

探索GPT在教育中的機遇與挑戰

夏志雄

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賽馬會「混合式學習」計劃副負責人



個人介紹

- | | |
|------|--|
| 2012 | 推動校內老師進行電子教學 |
| 2013 | 成為蘋果傑出教育工作者 (ADE) |
| 2014 | 校內中一級推行 BYOD |
| 2015 | 教育局資訊科技教育策略發展督導委員會會員委會
教育局資訊科技教育組借調老師 |
| 2016 | 創立香港翻轉教學協會 |
| 2019 | 賽馬會翻轉教學先導計劃顧問 |
| 2022 | 賽馬會「混合式學習」計劃副負責人 |



遇有學習、
編程困難，
AI ChatBot
可隨時幫忙。



高中 ICT 編程課堂


Task: Generate 100 random passwords with Python

Google


python program generate 100 random passwords

Q All Images Videos Books News More Tools


About 7,190,000 results (0.44 seconds)

 **Geekflare**
<https://geekflare.com> > ... > Technology > Development

How to Create a Random Password Generator in Python
26 Sept 2022 — 1. Automate the **Password** Generation Process · 2. **Generate** Secure **Passwords** · 3. · Step 1: Import necessary modules · Step 2: Define the alphabet.

 **PYNative**
<https://pynative.com> > Python > Random

Generate Random Strings and Passwords in Python
5 steps
1. The string module contains various string constant which contains the ASCII characters of a...
2. The string.ascii_lowercase returns a list of all the lowercase letters from 'a' to 'z'. This data ...
3. Decide how many characters you want in the resultant string.

 **GeeksforGeeks**
<https://www.geeksforgeeks.org> > create-a-random-pass...

Create a Random Password Generator using Python
10 Jan 2023 — In this article, we will see how to create a **random password generator** using **Python**. Passwords are a means by which a user proves that they ...



Write a Python program to generate 100 random passwords.

Sure, here's a [Python program](#) to generate 100 random passwords:

```
python
import random
import string

# Define the length of the password
password_length = 10

# Define the number of passwords to generate
num_passwords = 100

# Define the characters to use for the password
characters = string.ascii_letters + string.digits + string.punctuation

# Generate the passwords
passwords = []
for i in range(num_passwords):
    password = ''
    for j in range(password_length):
        password += random.choice(characters)
    passwords.append(password)

# Print the passwords
for password in passwords:
```



Analogy



Google

 ChatGPT

Student's Feedback (S5 Hailey)

In my opinion, ChatGPT has helped me a lot with my studies, including assisting me on thinking ideas on my English writing, solving difficult questions in Mathematics, as well as writing complicated codes in my ICT homework.

I have used this technology since February, and I would rate an 8 for using the ChatGPT. Undeniably, ChatGPT provides a lot of explanations on the topics that I am not familiar with, and its answers are certainly concise and precise.

Student's Feedback (S5 Hailey)

However, I believe that if students **over rely** on this technology, I am afraid that students will **no longer think** by themselves. They would just **copy and paste** the answers from the ChatGPT, **without digesting** the main idea on that question. Thus, it is definitely a must for all of us, to learn how to **use this technology healthily** and **correctly**.

Overall, using ChatGPT in my academic works is an **interesting** and fascinating experience, and this technology would definitely continue to generate a wave and gain traction in our society.

AI in Classroom

智慧學習

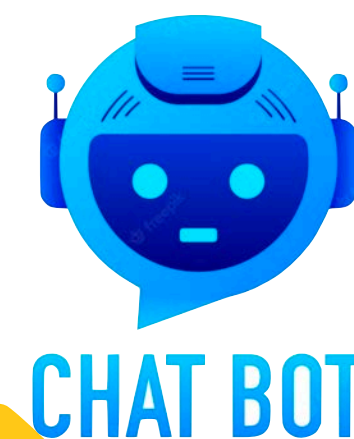
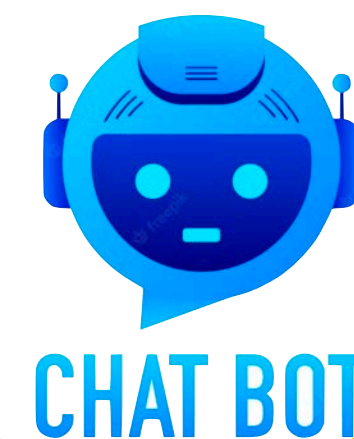
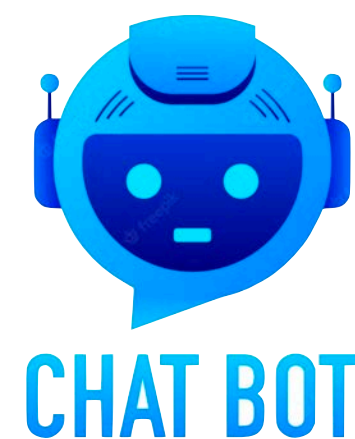
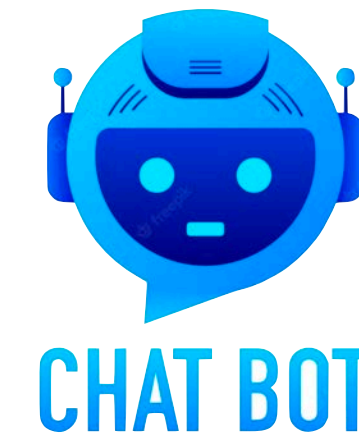
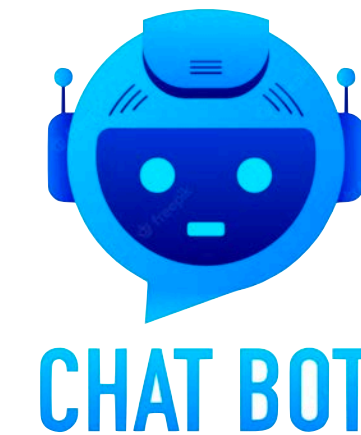
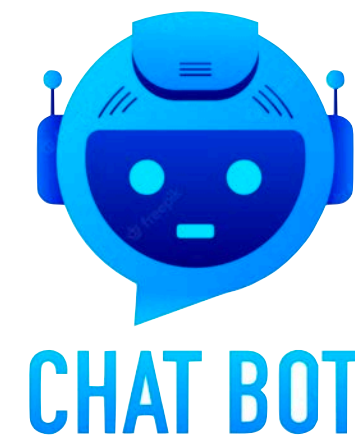
伙伴/陪練 $\times N$



