



Funded by the British Aid,
British Embassy in Cambodia

GenAI for Gen Z

Workshop by
IT Academy STEP Cambodia Institute
Sisters of Code



Generative AI for Generation Z

"GenAI for Gen Z" workshops aim:

to equip young people, especially female students, in Cambodia with Generative AI skills.

Why?

We want to:

- create open discussions and improve understanding of AI
- inspire students with AI's potential to discover new possibilities for learning and creativity.

This workshop is developed by IT Academy STEP Cambodia Institute and Sisters of Code team thanks to the support of the **British Embassy in Phnom Penh.**

International Curriculum for Cambodia

AI for Education

AI for Education

Workshop content is inspired
by AI for Education training
materials.



**UNESCO AI
Framework**

The workshop introduces the
main concepts of the UNESCO
AI Framework for Students.

What will you learn?

- 01** UNESCO AI Guidance for Students Framework
- 02** What is AI and how does it work?
- 03** Differences between AI and Generative AI
- 04** How Generative AI is trained?

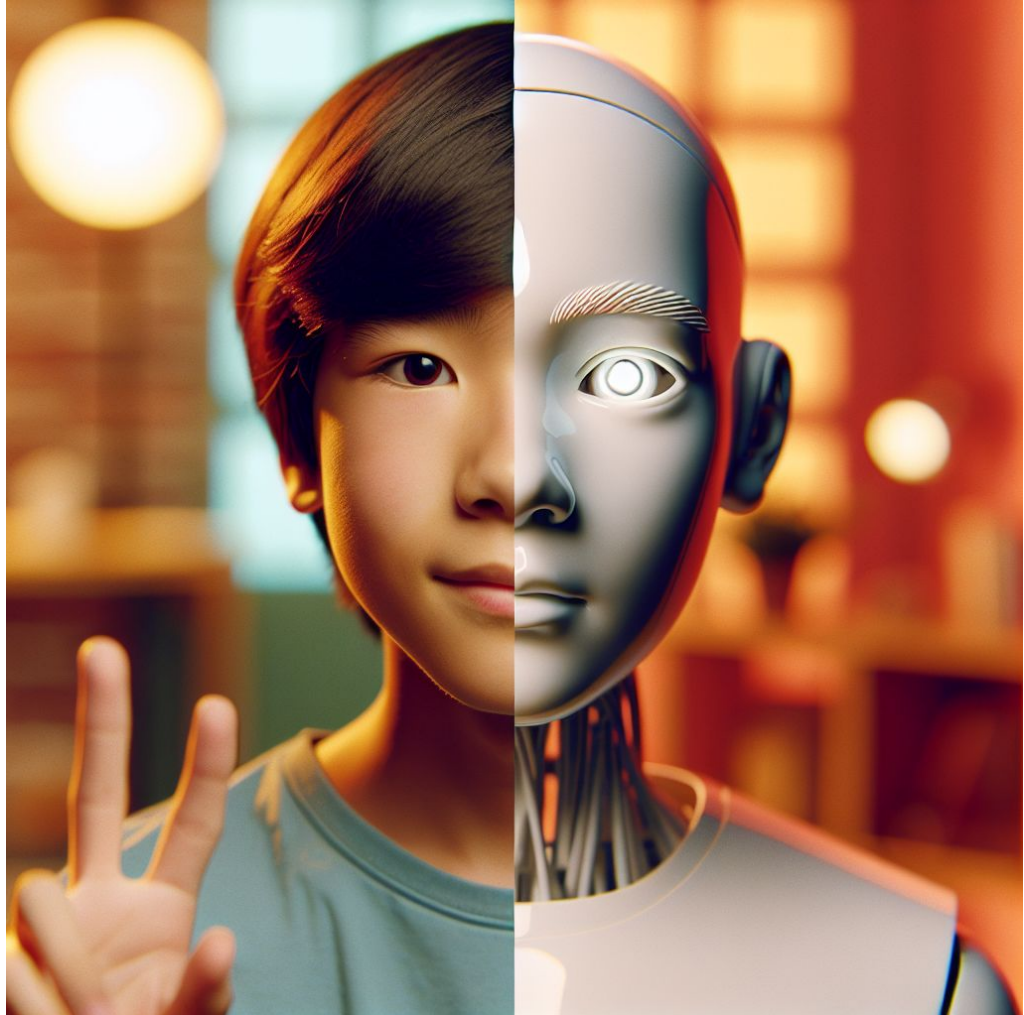
- 05** Why Generative AI hallucinate?
- 06** How to talk to Generative AI: prompt engineering
- 07** AI impact on Environment
- 08** Generative AI application and what can you do?

01

Let's Get Started!

