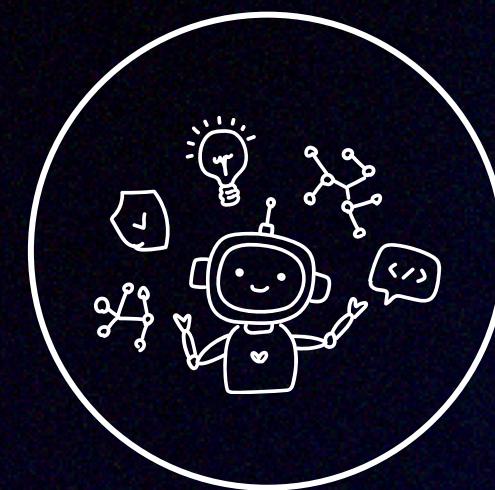


ai4all

5th Apr 2025, cohort 2 (kriti)

kanchuki & arun

Using AI for Education: A workshop for middle-school teachers



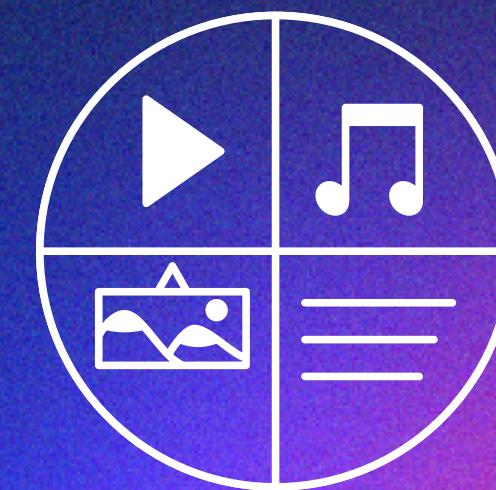
ChatGPT: What it is, and how to use it well

How it works, how to use it, alternatives, the power of prompts



ChatGPT in Education: How to use it as a teacher to help children

Prompts for syllabus, paper correction, question setting, coding. Showcase NotebookLM.



Multi-modal creation: Beyond text

Using AI for audio & video creation. Building a website. Writing Python code

Meet your instructors!



Kanchuki Sarma

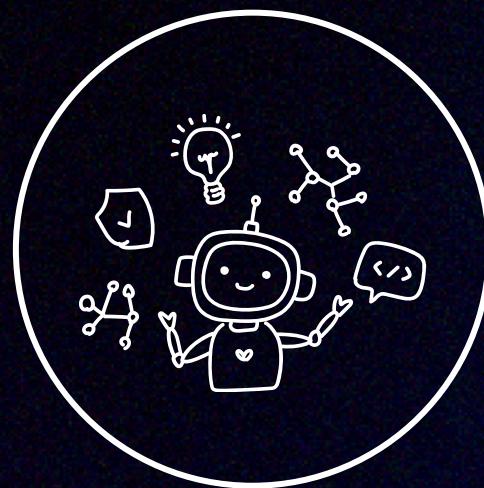
Multi-modal AI tools, AI for design, Zero Code AI toolbench (lovable, bolt), Agentic AI. Nature & travel lover. Head of Product and Design at Zemoso Labs. Previously at Gojek, Microsoft, ISB, and Next Education.



Arun Rajappa

AI foundations, Copilots & LLMs, Developer toolbench (Windsurf) Loves music, books, and food. Writes occasionally. Plays video games & tennis. Country head at Riot Games. Previously at Microsoft, Google & Twyst.

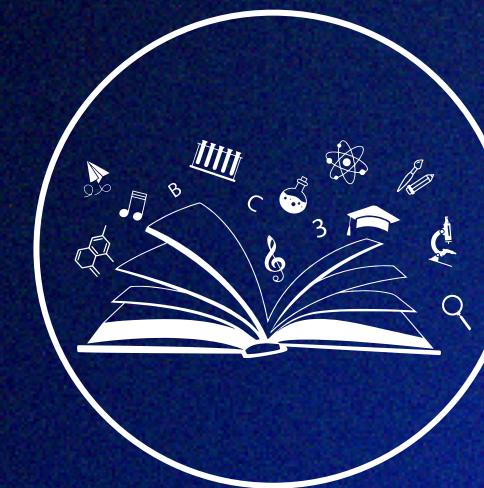
ChatGPT: What it is? **(demo)**



Generative

Generates one “token” at a time

A token is a word, word part or phrase; tokens are the vocabulary of AI



Pre-trained

The neural network is trained every 6-12 months by OpenAI

Meaning, grammar, relationships between words are learned in this expensive phase