助教



老師 $\times 1$



學生 $\times N$



Poe – Fast AI Chat

Ask questions and
get answers

OPEN



9.2K RATINGS

4.8

★★★★★

AGE

17+

Years Old

CHART

No.1

Productivity

DEVELOPER



Quora

What's New

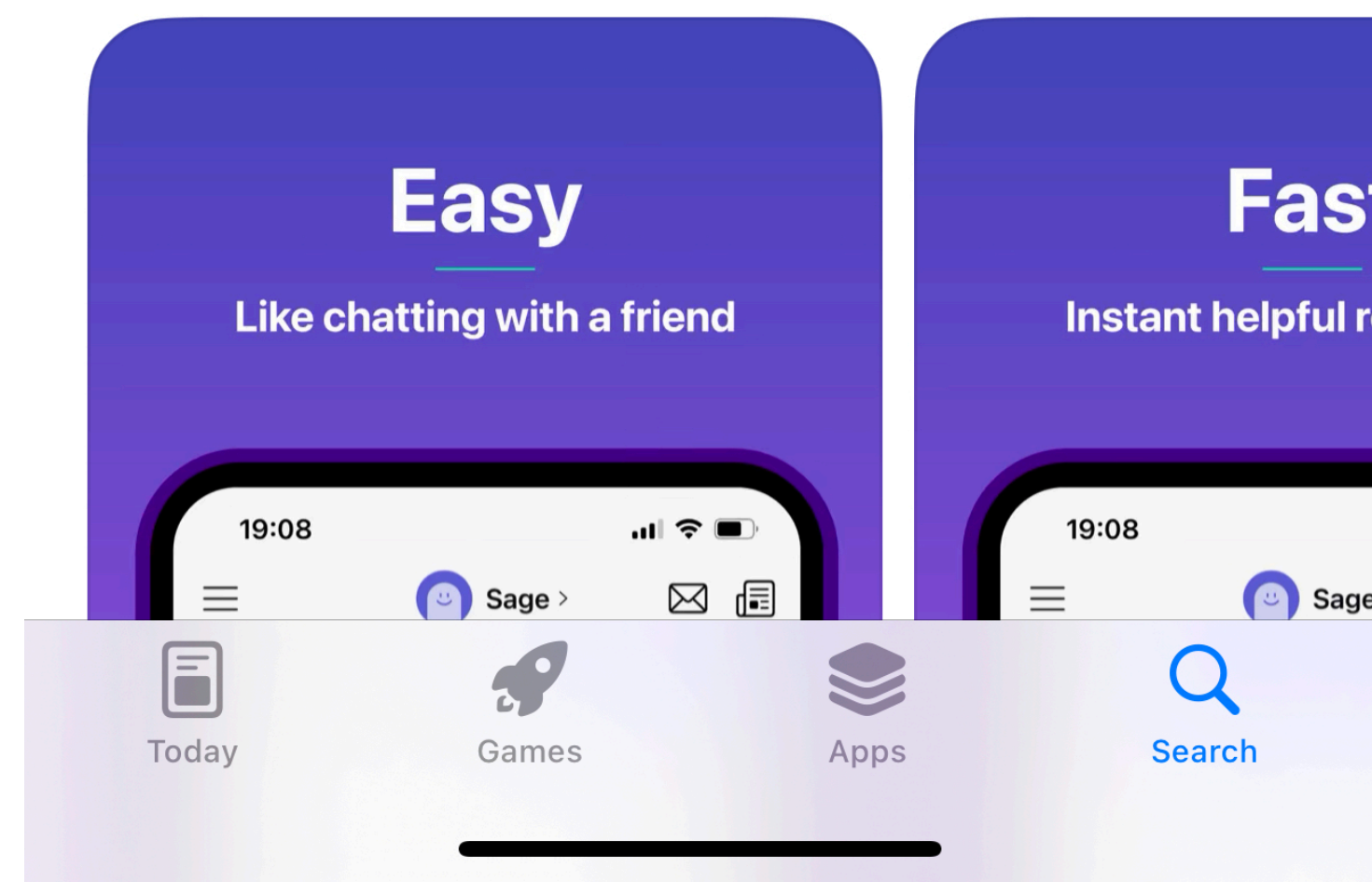
[Version History](#)

Version 1.2.15

19h ago

Now includes bots powered by GPT-4 and Claude+! Download Poe to try the newest and most powerful AIs on the market [more](#)


Preview





<https://poe.com>


Free and VPN-less


Poe 內有 ChatGPT 及 GPT-4


 **Poe**


 Sage


 **GPT-4**
Subscribed


 **Claude+**
Subscribed


 **Claude-instant-100k**
Subscribed


 **Claude-instant**

 **ChatGPT**

 Midjourney

 Summarise



 **ChatGPT** >

Write a Python program to generate 100 random passwords.

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# Define the characters to use for the password
characters = string.ascii_letters + string.digits + string.punctuation