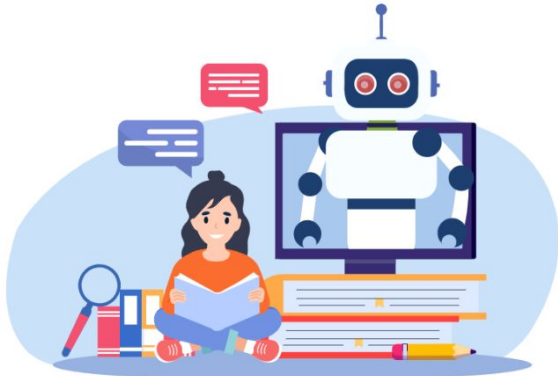
Ice Breaking Activity

Please introduce yourself to someone next to you and share one thing you hope to learn from this workshop.





AI competency framework for students



Education
2030

WHAT is AI?

UNESCO AI Guidelines
for Students Framework
explained

AI is NOT a Magic Tool!

Understand

We need to question potential AI benefits and risks, like its impact on climate, society, and the economy

Be Critical

Decide when AI is helpful and when it's not the right tool. Therefore developing critical thinking skills is the most important when using AI.

Lifelong Learning

Get prepared for lifelong learning as AI and technology keep evolving



Human Centered Interaction with AI

- AI should be designed to help humans and not the other way around. We need to make sure AI respects human rights, dignity, and diversity.
- We shouldn't let AI replace our own thinking skills, and we should always be in control of important decisions.

UNESCO FRAMEWORK FOR STUDENTS

UNDERSTAND

Students should be “able to explain their knowledge with connections to real-life or social practices.”

APPLY

Students "to have acquired a basic understanding of the human- centred approach and essential ethical principles for AI, as well as basic AI knowledge and application skills"

CREATE

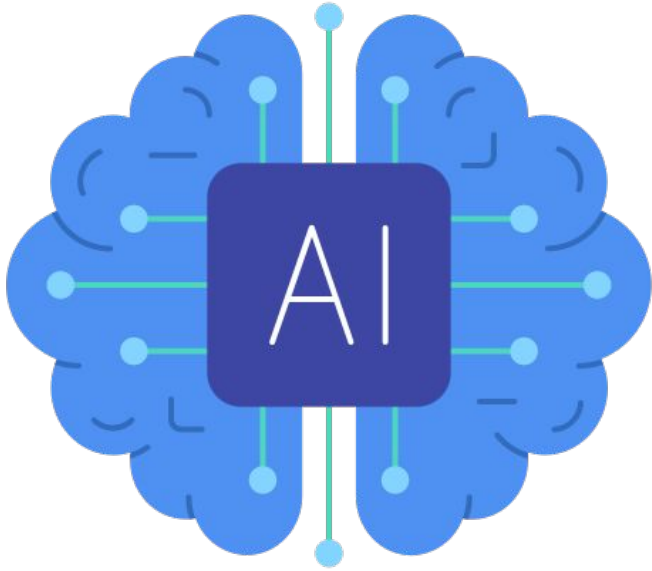
Students apply "skills on AI to design, implement and test AI solutions that can help address real-world challenges"

TYPE A WORD!

Type words that you think about when thinking about Artificial Intelligence!



