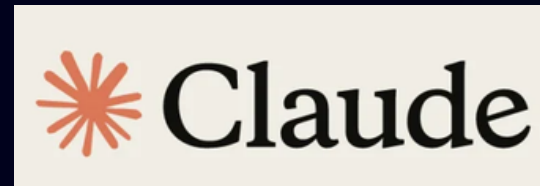
Task

Prompt:

"What are some ethical guidelines for AI Use in the Classroom?
Create an infographic outlining key ethical principles and best practices for responsibly integrating generative AI tools into teaching and learning activities."

WRITING TASK PROMPTS

Apps:



Gemini



ChatGPT

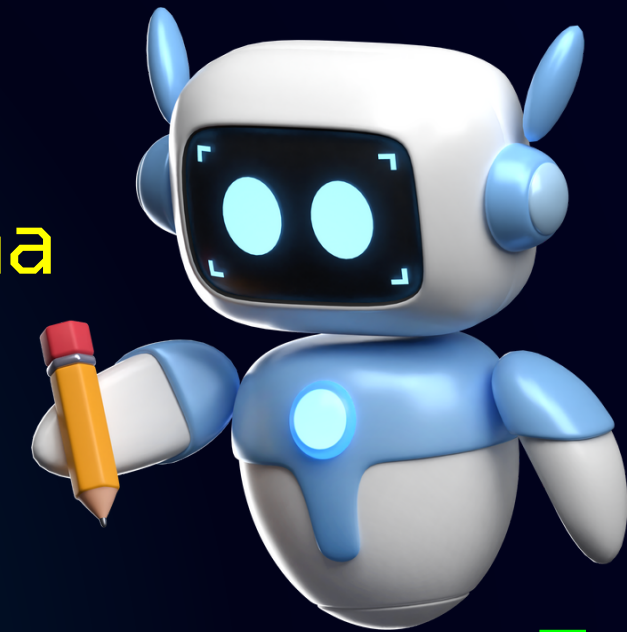


Copilot

Exemplar

Context

Persona



Format

Tone

Task

Prompt:

"Write a letter of recommendation to Purdue University as a high school principal for a former student who always ranked in the top of the class in grades and was an excellent participant in class discussions. Outline exceptional social, academic and professional competence. Put it in bullet points so I can do the rest of the writing."

QUERY A PDF FILE

Apps:

 Claude

 Gemini



Copilot



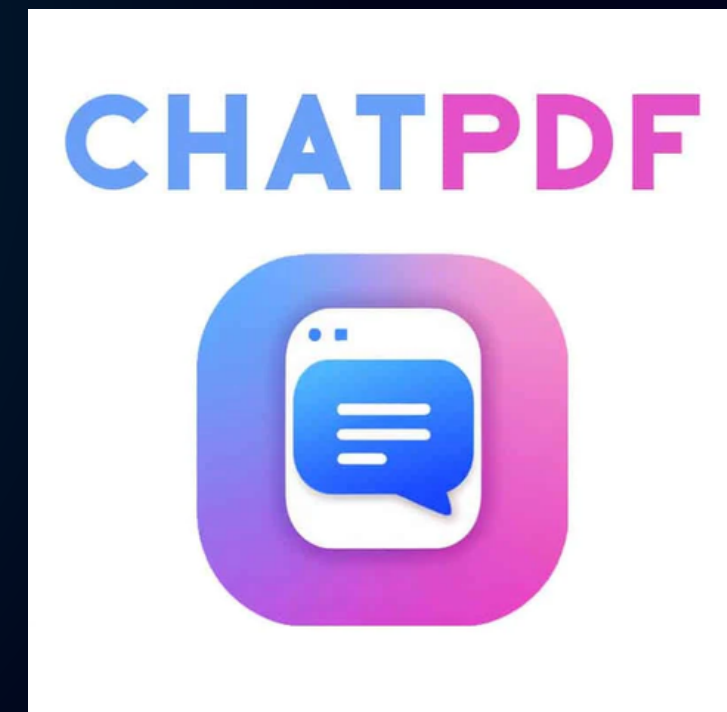
ChatGPT

Prompt:

“Using the information in this text [XOXOX] determine who is responsible for the procurement of the materials”



WARNING:
Only submit
non secure
docs with no
PII or other
confidential
Information



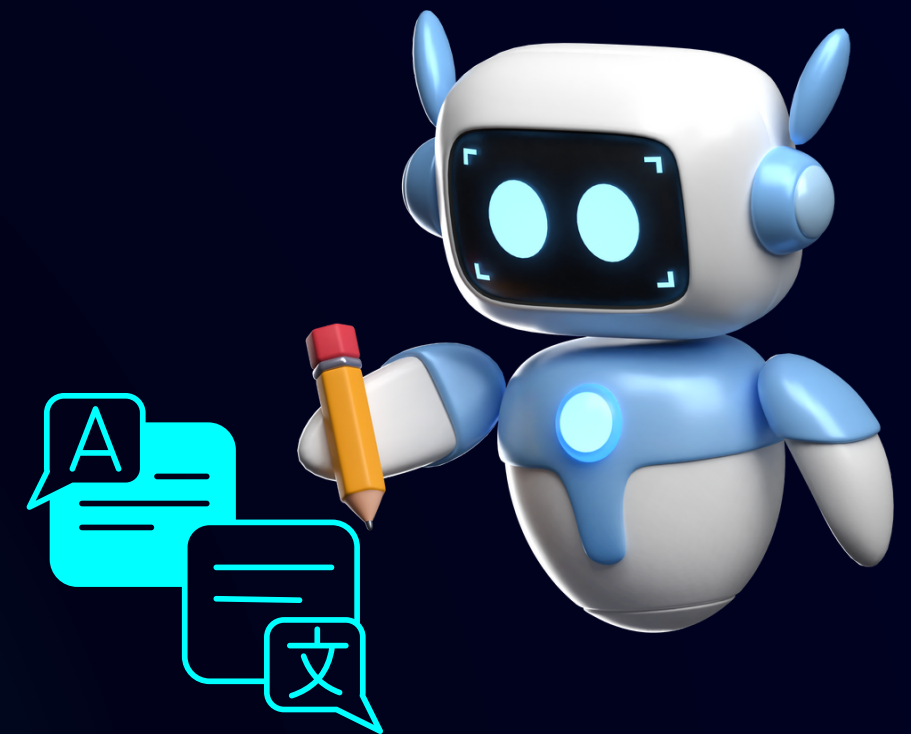
No prompting with
ChatPDF, just drop in a
file and ask your Q's!