# Generate the passwords
passwords = []
for i in range(num_passwords):
```

 Copy

 Talk to ChatGPT on Poe





AI Chatbot 是 App 的新品種



Content App
(Fixed)



Process App
(No content,
creativity)



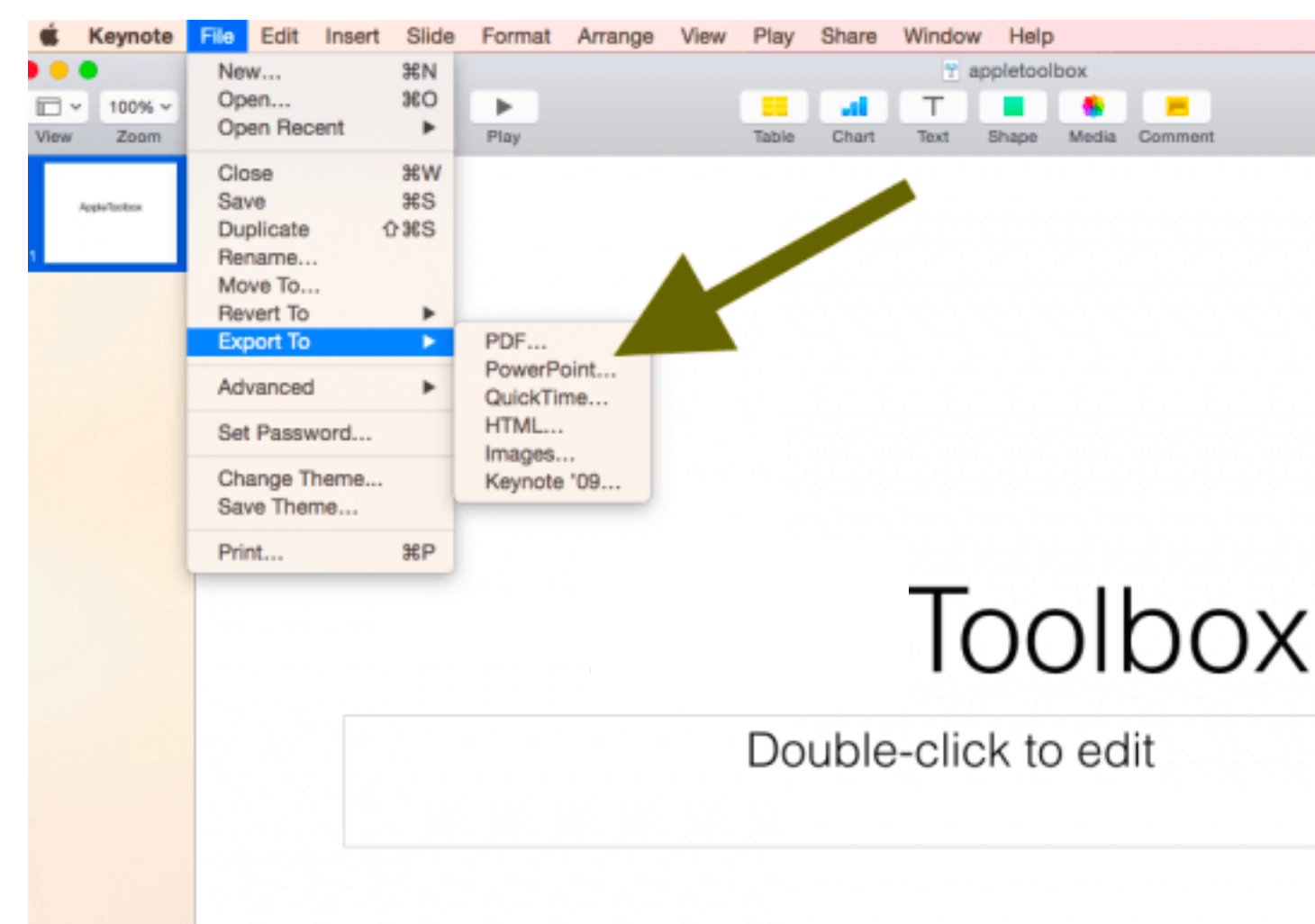
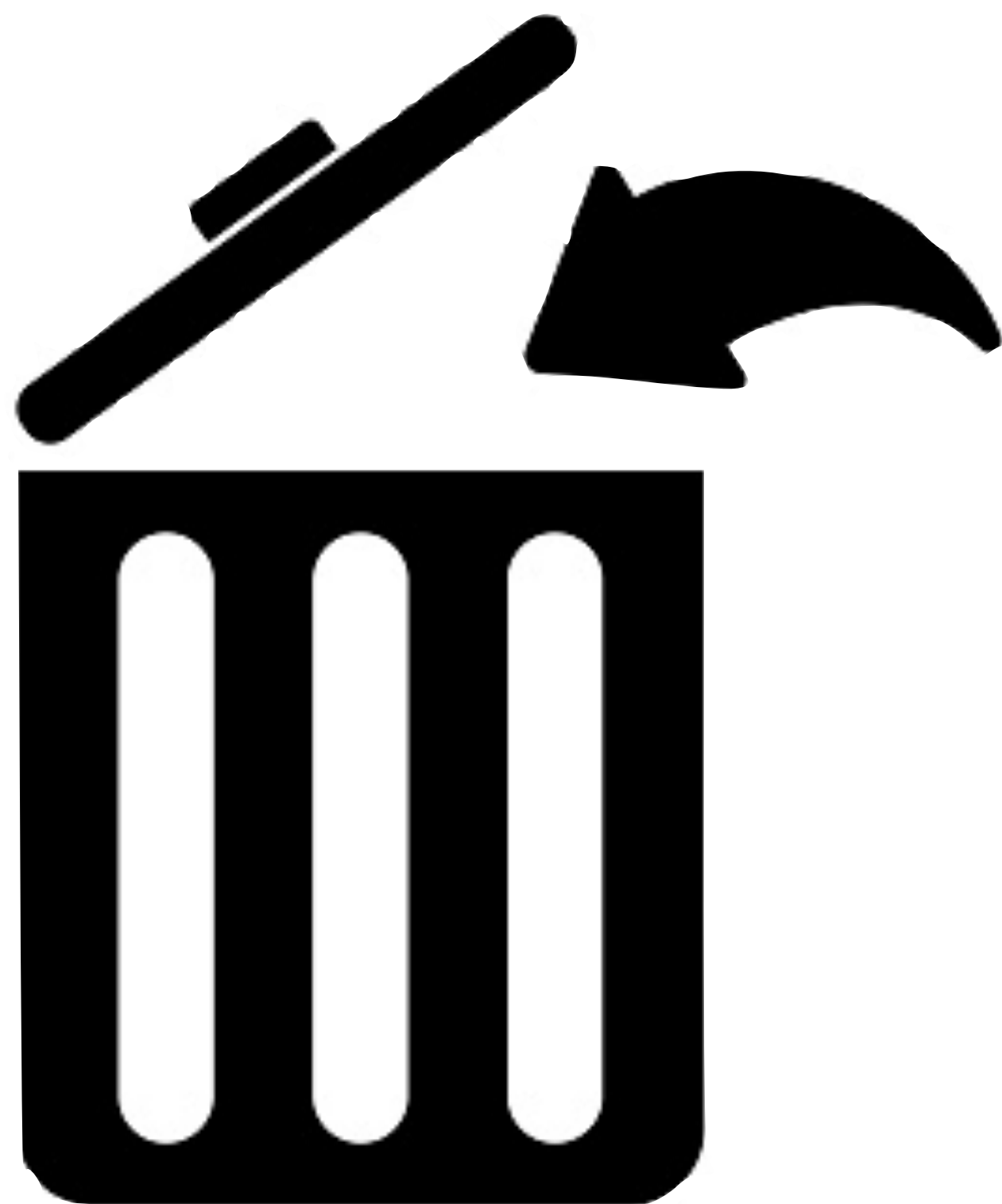
ChatGPT
(AI create content by
our prompts)

終於有一個幫助老師
節省時間的電子工具 🎉🎉



SAVE TIME.

無需學軟件操作已是一大進步



Prompt Engineering

如何問好一個問題

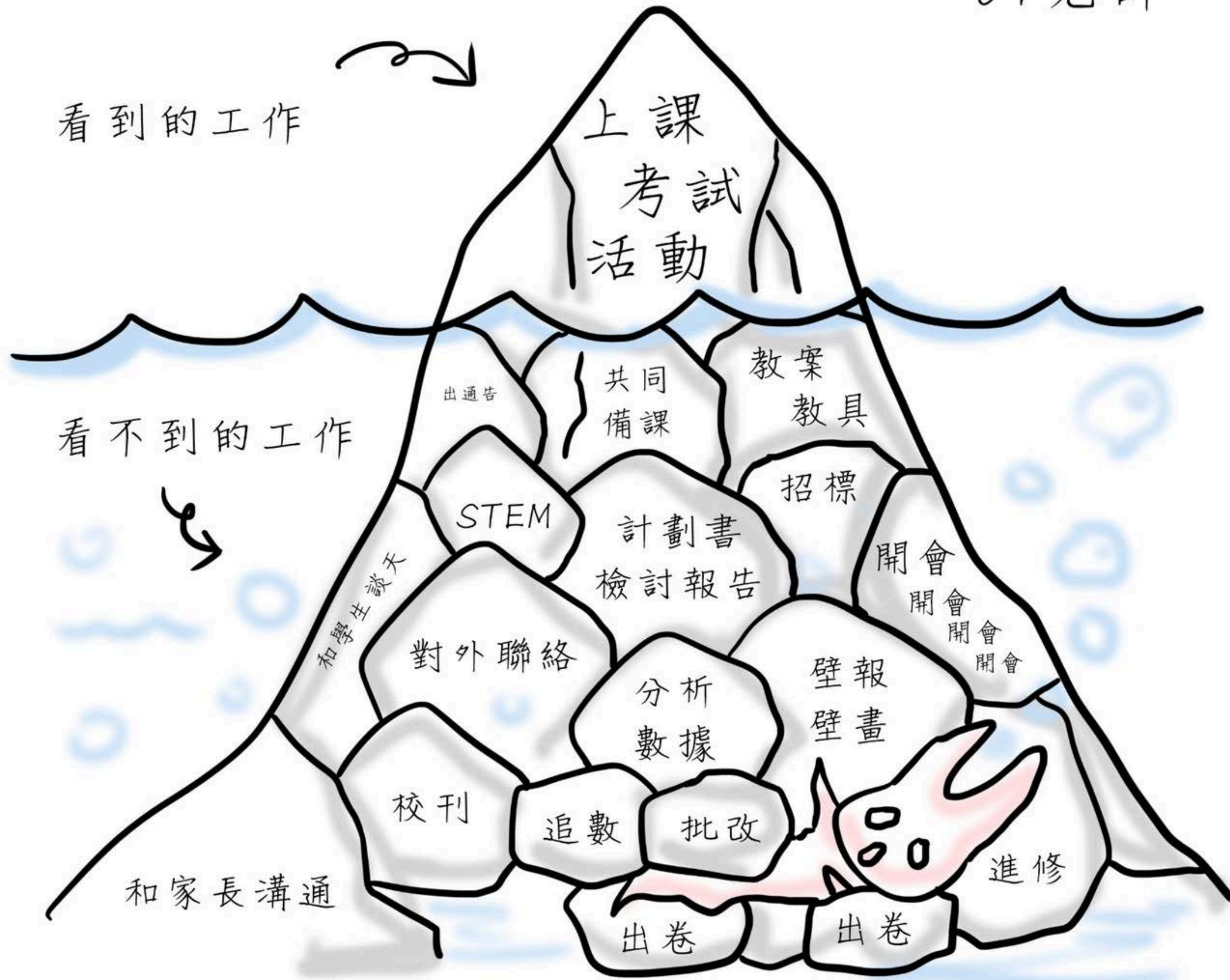


GPT-4 >

What is prompt engineering?

Prompt engineering is the process of designing and refining **input prompts** for **AI models**, such as those based on OpenAI's **GPT series**, to obtain more accurate, useful, and relevant responses. It involves crafting a question or statement in a manner that guides the **AI model** to produce the desired output.

01 老師



What can be seen is just the tip of the iceberg.
