



香港教育大學

The Education University
of Hong Kong

Advanced-level Workshop of LTTC LLM Studio

Developing GenAI-empowered Customised Workflows on Model-as-a-Service (MaaS) Platform

Date: 3 Dec 2024

Time: 2:30 pm – 4:30 pm

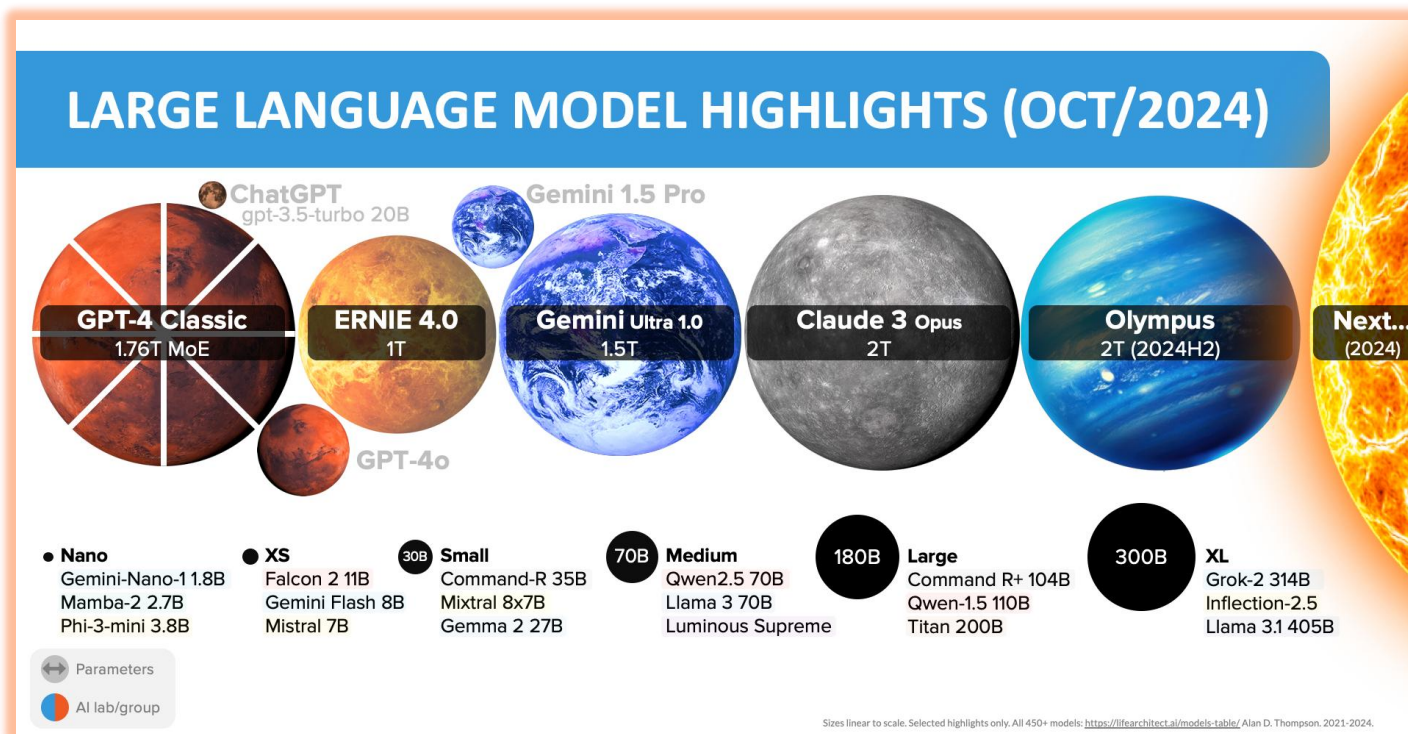
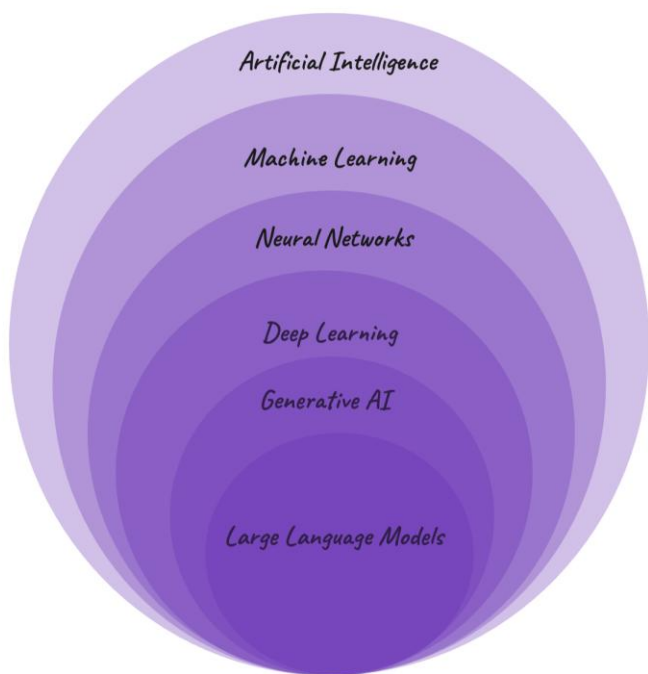
Venue: E-P-12 (Metaverse Education Lab)