BRAINSTORM



Group discussion

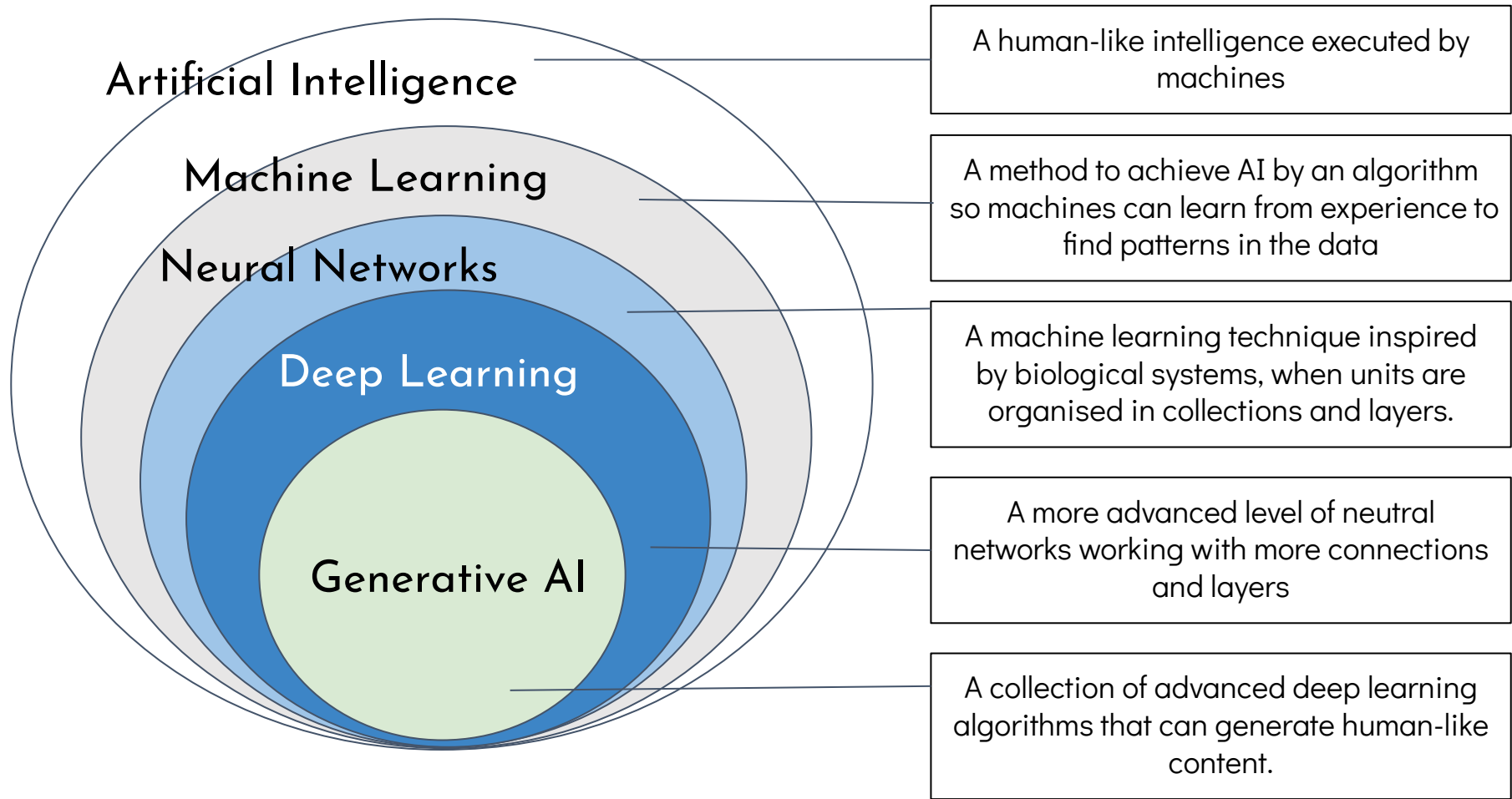
10 minutes to discuss
in groups of 2 or 3

Examples of AI

What examples of AI
application do you
know?

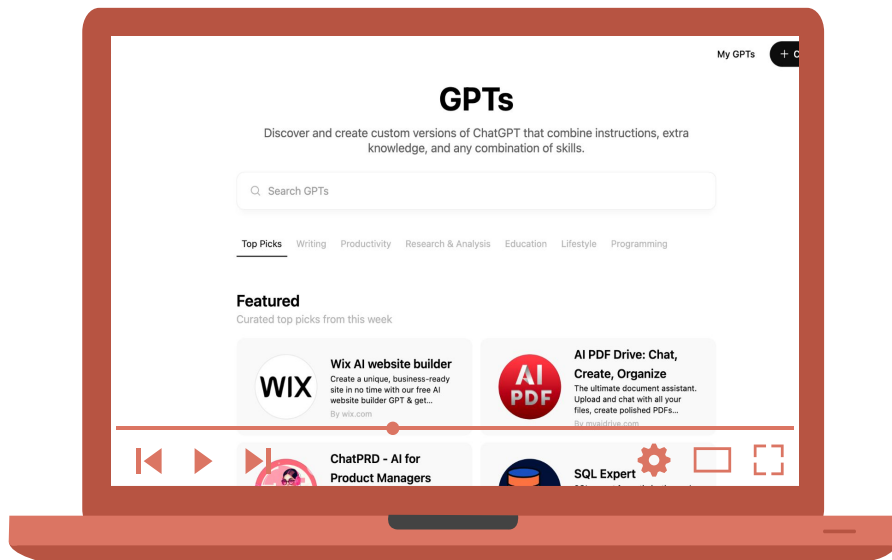
Explain AI

How can you explain
AI in simple words?



AI vs Generative AI

| FEATURE | AI | GEN AI |
|------------|---|---|
| GOAL | To process and analyze data, make predictions, solve problems | To create new data / content |
| OUTPUT | Insights, decisions and actions | Text, images, code, music and other |
| TECHNIQUES | Machine Learning, deep learning, reinforced learning | Generative Adversarial Networks (GANs), variational autoencoders (VAEs), and transformers |



GPT 3.5 (free version)
is trained on

300 billion words.

It would take a human
2,854 years to read
so many words

WHY TO START USING GEN AI?