SPEECHTEXT.AI

Apps: speechtext.ai/

"SpeechText.AI is a powerful artificial intelligence software for speech to text conversion and audio transcription from audio or video URIs,

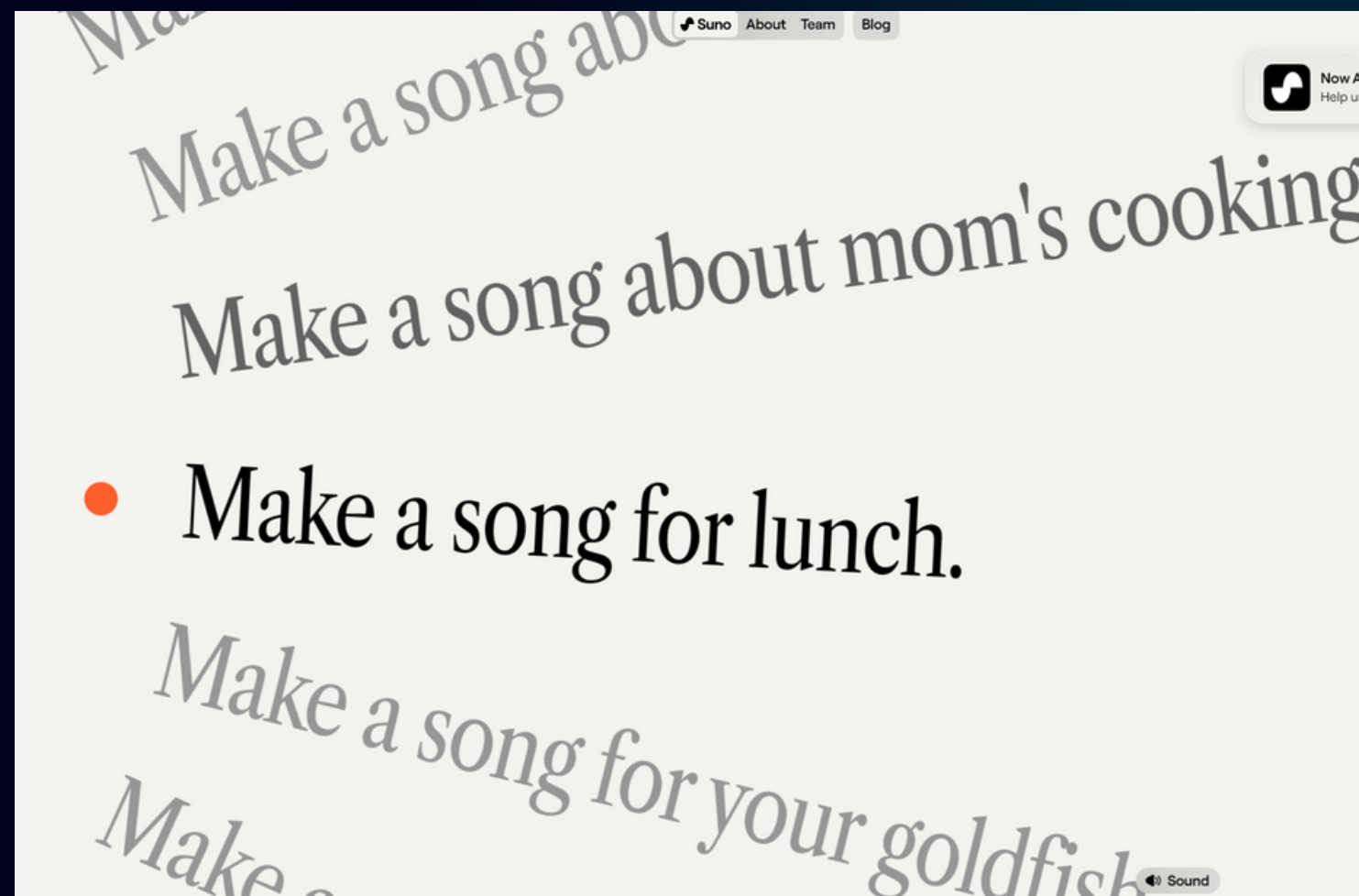
MULTI LANGUAGE
SPEAKER IDENTIFICATION
AUTOMATIC PUNCTUATION
AUDIO SEARCH ENGINE
EXPORT TRANSCRIPT



transcribe audio and video in seconds

TEXT TO SPEECH/ SONG

Apps: <https://www.suno.ai/>



Prompt:

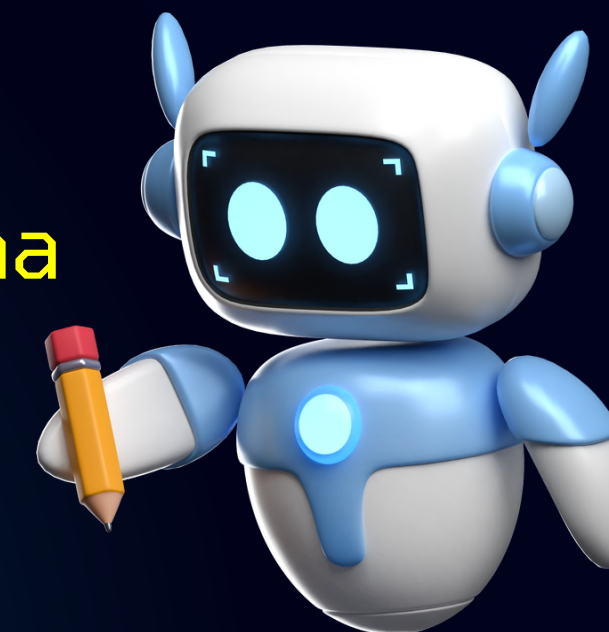
"Make a song for lunch using EDM, Epic Drops, Heavy Bass Bridges, Latin, Female, Beautiful, Trendy, Catchy, Marimba"

Exemplar

Context

Persona

Format

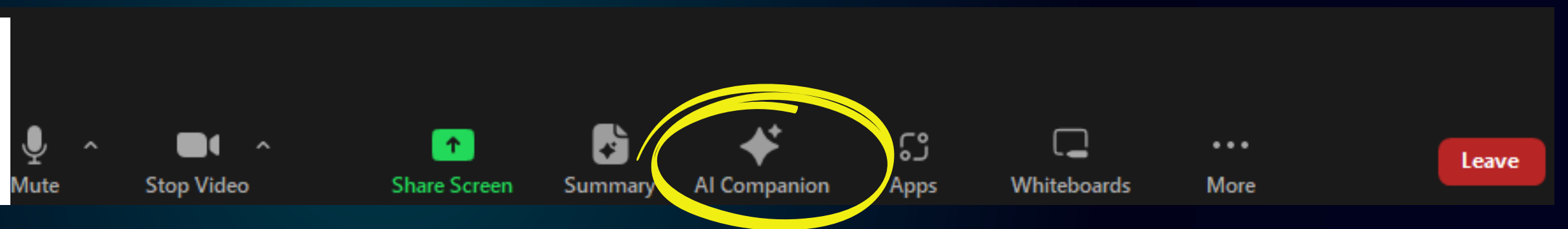


Tone

Task

DOCUMENT VIRTUAL MEETINGS

Apps:



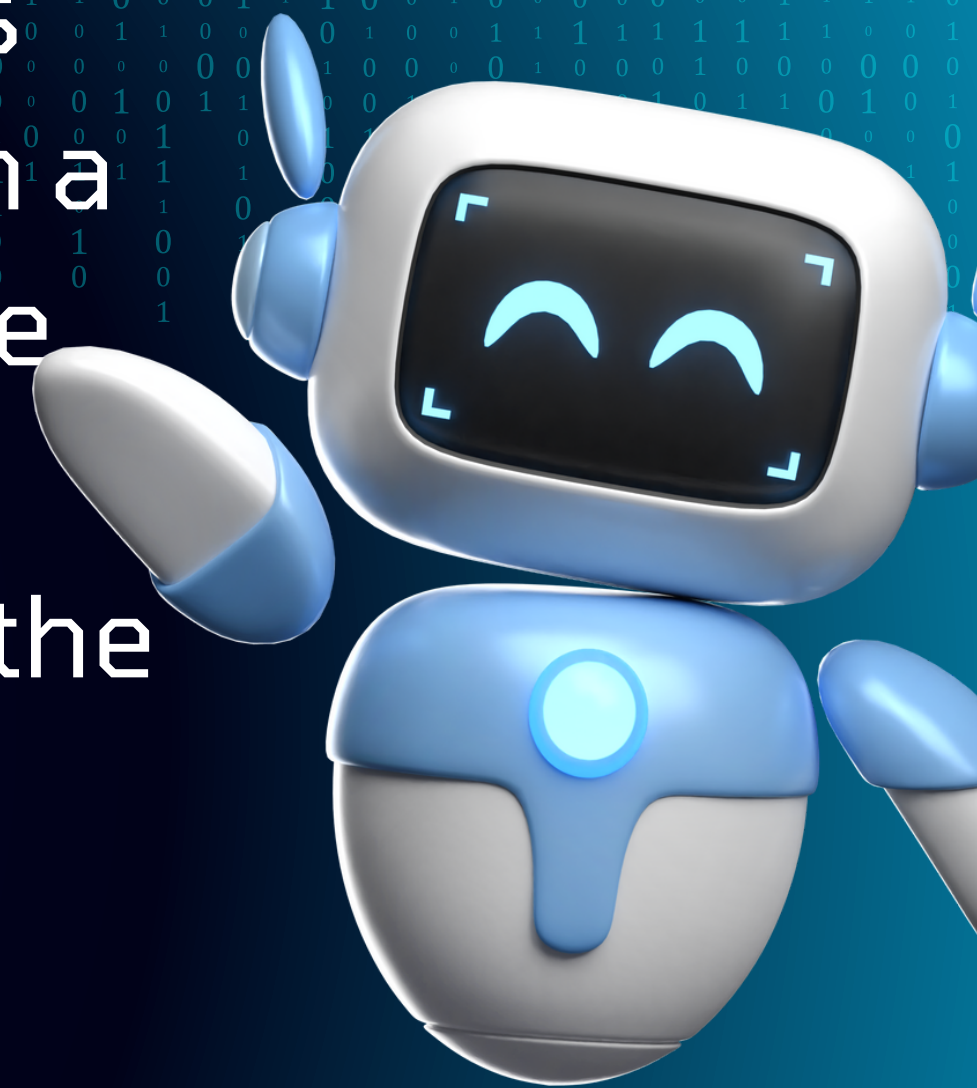
Usually a plug into the web conferencing app using AI powered automated transcription