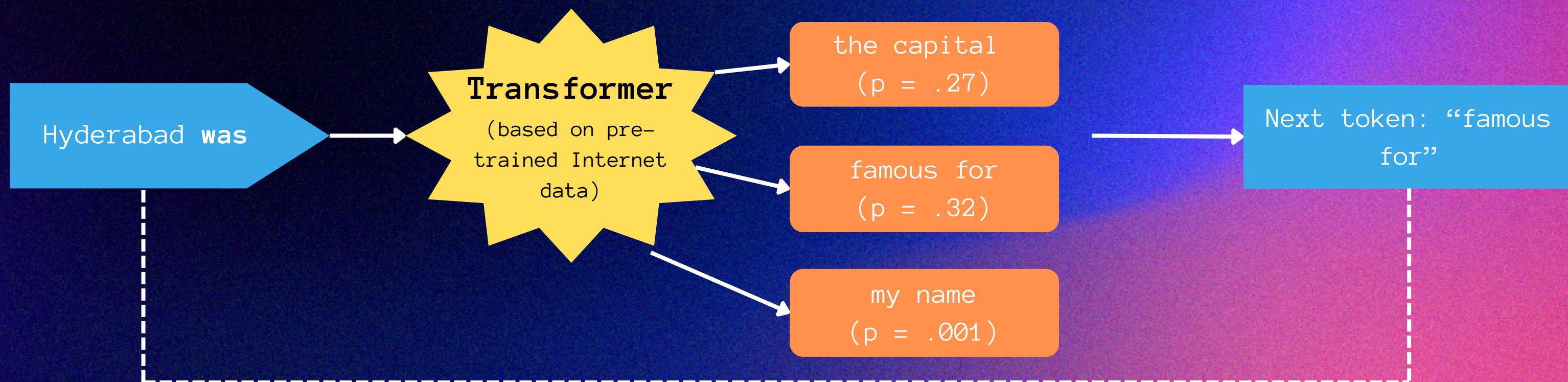
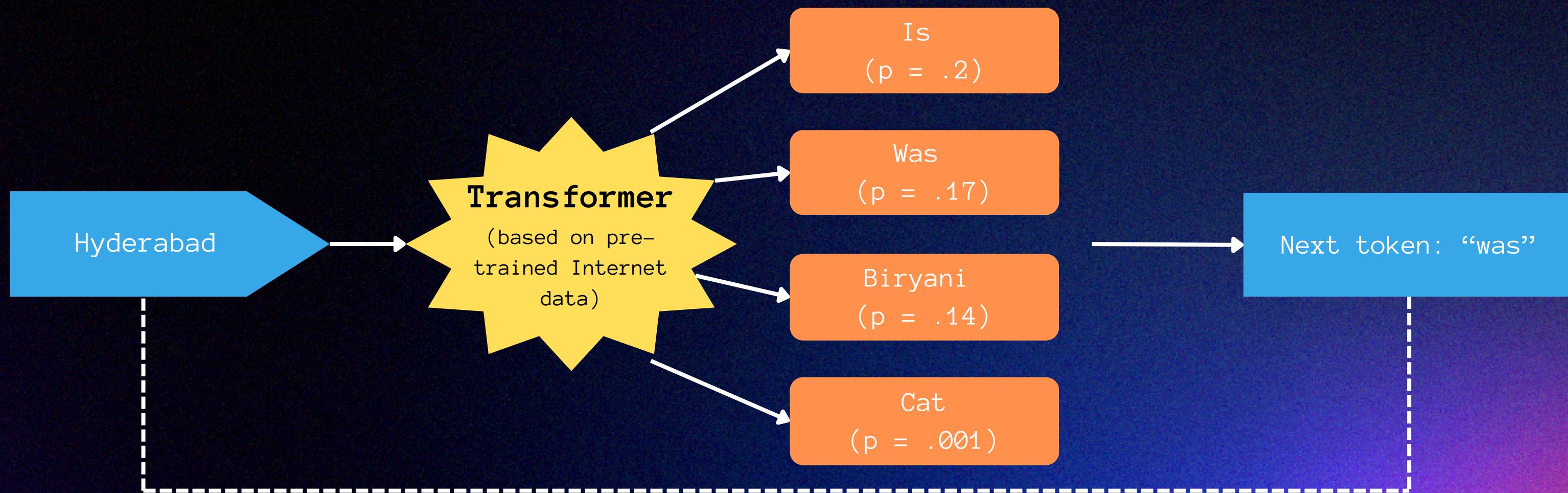