看得見的工作，只是冰山一角。

f MissRosieRabbie 露思兔子

有 AI, 這個局面 有機會改寫...



1. 設計課程和教學計劃
2. 準備教學資料
3. 提供知識點解釋
4. 批改作業
5. 設計評估方法
6. 輔導學生
7. 線上答疑
8. 課堂活動設計
9. 教育研究
10. 提升教學效果

ChatGPT 能夠幫助
老師處理那些工作？

Source: ChatGPT

早用早享受



出卷工作量 🌀



UT1

Exam1

UT2

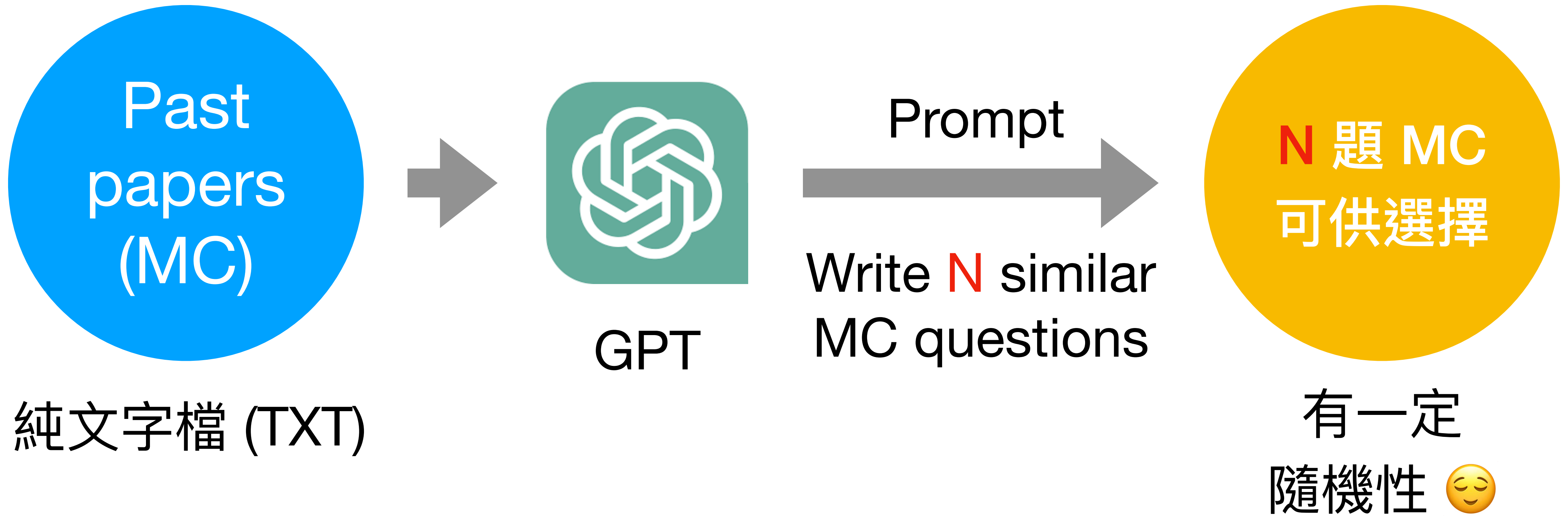
Exam2



AI in Assessment for Learning

出卷機械人 (連題解)
分析學生測考表現
針對性強化

出題



Prompt (Setting question)

Input past paper.

“Write N similar MC question.”

“Give me the answer with detailed explanations.”

S4 ICT paper

27.

Dry run the following algorithm. How many '*' are output?

N = 2

WHILE N < 8 DO

OUTPUT '*'

N = N + 3

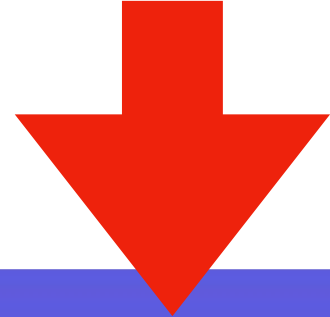
A. 0

B. 2

C. 3

D. 4

Past paper



write a similar mc question

give me the answer with detailed explanations



27.

Dry run the following algorithm. How many '*' are output?