2

IMAGE GENERATION APPS

DALL-E 2 via MS Copilot Designer Image Creator is quick, easy to use, Free limited access - sign in with a Microsoft account. Best AI image generator for ease of use. **DALL-E 3** creates more interesting, more realistic, and more consistent results, but requires the Open AI subscription (\$20/mo+).

Midjourney- Creates powerfully beautiful images, Access to the service requires a Discord account. From \$10/mo for ~200 images/mo and commercial usage rights.



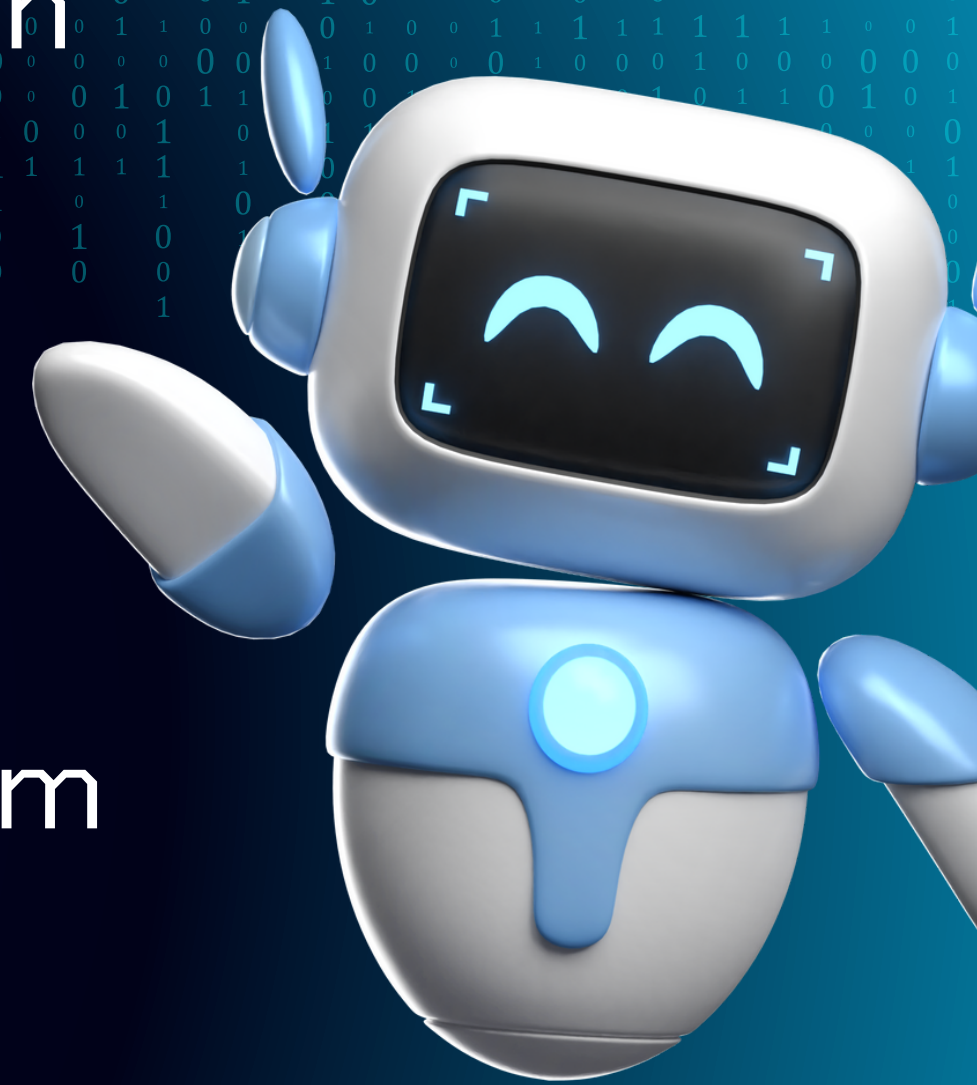
2

IMAGE GENERATION APPS

DreamStudio (Stable Diffusion) for customization and control of your AI images. Free for 25 credits; from \$10 for 1,000 credits.

Adobe Firefly (Photoshop) for integrating AI-generated images into photos. Free beta online; from \$19.99/month as part of the Creative Cloud Photography Plan.

SDXL Lightning: Extremely fast high-quality 1024px images in just a few steps.



IMAGAE GENERATION

Apps: SDXL Lightning

<https://fastsdxl.ai/>



Prompt:

Close up of a German town from folklore in the Bavarian alps including a couple of fictional characters playing a popular outdoor game. Illustrate in a hyper realistic style.



Microsoft's Copilot Example

Microsoft Copilot's new AI integration with PowerPoint allows you to create in-depth presentations with speaker notes from documents in seconds.