Transformer

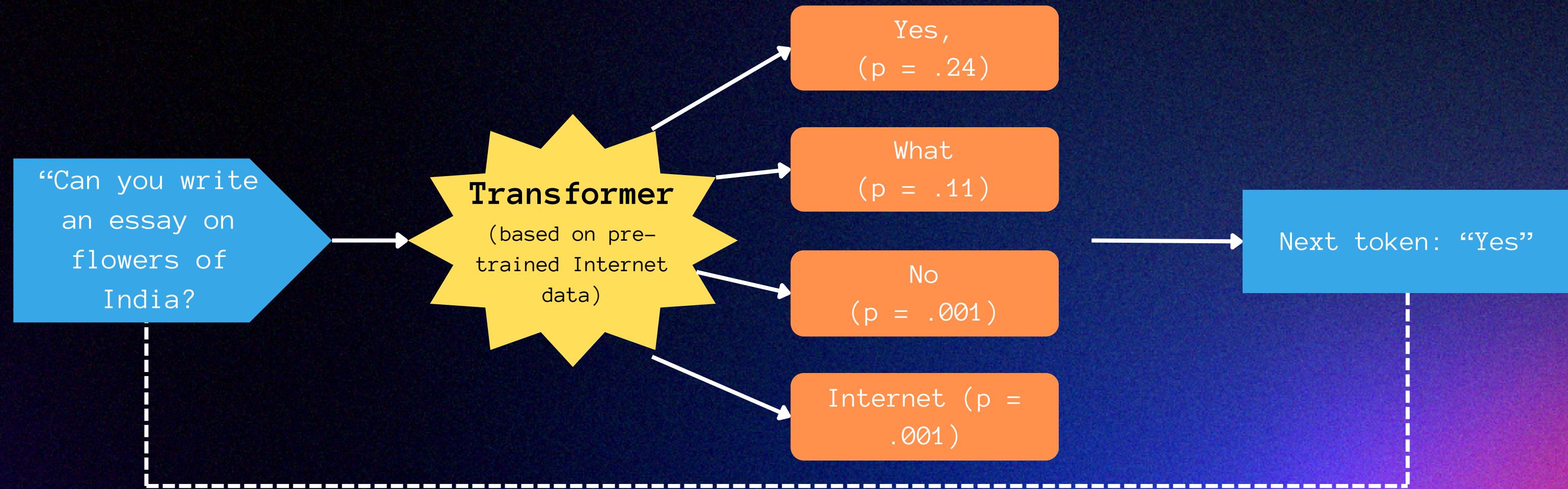
The “engine” of the AI that calculates the next probable token

Based on the inputs, and context in the sentence, a list of probable next tokens is returned

Example: One word at a time



It doesn't understand “meaning”



How does it work – one word at a time!

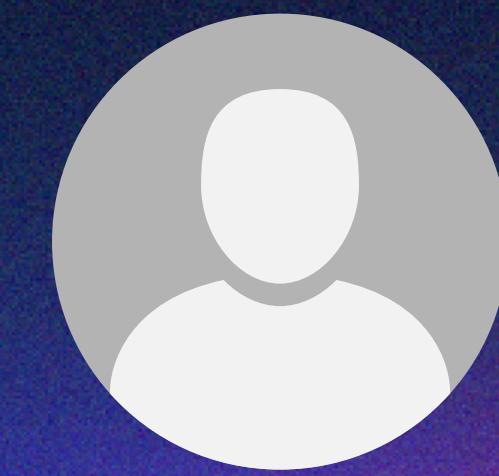
“Yes, I can write an essay on the flowers of India for you. India is known for its bio-diversity, and has a large variety of beautiful flowers”...

How is ChatGPT built?

Pretraining
Like studying a text book

Finetuning
Like studying solved problems

Reinforcement learning
Like solving practice problems and then teacher checks



Inference
When the user uses ChatGPT, like test paper

How to use ChatGPT well: Promptingtg

Tips

- Give lots of context of what you want
- Don't be afraid to write a lot
- Break up the problem into steps
- Build up your questions one at a time

How to create a great prompt: COSTAR framework

- Context: What is the background
- Objective: What do you want
- Style: What style of communication
- Tone: What tone of voice
- Audience: Who is the audience
- Response: What is the response format

Example of COSTAR framework & demo

- Context: Play the role of a 8th standard CBSE physics teacher in India
- Objective: Explain the basics of how rockets work
- Style: In simple and easy English
- Tone: Fun and engaging
- Audience: For 8th and 9th standard children in Hyderabad India
- Response: Explain it in 200 words with 3 key bullet points

Response from ChatGPT

Okay students, let's learn something super exciting today — how rockets work! 