01

Future Jobs

Learning GenAI equips students with skills needed for future jobs as automation and AI reshape industries

02

Problem Solving

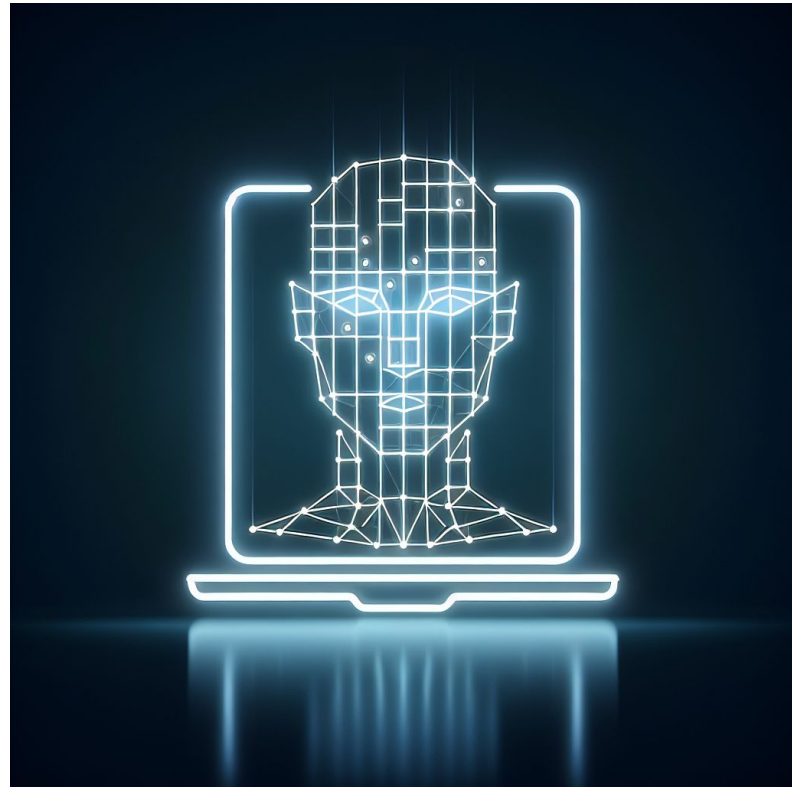
With GenAI, students can solve complex problems by analyzing data and generating insights beyond human capability.

03

Global Competitiveness

GenAI knowledge helps Cambodian students stay competitive in the global workforce, ensuring they are not left behind in the AI revolution.

How GenAI works?





HOW DO YOU LEARN?

If you would need to learn playing a guitar - write and/or draw **five steps** what would it take to learn this skill?

Step 1:

Buy or borrow a guitar



Step 2:

Pick a simple song you like that has a 'how to play' video on YouTube.



Step 3:

Study the video, pausing to practice each of the steps.



Step 4:

Practice this song over and over again. Eventually without the YouTube clip.



Step 5:

Play your new song for some friends!



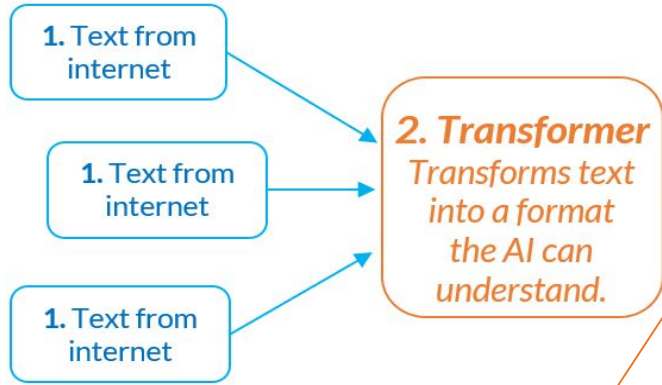
Finished?

How would you rate your response with this template?

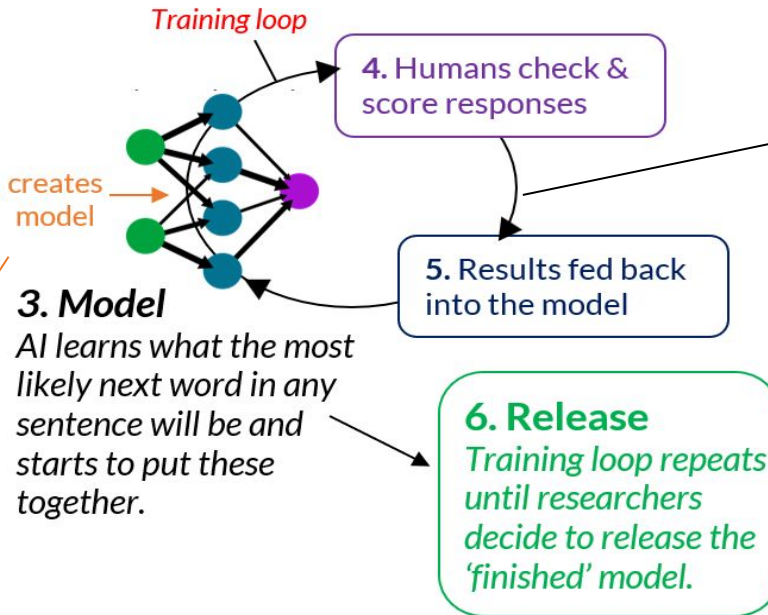


How a GenAI chatbot is trained?