```
N = 2  
WHILE N < 8 DO  
  OUTPUT '*'  
  N = N + 3
```

- A. 0
- B. 2
- C. 3
- D. 4

原題目

29.

Dry run the following algorithm. How many '#' are output?

```
M = 4  
WHILE M <= 16 DO  
  OUTPUT '#'  
  M = M * 2
```

- A. 1
- B. 2
- C. 3
- D. 4

AI 出的題目

Let's step through the algorithm:

1. $M = 4$
2. $M \leq 16$ ($4 \leq 16$), true, enter the loop.
3. OUTPUT '#' (first output)
4. $M = M * 2 \Rightarrow M = 4 * 2 \Rightarrow M = 8$
5. $M \leq 16$ ($8 \leq 16$), true, enter the loop again.
6. OUTPUT '#' (second output)
7. $M = M * 2 \Rightarrow M = 8 * 2 \Rightarrow M = 16$
8. $M \leq 16$ ($16 \leq 16$), true, enter the loop again.
9. OUTPUT '#' (third output)
10. $M = M * 2 \Rightarrow M = 16 * 2 \Rightarrow M = 32$
11. $M \leq 16$ ($32 \leq 16$), false, exit the loop.

A total of 3 '#' are output. The answer is C. 3.

AI 出的答案 及題解

S1 Computer paper

Which of the following are common applications of VR?

 Copy

- (1) Gaming
- (2) Driving a car on a road
- (3) Training pilots

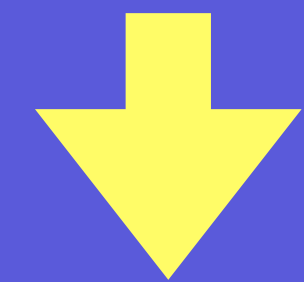
- (1) and (2) only
- (1) and (3) only
- (2) and (3) only
- (1), (2) and (3)

write 3 similar mc questions on VR like this one

What are some advantages of using VR in education?

- (1) Immersive learning experiences
- (2) Reduced travel costs
- (3) Improved collaboration

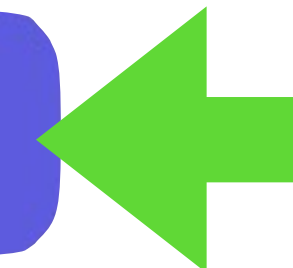
- (1) and (2) only
- (1) and (3) only
- (2) and (3) only
- (1), (2) and (3)



rewrite this mc question with another option (3)

replace option (3) with an easier to understand wordings

why is option (2) correct



Now every MC has detailed explanation

Q	Key	Explanation
		<p>To have true colour and transparency, Mary should use either PNG or GIF file formats.</p> <p>A. GIF (Graphics Interchange Format) is a bitmap image format that supports up to 8 bits per pixel, allowing for up to 256 colours to be used. GIF also supports transparency, which can be specified for one colour in the image. However, GIF does not support true colour, which means it cannot display more than 256 colours simultaneously. Therefore, GIF does not meet the requirement for true colour and transparency.</p> <p>B. PNG (Portable Network Graphics) is a bitmap image format that supports true colour and transparency. PNG supports 24-bit true colour, which can display over 16 million colours, as well as alpha-channel transparency, which can specify varying levels of transparency for each pixel in the image. Therefore, PNG meets the requirement for true colour and transparency.</p> <p>C. Both GIF and PNG support transparency, but only PNG supports true colour. Therefore, the correct answer is (2) only, which is PNG. Option A, (1) only, is incorrect because GIF does not support true colour. Option D, (2) and (3) only, is incorrect because JPG (Joint Photographic Experts Group) is a lossy compression format that does not support transparency.</p>