Have you ever blown a balloon and let it go without tying it? What happens? The air comes out, and the balloon flies around, right? That's the same idea behind rockets!

A rocket moves by pushing something in the opposite direction. This is called **Newton's Third Law**: "*For every action, there is an equal and opposite reaction.*" Simple words: if you push something back, you go forward.

Rockets burn special fuel. When this fuel burns, it makes hot gases. These gases come out very fast from the back of the rocket. Because gases go down, the rocket goes up. This is how rockets fly into the sky and even into space!

3 key points to remember:

- Rocket fuel burns and makes hot gases
- Gases go down, rocket goes up (opposite direction)
- Rockets can fly even where there is no air (like in space)

So rockets are not like cars or buses. They don't need roads or air. They are like big flying machines that push themselves up by throwing gases down. Isn't that amazing? 

Modes, CoPilots & Alternatives

ChatGPT 4.0

Good for daily use of questions & answers, conversations, etc.

ChatGPT 4.5

Good for writing, research, exploring ideas

Google Gemini

Best model right now; very good for coding, writing

Perplexity

Very good as a search engine replacement

ChatGPT o1

Good for reasoning and explanation

ChatGPT o3 mini high

Good for coding and analysis, great at writing code

Claude Sonnet

Very good for coding tasks

Grok

Good, but not recommended for students / education. Can give extreme responses

Microsoft CoPilot

Integrated into Windows 11, can be used as an alternative to search and for daily conversations

CoPilot in M365

Integrated into Word, Excel, Powerpoint, Outlook for assistance in common tasks

LEARN MORE

LMArena is a good place to check which model is the best!

ChatGPT for Education: Learn anything

Learn anything with AI, just paste this prompt into ChatGPT

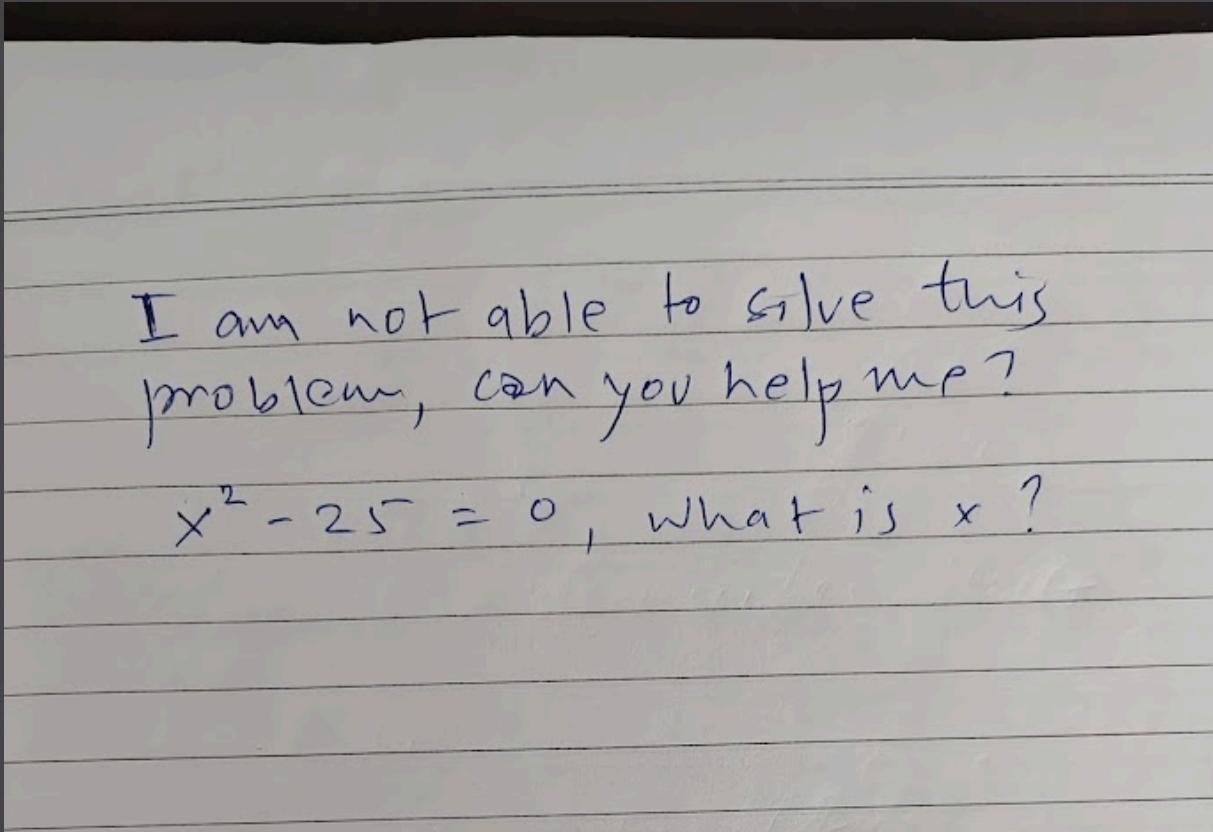
"I want you to act as an expert tutor who helps me master any topic through an interactive, interview-style course. the process must be recursive and personalized. Here's what i want you to do:

1. ask me for a topic i want to learn.
2. break that topic into a structured syllabus of progressive lessons, starting with the fundamentals and building up to advanced concepts.
3. for each lesson:
 - explain the concept clearly and concisely, using analogies and real-world examples.
 - ask me socratic-style questions to assess and deepen my understanding.
 - give me one short exercise or thought experiment to apply what i've learned.
 - ask if i'm ready to move on or if i need clarification.
 - if i say yes, move to the next concept.
 - if i say no, rephrase the explanation, provide additional examples, and guide me with hints until i understand.
4. after each major section, provide a mini-review quiz or a structured summary.
5. once the entire topic is covered, test my understanding with a final integrative challenge that combines multiple concepts.
6. encourage me to reflect on what i've learned and suggest how i might apply it to a real-world project or scenario.

this process should repeat recursively until i fully understand the entire topic.

Let's begin: ask me what i want to learn"

ChatGPT for Education: Solve problems



Sure! Let's solve the equation:

$$x^2 - 25 = 0$$

Step 1: Add 25 to both sides

$$x^2 = 25$$

Step 2: Take the square root of both sides

$$x = \pm\sqrt{25}$$

$$x = \pm 5$$

So the answer is: $x = 5$ or $x = -5$.

Let me know if you'd like help with more like this!

Other use cases & demos

1

ChatGPT / Custom GPT

Demo of uploading a syllabus and setting questions only from the syllabus in a Custom GPT

2

Google / Notebook LM

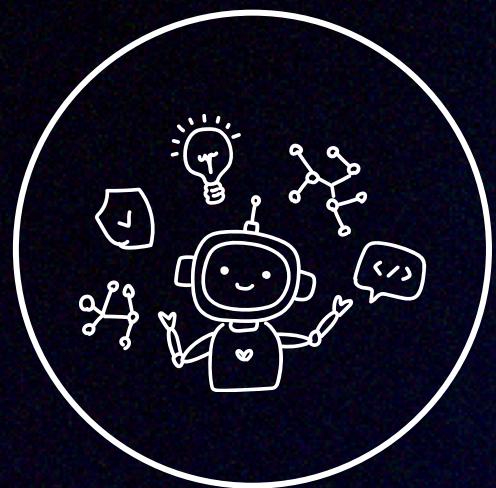
Show how to learn anything using notebook LM by uploading content and asking it for help, mind-maps, etc.

3

Computer science coding

Simple games, simple code for Python programs and more complex code also

Multi-modal AI: Beyond text chat



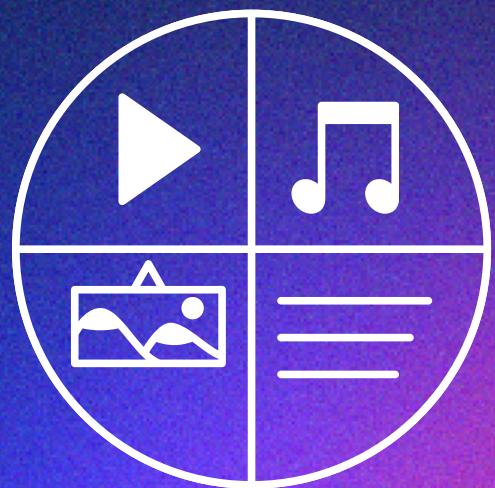
Images

Demo of ChatGPT image options, Gemini AIStudio image options, and freepik



Video

Demo of Sora and HeyGen



Music

Demo of suno and mureka

<if time permits> Coding a Python game

Showcase how a tool like Windsurf or Gemini can be used to code a game in Python or JavaScript

Closing thoughts & discussions

1

Where AI is going

The changing state of AI, how progress is happening daily, how we are surrounded by it

2

Problems using AI

Hallucinations, how kids can learn with AI, dangers of AI

3

AI Ethics

Copying answers, how AI is changing what it means to “know” things



THANK
YOU