Training Data:



This initial model is trained without human input, so it is referred to as “**unsupervised training**” (e.g., without human supervision).



This training loop uses **reinforcement learning**. Think of it like the AI model getting the computer version of a “doggie treat” when it gets a high score from the **human reviewers** (4).

QUIZ TIME!

1. GenAI chatbots like ChatGPT learn from:

- a) Any text available on the internet.
- b) Selected textbooks only.
- c) Their own results, scored by humans.
- d) Both a) and c).

2. A key difference between unsupervised training and reinforcement learning is:

- a) Unsupervised training involves humans.
- b) Reinforcement learning involves humans.
- c) Unsupervised training is riskier and more expensive.
- d) Reinforcement learning happens inside the transformer.

3. The AI model released to the public is:

- a) The first model the transformer creates.
- b) A model that has been through many revisions and human checks.
- c) A model that is still being trained.
- d) The text and transformer only.

4. Once an AI model is 'released':

- a) It continues to gather more training data from the internet to keep updated.
- b) It fact-checks all answers.
- c) Its training data remains the same until the whole model is updated.

5. What role do humans have in training AI?

- a) Nothing, AI trains itself.
- b) They build neural networks from training data.
- c) They score responses from the model.
- d) They transform text into a form AI understands.

7. Due to its training, the answers GenAI chatbots provide are most similar to:

- a) Autocorrect on a phone.
- b) A bus timetable.
- c) A random word generator.
- d) A calculator.



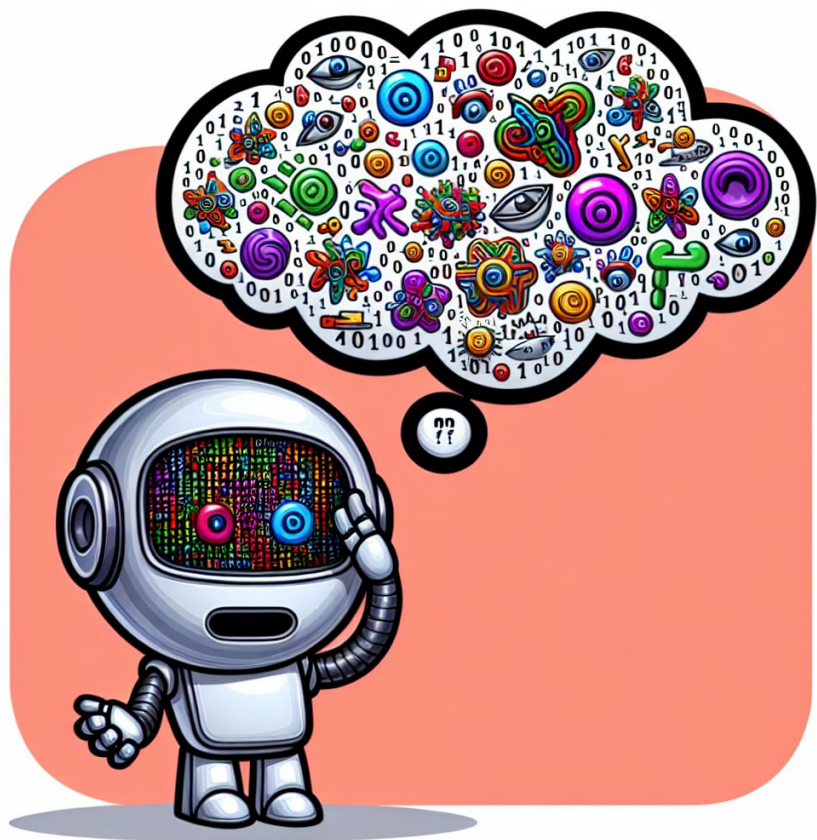
**How to confuse
machine
learning?**

GenAI chatbots cheatsheet

| | <u>ChatGPT</u> | <u>Claude</u> | <u>Google Gemini</u> | <u>Microsoft Copilot</u> |
|--------------|--|---|---|---|
| Key features | <ul style="list-style-type: none">● Text generation● File attachment (limited in free version)● Image generation (paid)● GPTs (access in free, built in paid) | <ul style="list-style-type: none">● Text generation● File attachment (free)● Process visual inputs● Focus on ethics and safety | <ul style="list-style-type: none">● Multimodal input (text, images, audi)● Image generation (free)● Data analysis● Internet access | <ul style="list-style-type: none">● Multimodal input (text, images, audi)● Image generation (free)● Data analysis● Internet access |
| Best for | <ul style="list-style-type: none">● Basic writing tasks● Language translation● Writing code | <ul style="list-style-type: none">● Working with files● Sophisticated writing tasks | <ul style="list-style-type: none">● Complex reasoning tasks● Working with Google tools (Gmail, Youtube) | <ul style="list-style-type: none">● Working with Microsoft tools● Data analysis with Excel |