Step-by-step AI generated PPT:

1. Open Microsoft PowerPoint and click the 'Copilot' button on the top right taskbar.
2. In the prompt box, explain what you'd like to create. Options include creating a presentation from scratch, uploading documents to create from a file, or creating individual slides.
3. Copilot will provide suggestions based on your prompt. Accept, modify, or reject the outputs as needed.

Copilot is also capable of adjusting layouts and images, generating speaker notes, animating slides, and more — all by chatting conversationally via the chat box.



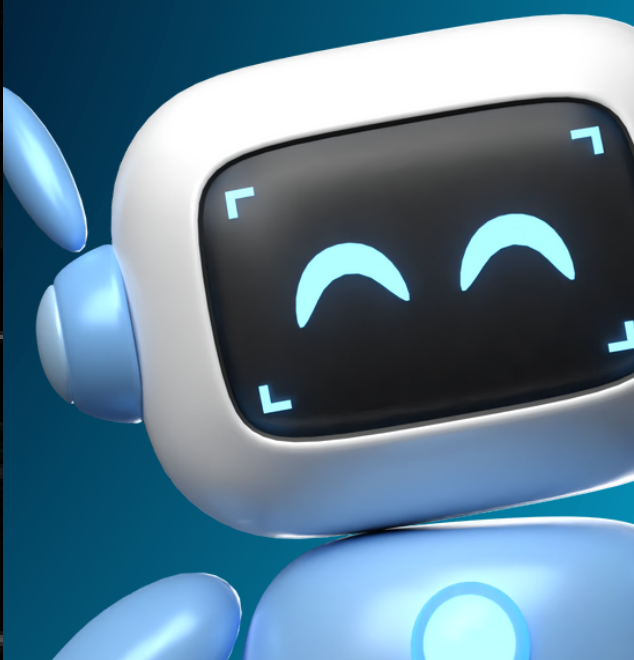
MAGIC SCHOOL


MAGIC SCHOOL


MagicSchool adapted OpenAI's technology to help teachers by feeding language models prompts based on best practices.


The image shows a YouTube video thumbnail with a dark, starry background. At the top left is a purple circular icon with a white 'M'. To its right is the text 'Top 4 MagicSchool AI Tools for SpEd Teachers'. In the top right corner is a white 'Share' button with a right-pointing arrow. The central part of the thumbnail features a white-bordered box containing the text 'MagicSchool.ai' in a stylized font. Below this is a large black box with the text 'TOP 4 TOOLS FOR SPED TEACHERS' in white, with a red play button icon overlaid. At the bottom of the box are two smaller white-bordered boxes: the left one says 'AI Assistant For Teachers' and the right one says 'Sign Up Is Free!'. A purple circular icon with a white 'M' is positioned at the bottom center of the main box.


Watch on YouTube




 Magic Tools


 Raina (Chatbot)


 Output History

 MagicStudent ●

 Love

 Training

 Share the Magic

 Upgrade

Plus ends in 14 days

TEACHERS ARE

🔍 Search

🌟 All

Planning

Content

Questions

Intellectual Prep

Student Support

Communication

Community Tools

Favorites [Change Order](#)



Professional Email

Generate a professional e-mail communication to colleagues and other...



E-mail Responder

Generate a customized professional e-mail communication in response to an...



Syllabus Generator

Generate a syllabus based on information provided about your class for the school...



Teacher Observations

Generate areas of strength and suggestions for next steps for a teacher...



Rubric Generator

Have AI write a rubric for an assignment you are creating for your class in a table...



Data Table Analysis

Generate a table with data of your choice for your class with associated questions.



Class Newsletter

Generate a newsletter to send to families weekly.



Group Work Generator

Generate group work activity for students based on a a topic, standard, or objective.





Magic Tools

Raina (Chatbot)

Output History

MagicStudent

Love

Training

Share the Magic

Upgrade

Best Practices for Using MagicSchool

Check for Bias and Accuracy: AI might occasionally produce biased or incorrect content. Always double-check before sharing with students.

The 80-20 Approach: Use AI for initial work, but make sure to add your final touch, review for bias and accuracy, and contextualize appropriately for the last 20%.

Your Judgement Matters: See AI-generated content as a starting point, not a final solution. Always adhere to your school's guidelines.

Know the Limits: Our AI's knowledge stops at 2021, so be aware when dealing with recent topics.

Protect Privacy: Don't include personal student details like names or addresses. We strive to promptly remove any accidentally submitted information.

[Back](#)



[Let's Get Started!](#)

AL
EN
AD

AI CREATION INSIDE CANVA

Apps: DALL-E 2

Magic Write



Magic Media

Images

Videos

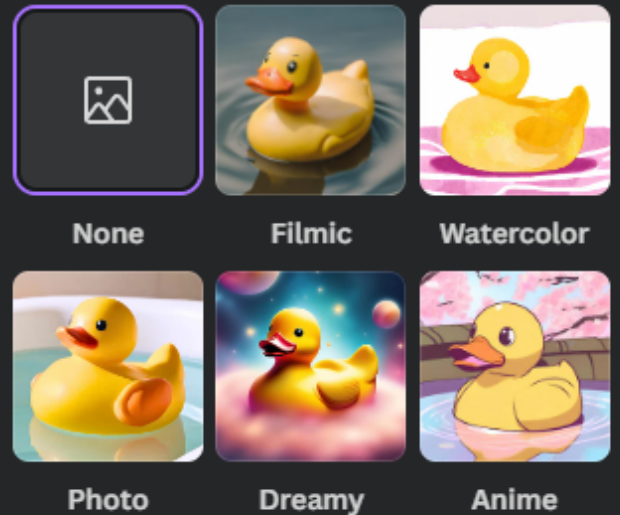
Describe what you'd like to create

Enter 5+ words to describe...