出卷有幫手 🦾

時間縮短 🕒

腦輕鬆 🧠

壓力大減 😊

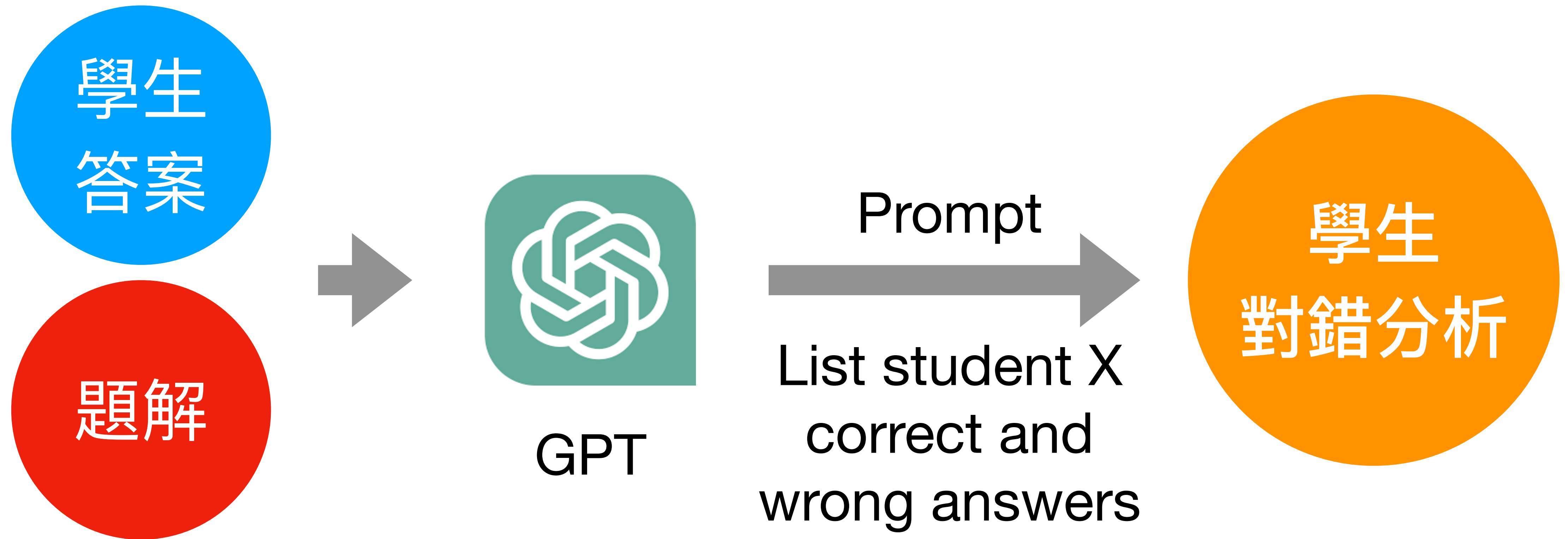
只需檢查 AI 的回應 ✅

選擇適合的題目

保持/提昇題目質素

更可提早出卷 🦜

改卷及分析

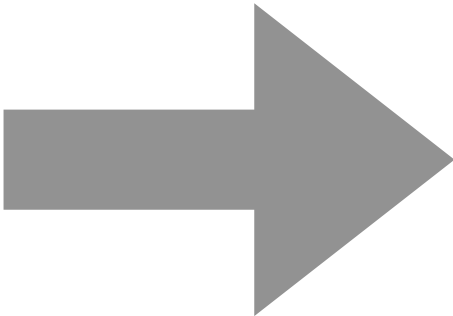


Student	
1. D	
2. C	
3. A	
4. cancelled	
5. A	
6. B	
7. C	
8. A	
9. B	
10. A	
11. B	
12. C	
13. B	
14. A	
15. D	
16. A	
17. B	
18. C	
19. C	
20. B	
21. A	
22. C	
23. B	
24. B	
25. C	

學生答案

Answer:
1. D
2. D
3. A
4. cancelled
5. A
6. B
7. C
8. A
9. B
10. A
11. C
12. C
13. B
14. A
15. D
16. D
17. B
18. D
19. C
20. B
21. A
22. C
23. C
24. B
25. D

題解



Here are Student XYZ's correct and wrong answers:

Correct Answers:

- 1. Question 1 (Algorithm, Output, While Loop)
- 2. Question 3 (Algorithm, Input, Output, Remainder)
- 3. Question 5 (Boolean Expressions, Comparison)
- 4. Question 6 (Algorithm, Output, Array, Loop)
- 5. Question 7 (Algorithm, Output, Array, Loop)
- 6. Question 8 (Modularity, Software Development, Benefits)
- 7. Question 9 (Algorithm Testing, Sorted Array, Test Data)
- 8. Question 10 (Software Development, Testing, Importance)
- 9. Question 13 (What-if Analysis, Spreadsheet, Business)
- 10. Question 14 (Nested IF Functions, Spreadsheet, Formula)
- 11. Question 15 (Goal Seek, Spreadsheet, Purpose)
- 12. Question 17 (Object Linking, Object Embedding, Difference)
- 13. Question 19 (Image Compression, Presentation, Effects)
- 14. Question 20 (Embedding Video, Presentation, Benefit)
- 15. Question 21 (Python Code, Stack, Output)
- 16. Question 22 (Python Code, Queue, Output)
- 17. Question 24 (Stack, Web Browser, Back Button, Benefit)



Wrong Answers:


- 1. Question 2 (Algorithm, Output, While Loop, Remainder)
- 2. Question 11 (Word Processing, Formatting, Consistency)
- 3. Question 16 (Spreadsheet, Sales, Data Organization)
- 4. Question 18 (OLE, Linked Objects, Benefits)

學生表現分析

Prompt (Cater for learner's diversity)

“Analyse student XYZ performance.
What are her strengths and weaknesses?
Suggest follow up actions.”

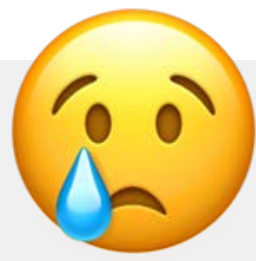
Student XYZ's performance shows a good understanding of most of the topics covered in the questions. Here's an analysis of her strengths and weaknesses:

Strengths: 

1. **Algorithms** - She answered questions related to algorithms, inputs, outputs, loops, and remainders mostly correct.
2. Boolean Expressions and Comparisons - She answered the question related to boolean expressions correctly.
3. Modularity, Software Development, and Testing - She answered questions related to modularity, software development, and testing correctly.
4. Spreadsheet Functions - She showed a good understanding of various **spreadsheet functions** such as What-if Analysis, Nested IF Functions, and Goal Seek.