GenAI chatbots cheatsheet

| | <u>ChatGPT</u> | <u>Claude</u> | <u>Google Gemini</u> | <u>Microsoft Copilot</u> |
|--------------------|--|--|---|---|
| Limitations | <ul style="list-style-type: none">• Generic writing style• Limited functionality in free version• No internet access in the free version | <ul style="list-style-type: none">• Usage limitation: 30 messages per day on free plan• No images generation• No internet access | <ul style="list-style-type: none">• Limited image generation (no people)• Limited Khmer language | <ul style="list-style-type: none">• No document upload in free version• Limited Khmer language |
| Costs | Free or 20\$/month | Free or 20\$/month | Free or 19.99\$/month | Free or 20\$/month |



HALLUCINATIONS IN AI

What is it and how to deal
with hallucinations?

TRUE OR FALSE

STEP 1

Split into groups by 2
or 3

STEP 2

Share 2 things about
yourself: one should
be true and another
is false

STEP 3

Ask the peers to
guess what was true
and what was false?



BE AWARE OF HALLUCINATIONS

GENAI MAY HAVE HALLUCINATIONS

We can't trust
ChatGPT's two truths
and a lie – it may
contain three truths, one
truth or no truths

GROUP DISCUSSION

Why do you think this
happens?

How different is
hallucination from lying?

HALLUCINATION TEST MUSHROOMS IN CAMBODIA



**MUSHROOMS
IN CAMBODIA**

Hallucinations and biases for content in Khmer

BE AWARE!

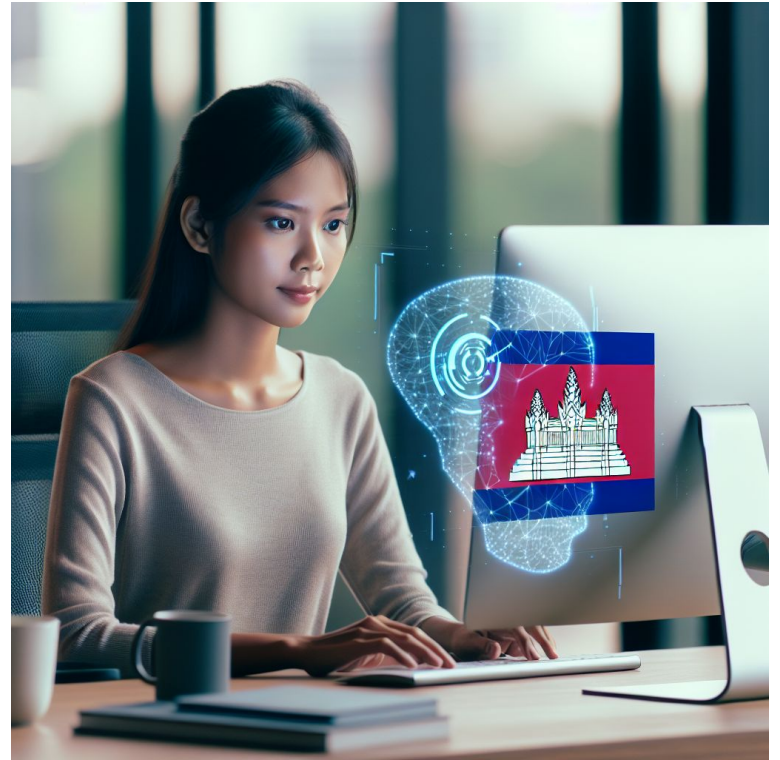
As the data that is provided to AI tools in Khmer language, as well as data that is collected from trusted sources about Cambodia is limited, be very careful about hallucinations as the error can be higher!

LIMITED DATA

Biases, misinformation, hallucinations are very common for specific countries, as generally AI is trained on western data in English language. Khmer language data is limited.

PROMPT ENGINEERING

How to talk to Generative AI?



PROMPT ENGINEERING

WHAT IS IT?

It is writing an assignment (input) for a Generative AI chatbot to create a content (output).



EXAMPLE

What do you think should young people in Cambodia focus on studying to be prepared for the future? Answer as an experienced career counselor. Provide a list of actions and explain your suggestions.

CHAT GPT LOGIN

Go to <https://chat.openai.com/>

Select: Sign Up

Enter e-mail address

Verify your email address

Return to <https://chat.openai.com/>

Login with your data

Start asking questions - writing your prompts!



PROMPT ENGINEERING

Prompt Engineering refers to the process of carefully writing instructions in a natural/human language which help Generative AI model to answer a question or prompt in a way that it is most helpful/

- This prompt example specifies the length and the level of the desired answer:

How does ChatGPT learn information? Answer at the 6th grade level in 100 words.

- This prompt example gives the bot the role to answer from:

You are an expert marketing professional in Cambodia. Suggest the best marketing strategy for a coffee shop in Phnom Penh.