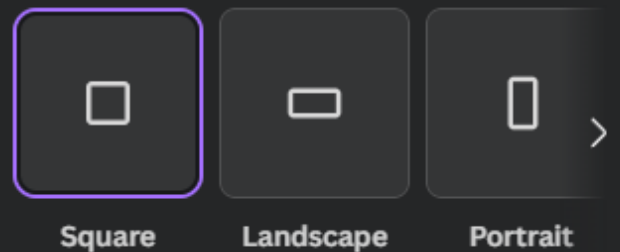
Inspire me

Styles

See all



Aspect ratio



Generate image

Use 1 of 497 credits. Refreshes 3/31/24

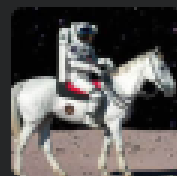
DALL-E

Start with a detailed description

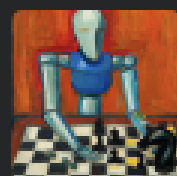
A bowl of soup that is also a portal to another dimension, digital art

Surprise me

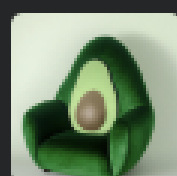
Try an example made with DALL-E



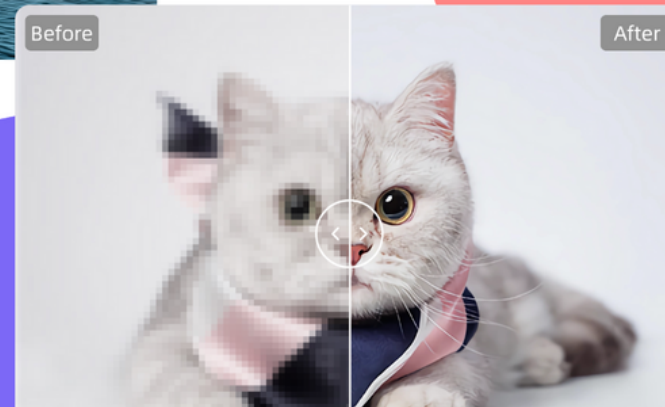
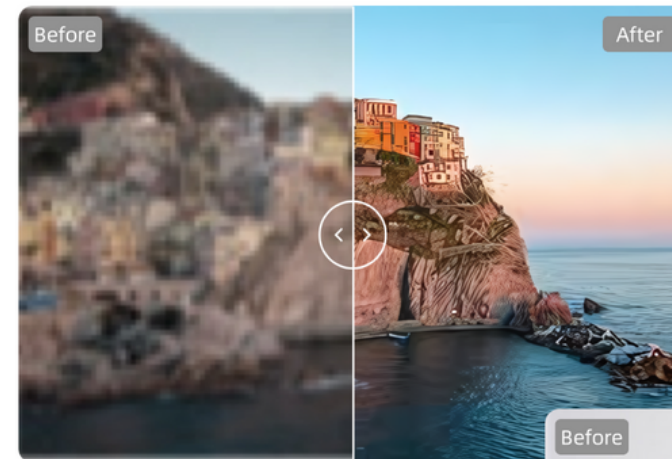
Horse-riding astronaut digital art



An oil painting by Matisse of a humanoid robot playing chess



An armchair in the shape of an avocado



Elevate your image resolution with AI

Utilize advanced AI to upscale and refine your images, ensuring your images in Canva stand out with unparalleled clarity and detail.

Permissions

When this app is open in a design, it can:

- ✓ Read and change the contents of the design
- ✓ Access your uploaded media in Canva and upload new media on your behalf

Prompt Engineering Guide

- 😊 Basics >
- 📁 Basic Applications >
- 👤 Intermediate >
- 🔧 Applied Prompting >
- 🚀 Advanced Applications >
- 🛡️ Reliability >
- 🖼️ Image Prompting >
- 🔒 Prompt Hacking >
- 🔧 Tooling >
- 👉 Prompt Tuning >
- 🎲 Miscellaneous >
- 📖 Vocabulary Reference
- 📚 Bibliography
- 📦 Prompted Products
- 👤 Additional Resources
- 🌟 Credits
- 🔥 Hot Topics

[Home](#) > [Prompt Engineering Guide](#)

Prompt Engineering Guide



Welcome to Learn Prompting's Introductory Course on Generative AI and Prompt Engineering!

Generative AI is the world's hottest buzzword, and we have created the most comprehensive (*and free*) guide on how to use it. This course is tailored to non-technical readers, who may not have even heard of AI, making it the perfect starting point if you are new to Generative AI and Prompt Engineering. Technical readers will find valuable insights within our later modules.

Generative AI refers to tools that can be used to create new content such as articles or images, just like humans can. It is expected to significantly change the way we work¹² (read: *your job may be affected*¹³). With so much buzz floating around about Generative AI (Gen AI) and Prompt Engineering (PE), it is hard to know what to believe.

We have scoured the internet^c to find the best techniques and tools for our 1.3 Million readers from companies like OpenAI, Brex, and Deloitte. We are constantly refining our guide, to ensure that we provide you with the latest

[Motivating Example](#)[Ethos and Philosophy](#)[How We Teach](#)[Modules](#)[Article rating system](#)[Feedback](#)[Conclusion](#)

[HTTPS://LEARNPROMPTING.ORG/DOCS/
INTRO](https://learnprompting.org/docs/intro)

Other Generative AI Apps to Try:

- [Class companion](#) uses AI to help high school Social Studies teachers assess written assignments and immediate feedback for students.
- [Packback](#) is an AI writing tutor for students.
- [Jasper AI](#) can be used to write anything.
- [AI Lawyer](#) can help with your legal questions.
- [Voice AI](#) can change the sound of your voice.
- [Repurpose AI](#) can take long content and create shorter content to post to numerous Social Media sites.
- [Jenni AI](#) is a writing assistant.