5. Python Code - She answered questions related to Python code, such as stack and queue, correctly.

學生強弱項 報告

Weaknesses:



1. Array and Loop related questions - She answered question 23 related to **2D arrays** and loops incorrectly.
2. **Document Formatting** and Backup - She answered question 11 related to word processing incorrectly.
3. Sales Data Organization - She answered question 16 related to organizing sales data in a spreadsheet incorrectly.
4. Object Linking and Embedding - She answered question 18 related to benefits of linked objects in OLE incorrectly.
5. **Queue Applications** - She answered question 25 related to the benefits of using a queue in a printing queue incorrectly.

Overall, Student XYZ demonstrates a strong foundation in algorithms, software development, and spreadsheet functions. However, she could improve her understanding of **array manipulation**, document formatting, and object linking and embedding.

學生對此課題
(OLE) 不理解



針對性出題

1. What does **OLE** stand for in the context of software applications?
 - A. Object Learning Environment
 - B. Object Layering Environment
 - C. Object Linking and Embedding
 - D. Object Lifting and **Editing**
2. Which of the following is NOT a benefit of using Object Linking and Embedding (OLE) in documents?
 - A. **Automatic updates** of linked objects
 - B. **Consistent formatting** across different applications
 - C. Embedding large files without increasing the **document size**
 - D. Sharing data and objects between different applications
3. When an object is embedded using OLE, what happens to the **source file**?
 - A. The source file is not required to display the embedded object.
 - B. The source file must be available to display the embedded object.
 - C. The source file is deleted after the object is embedded.
 - D. The source file is moved to the same location as the document containing the embedded object.

針對學生
不理解課題
Prompt 類似題
目作鞏固



22-23 S4 ICT UT2 Report

22-23 S4 ICT UT2 Report

29 March 2023

MC performance analysis

Student [redacted]'s performance can be analyzed based on the given answers. Here's a summary of her performance:

Correct answers: 1, 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Incorrect answers: 3, 9

Strengths:

Student [redacted] demonstrates a strong understanding of databases (Q5) and SQL concepts (Q6, Q7, Q8, Q18), as well as algorithms (Q11, Q13, Q14, Q16, Q17).

She also performed well in questions related to spreadsheets, specifically formulas (Q1, Q2), pivot tables (Q4), programming concepts such as modularity and code reusability (Q10), boolean logic (Q15), and testing (Q19).

Additionally, she answered correctly on questions related to control flows and variables (Q12) and comments (Q20).