Write an example of a prompt following the suggested formula on a question that you want to answer.

TIPS FOR WORKING WITH CHAT GPT

SIMPLICITY

Do not write too complex prompts. Keep them simple and focused.

ASK QUESTIONS

Ask ChatGPT follow up questions when you want to learn more details

GET DIFFERENT PERSPECTIVES

Ask different questions on the same topic to get different perspectives.

USE THE SAME CHAT

Ask ChatGPT follow up questions in the same chat so it remembers the whole conversation.

DRAFT 3 PROMPTS

Draft 3 different prompts to ask ChatGPT about itself and technology

PEER REVIEW

After your interviewed the ChatGPT, pair with a friend and revise what did you learn.

01

What similar questions and answers did you find?

02

What different questions and answers did you find?

03

One thing you like or surprised about this interview?

04

Rate the quality of the answers provided by ChatGPT

5 S PROMPT MODEL

- 01 SET THE SCENE** Tell the chatbot what role do you want it to take.
You are an expert in English literature and great at helping high school students to prepare for an exam
- 02 BE SPECIFIC** Clearly define what you want the chatbot to do and provide important details.
Create a list of five debate topics on recycling in Cambodia for a 9th grader.
- 03 SIMPLIFY YOUR LANGUAGE** Use simple language and do not build too complicated prompts
Explain Artificial Intelligence to me like I am a 5th grader.
- 04 STRUCTURE THE OUTPUT** Tell the chatbot how to structure the answer. Chatbots can structure outputs in bullet points, format charts or even use emoji
Create a quiz with multiple choice answers on a topic of Solar Energy. Highlight the correct answer.
- 05 SHARE FEEDBACK** Chatbots often do not get it right from the first time and can make mistakes. So provide feedback through the chat
Change the quiz format to a study guide.

HOW TO USE GEN AI TO LEARN FASTER

Explain like I'm 5 years old

Prompt example: Explain [insert topic or concept that you want to understand] as if you are talking to a 5 y.o. Child. Use simple language and everyday examples.

Examples and analogues

Prompt example: Explain [insert topic or concept that you want to understand] using 3 different real world examples or analogues that would be easy to understand for a beginner.

Study Plan

Prompt example: Create a detailed study plan for learning [insert topic or concept that you want to understand] for a [insert period of time]. Include specific goals, milestones and resources .

Quiz

Prompt example: Generate 10 questions quiz on [insert topic or concept that you want to understand] including a mix of multiple choice questions. Provide answers and brief explanations for each question.

HOW TO USE GEN AI TO LEARN FASTER

Improve what I have

Prompt example: Here is something that I wrote [insert your work.] Please provide specific suggestions how can I improve it [insert what do you want to improve: grammar, structure, clarity, persuasiveness]. Explain why that would make better.

Expert Round Table

Prompt example: Simulate a round table discussion with 3 experts [insert topic or concept that you want to explore]. Present 3 different viewpoints and any potential areas of agreements and disagreements.

Motivation

Prompt example: I am struggling to stay motivated while studying [insert subject or skill] Provide me 5 practical strategies to boost my motivation and maintain consistency with my studies.

USE AI RESPONSIBLY **EVERY** TIME

EEVALUATE

the initial output to see if that matches with your purpose and needs.

VERIFY

facts and figures, quotes and data using reliable resources to ensure there is no hallucination or bias.

ENGAGE

in every conversation with the chatbot, providing feedback and oversight to control the AI's output.

REVISE

the results to reflect your unique needs, style and tone. AI is a great starting point, but it should not be a final product.

YOU

are responsible for everything you create with AI. Always be transparent about how do you use these tools.

A guide for students: should I use AI?

Why do you want to use an AI Chatbot? I want it to...