I use futuretools.io/ to keep track of what's new in AI

Attributions:

pete@juststrategics.com



- “Where’s all the money going” chart: CB Insights
- Slide template from Slidesgo
- ChatGPT logo and text results
- Bing (DALLE 2) image results
- Stable Diffusion image results
- [Sal Kahn GPT-4 TEDtalk](#)

THANKS!



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Pete Just CETL
Former HS Science Teacher
Retired CTO/COO
Executive Director IN CTO
Recent CoSN Board
<https://bit.ly/SAMworkflow>

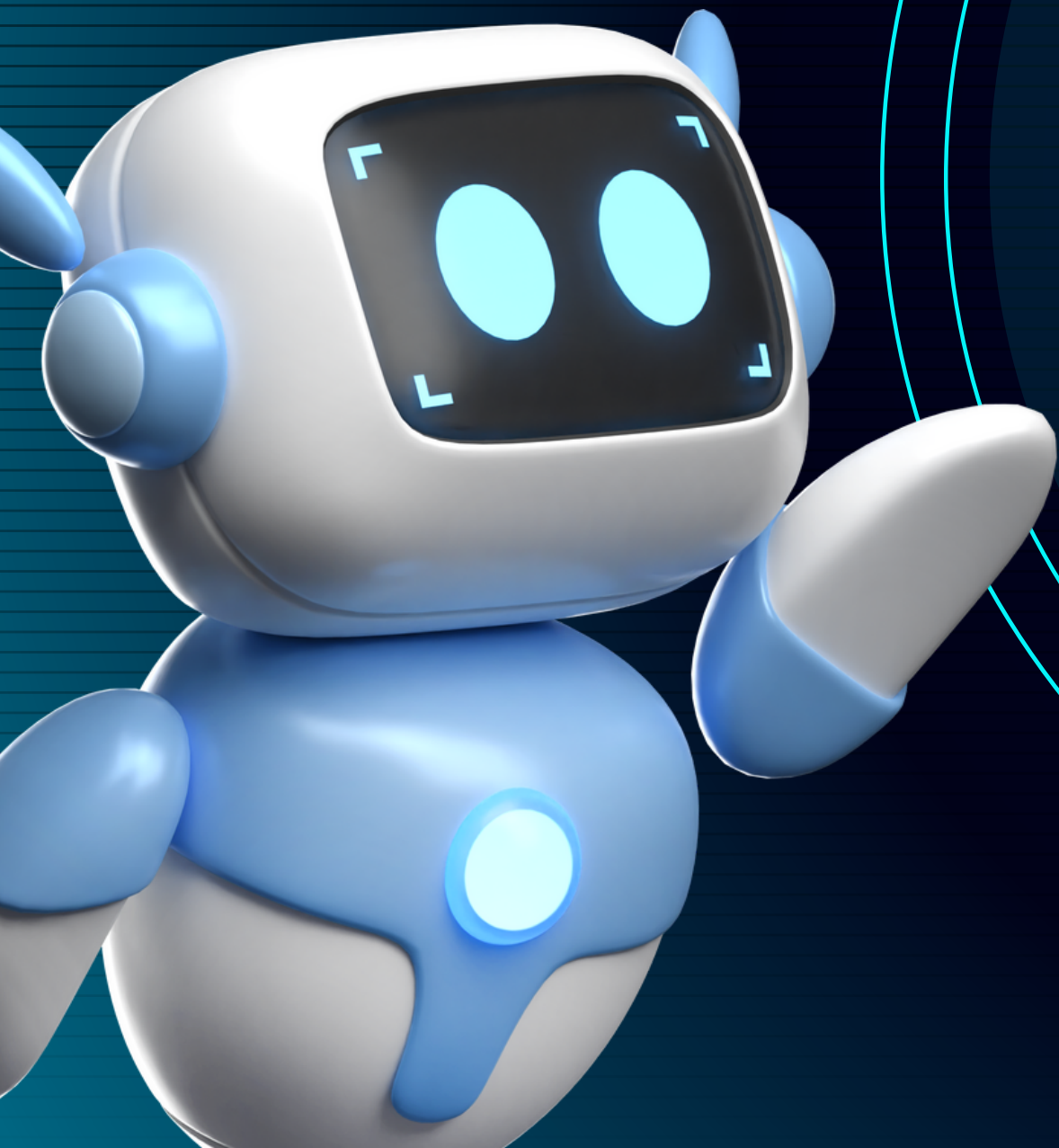