Weaknesses:

Student [redacted] struggled with a spreadsheet-related question, specifically involving conditional formatting (Q3).

She also had difficulties with an SQL query involving aggregate functions and GROUP BY (Q9).

Overall, Student [redacted] shows strengths in most aspects of databases, SQL, spreadsheets, programming concepts, and algorithms. Her weaknesses are limited to a specific spreadsheet topic (conditional formatting) and a particular SQL concept (aggregate functions and GROUP BY). To enhance her performance, she may consider practicing exercises in these areas.

學生個人成績 分析報告

用 AI 節省下來的時間怎麼用？



育人/輔導



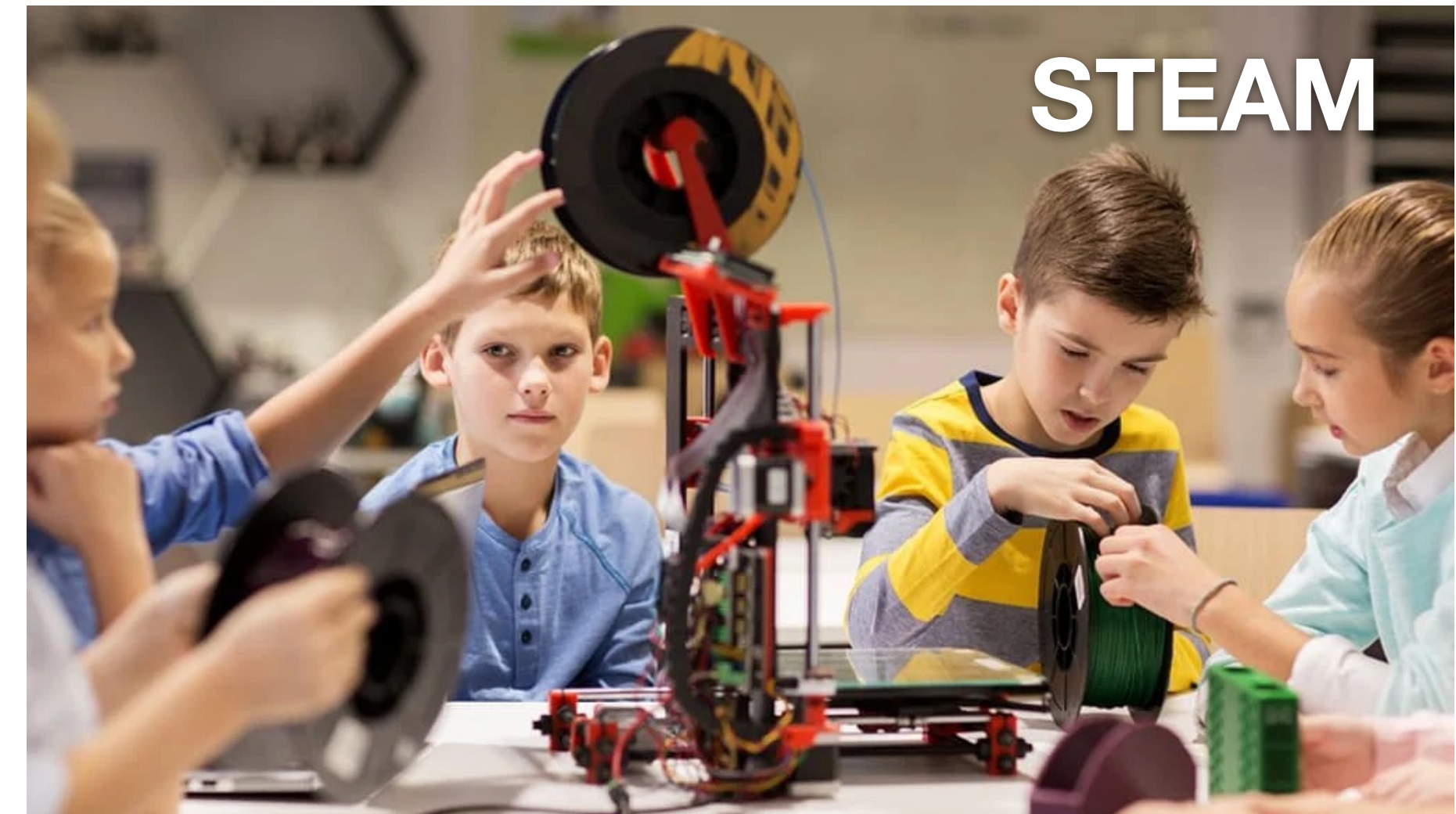
Well Being

教育反思

現行測驗考試
主要靠回答問題
去評估學生識唔識
可是回答問題這技能
已將被 AI 取代

我們是否要重新思考
評估的模式？

想了解學生是否
掌握知識有多種方法
答問題只是其中一種



翻轉教育反思

教導學生問問題，而不是答問題，
並判斷 AI 提供的「答案」是否正真確。

授人以魚



不如授人以漁



We Spoke To The Guy Who Created The Viral AI Image Of The Pope That Fooled The World

"I just thought it was funny to see the Pope in a funny jacket," he told BuzzFeed News.



Chris Stokel-Walker
BuzzFeed Contributor

Posted on March 28, 2023 at 2:15 am



View 20 comments



Fake

AI 也有錯



ChatGPT >

夏志雄是誰？

夏志雄（Hsia Chih-tsing）是一位著名的臺灣文學學者、評論家、教授、作家和翻譯家。他於1937年出生於浙江紹興市，1950年代隨家人移居臺灣，後來在國立臺灣大學取得中文系學士學位、紐約大學取得博士學位後回到臺灣，任教於中央研究院、國立臺灣大學等多所學校。他的研究領域主要包括中國文學、比較文學、文學批評等，著有《中國現代小說史》、《中國文學的現代性與後現代性》、《文學與人生》等多部著作，曾獲得多個文學獎項和榮譽。夏志雄也是一位具有國際影響力的翻譯家，曾翻譯過多部英美文學經典，如《傲慢與偏見》、《呼嘯山莊》等。他於2013年因病去世，享年76歲。

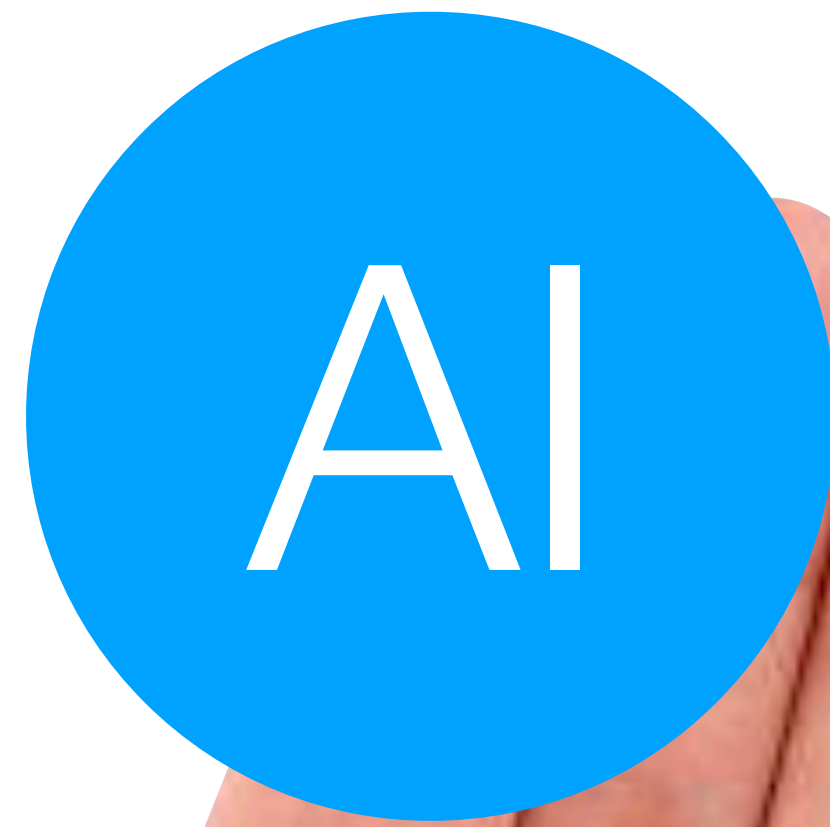
我不是這個夏志雄

很抱歉，我误解了您的问题。如果您是在提到自己的名字是夏志雄，那么夏志雄只是一个普通的名字，我无法确定您具体指的是哪个人。如果您有其他信息或上下文，可以提供给我，我可以尝试更好地回答您的问题。

Hallucination

AI Literacy

Artificial
Intelligence
人工智能



Information
Literacy
資訊素養

Day 1: Use AI ethically and responsibly

由第一日開始，以道德和責任心使用人工智能。

4. 資訊素養類別及範疇

香港學生的資訊素養涵蓋以下九個素養範疇，以發展學生的知識、技能及態度：

類別	九個素養範疇	
有效及符合道德地運用資訊	1	有效地、符合道德地及負責任地使用、提供和互通資訊
一般的資訊素養能力	2	識別和定義對資訊的需求
	3	找出和獲取相關資訊
	4	評估資訊、媒體內容和資訊來源／提供者
	5	提取和整理資訊、產生及表達新意念
資訊世界	6	運用資訊科技處理資訊、建立內容和於分享資訊時先作反思
	7	認識社會上資訊提供者的角色和功能
	8	認識能獲取可靠資訊的條件
	9	認識應用新興和先進資訊科技時所衍生的道德問題

《香港學生資訊素養》
學習架構（更新版）

教育局

九個素養範疇	
1	有效地、符合道德地及負責任地使用、提供和互通資訊
2	識別和定義對資訊的需求
3	找出和獲取相關資訊
4	評估資訊、媒體內容和資訊來源／提供者
5	提取和整理資訊、產生及表達新意念
6	運用資訊科技處理資訊、建立內容和於分享資訊時先作反思
7	認識社會上資訊提供者的角色和功能
8	認識能獲取可靠資訊的條件
9	認識應用新興和先進資訊科技時所衍生的道德問題

我係好學生
唔會用 AI 代做功課

學習如何問 AI (Prompt)
分析思維，AI 也有錯

我用 AI 嘅方法
會唔會對人有壞影響

分辨那個 Chatbot 可靠
假相，Deepfake

Awareness is what we need

However, I believe that if students **over rely** on this technology, I am afraid that students will **no longer think** by themselves.

They would just **copy and paste** the answers from the ChatGPT, **without digesting** the main idea on that question.

Thus, it is definitely a must for all of us, to learn how to **use this technology healthily** and **correctly**.

祝大家

善用 AI，生活更愉快 🤗

謝謝 🙏