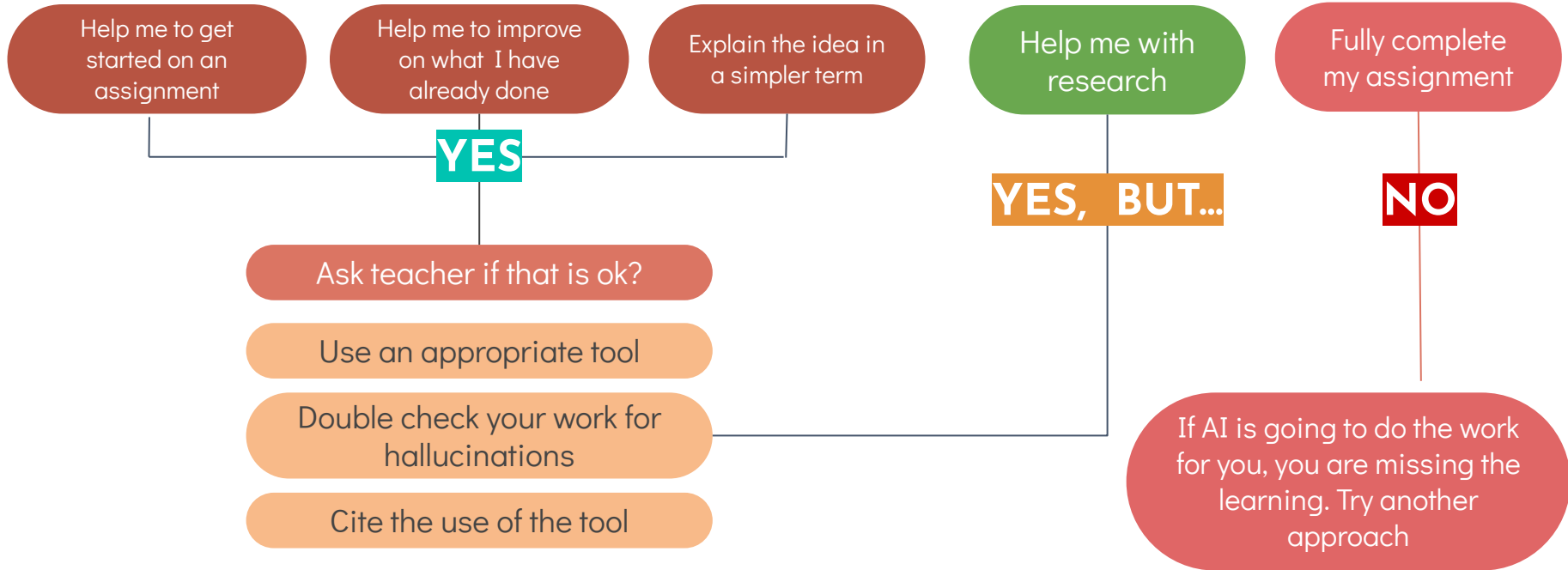


IMAGE GENERATION

Create images



Description*

ក្មេងស្រីខ្មែរលេងបាល់



Size

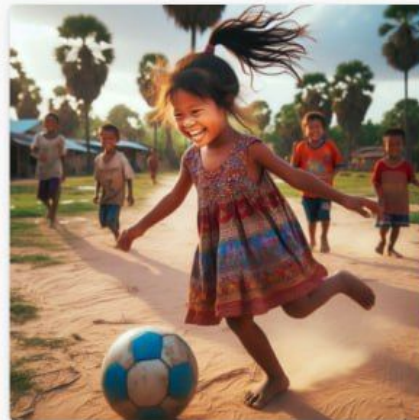
Square (1024 x 1024)

Generate →

Explore ideas

My creations

ⓘ About



FREE IMAGE GENERATION WITH MICROSOFT

Microsoft Designer Create with AI My projects

Sign in

Create images



Description*

Describe what you want to create



Size

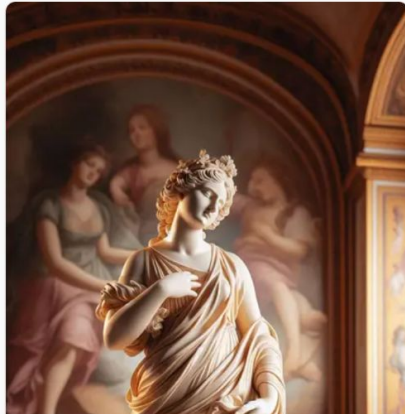
Square (1024 x 1024)

Generate →

[Explore ideas](#)

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AI IMPACT ON THE ENVIRONMENT



WHAT RESEARCHERS SAY

HIGH ELECTRICITY USE

Data centers, which are crucial for powering AI, already account for about 1-1.5% of global electricity use. The rapid growth of artificial intelligence may significantly raise this percentage.

PRODUCE CO₂

Creating ChatGPT used 1,287 megawatt hours of electricity and produced 552 tons of CO₂, equal to driving 123 gas-powered cars for a year.

CARBON FOOTPRINT

The carbon footprint of an AI prompt is 4 to 5 times higher than a search-engine query. If Google's 9 billion searches per day were instead AI chatbot queries, it would require as much power to run an entire country like Ireland.

REFLECTION TIME



WORK IN GROUPS

BRAINSTORM

OPPORTUNITIES

What opportunities AI presents for you and Cambodia? List 2.

RISKS

What risks may AI present for you? List 2.

EXIT GAME

N

Need to know: what else would you like to know about AI and ChatGPT?

E

Excited you: what excites you about AI and ChatGPT?

W

Worries you: what do you find worrisome about AI and ChatGPT?

S

Suggestions: what else would you like to learn about AI and ChatGPT?

THANK YOU!

WHAT'S NEXT?

Practice, but stay a critical thinker, evaluate the response by Generative AI and think - how and why do you use?

Most images created in this presentation are created by Canva AI



Post-Survey Form



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Feedback With Us!**

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