bit.ly/SAMworkflow

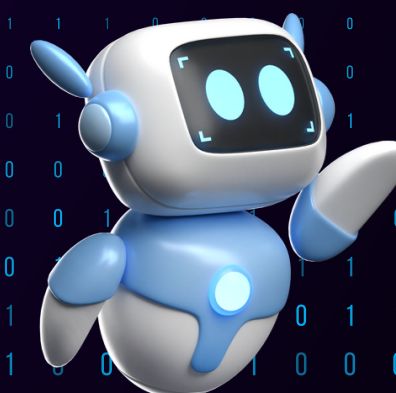
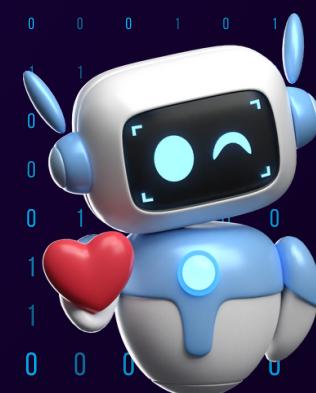
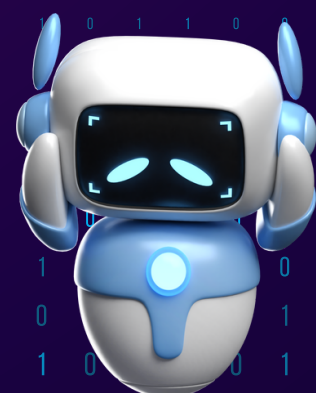
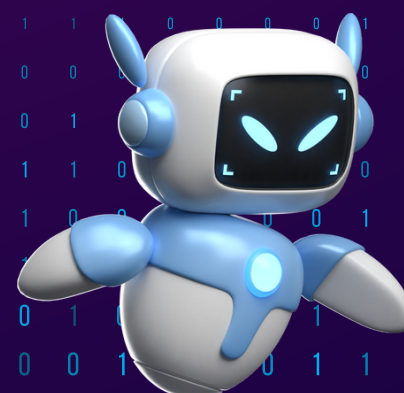
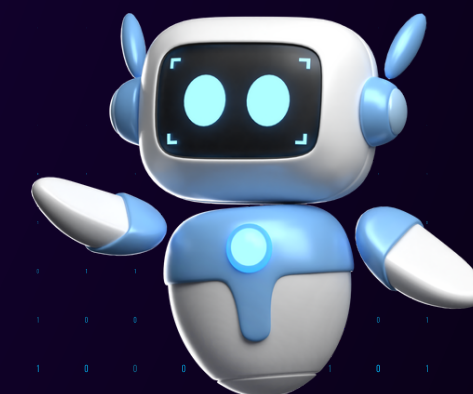
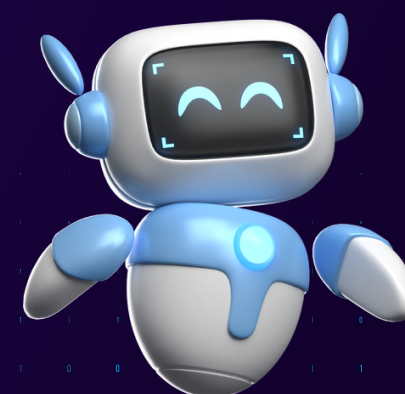
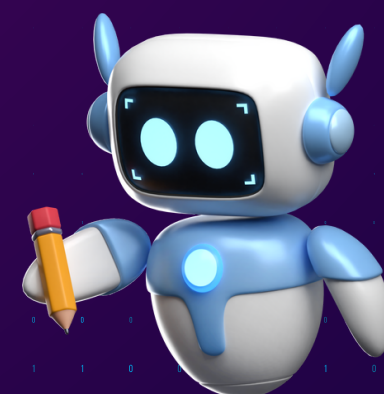
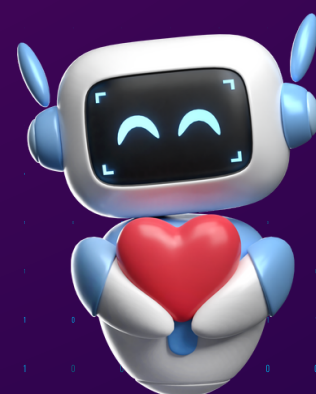
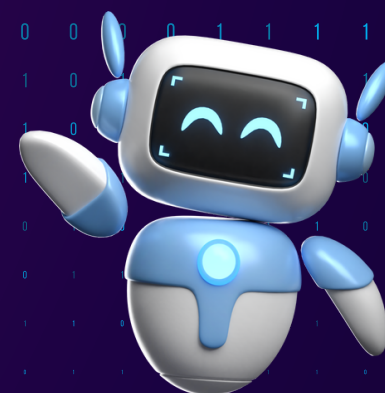
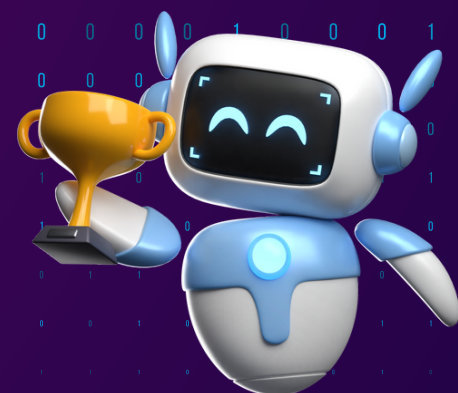
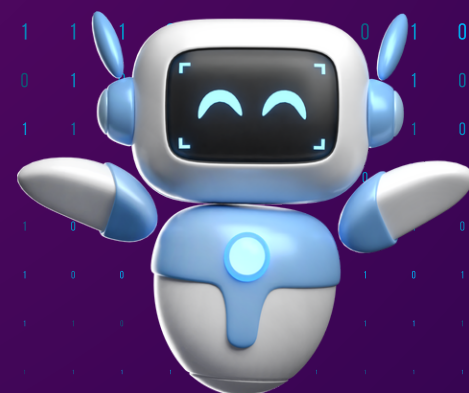
Prompt

Formula

TASK-
CONTEXT-
EXEMPLAR-
PERSONA-
FORMAT-
TONE



RESOURCES



1 GEN:

- Gen