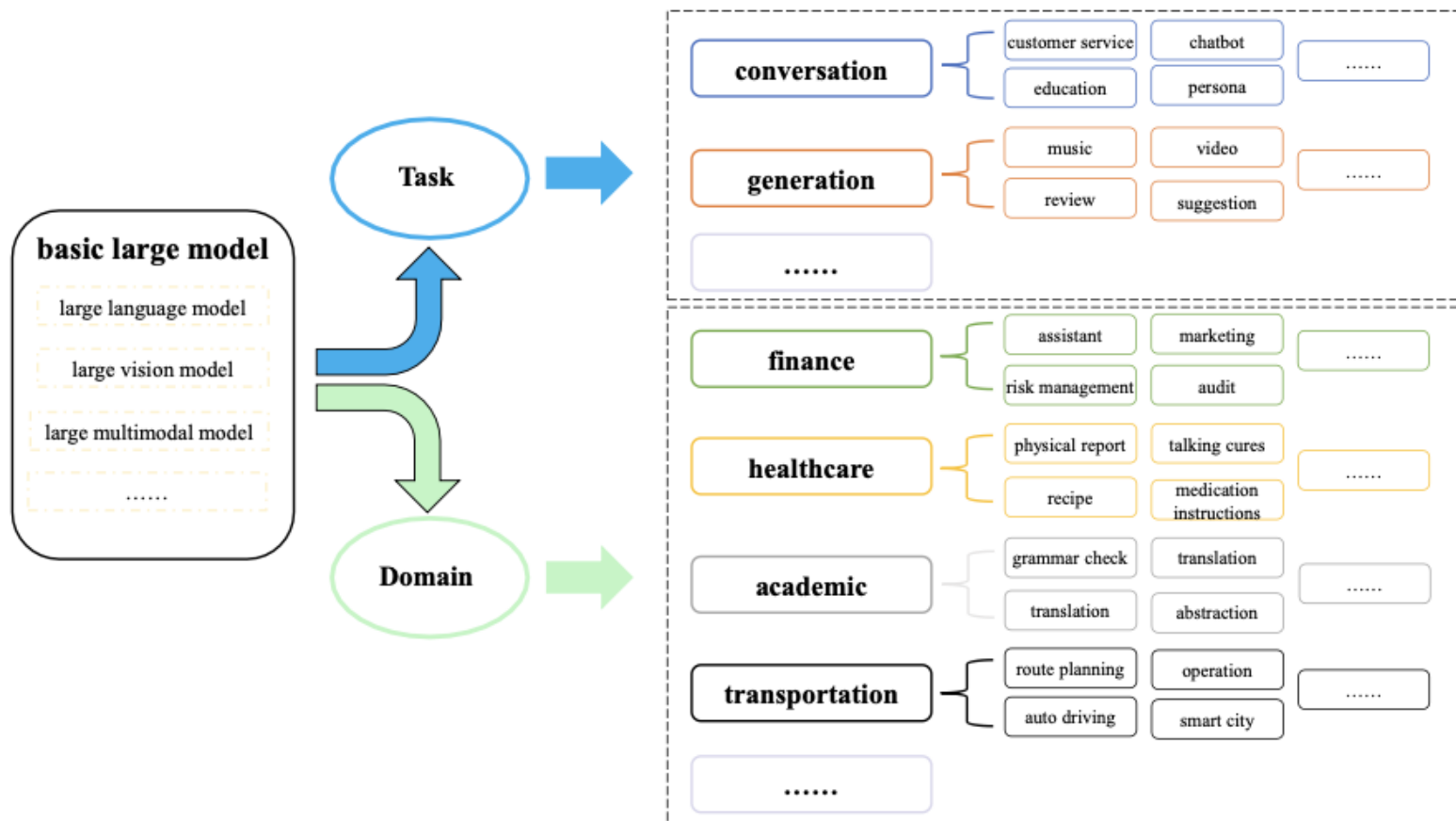
Background



Large Language Models (LLMs)



Service



Beyond chatting with LLMs - MaaS platform

Empower AI with Your Expertise

A free, open-source, and powerful AI knowledge base platform, offers out-of-the-box data processing, model invocation, RAG retrieval, and visual AI workflows. Easily build complex LLM applications.



Domain-Specific AI Assistant

Create AI-powered chatbots for specific domains by training models with imported documents or Q&A pairs.



Automated Data Preprocessing

Save time and improve efficiency with automated text preprocessing, vectorization, and QA segmentation.



Workflow Orchestration

Support AI Workflow orchestration, Design complex workflow using a visual drag-and-drop interface, integrating tasks like database queries and inventory checks.



Seamless API Integration

Seamlessly connect with existing GPT applications and platforms like Discord, Slack, and Telegram using OpenAI-aligned APIs.

Common MaaS Platforms



OpenAI GPTs



ollama



Coze



vellum

Agents;
Model-as-a-Service;
LLMOps;
Workflow;
....



Google Vertex AI



Azure



Fastgpt



Flowise



Lark



Xunfei Spark



Dify



Beam



Tencent YuanQi



Zhi Pu Qing Yan



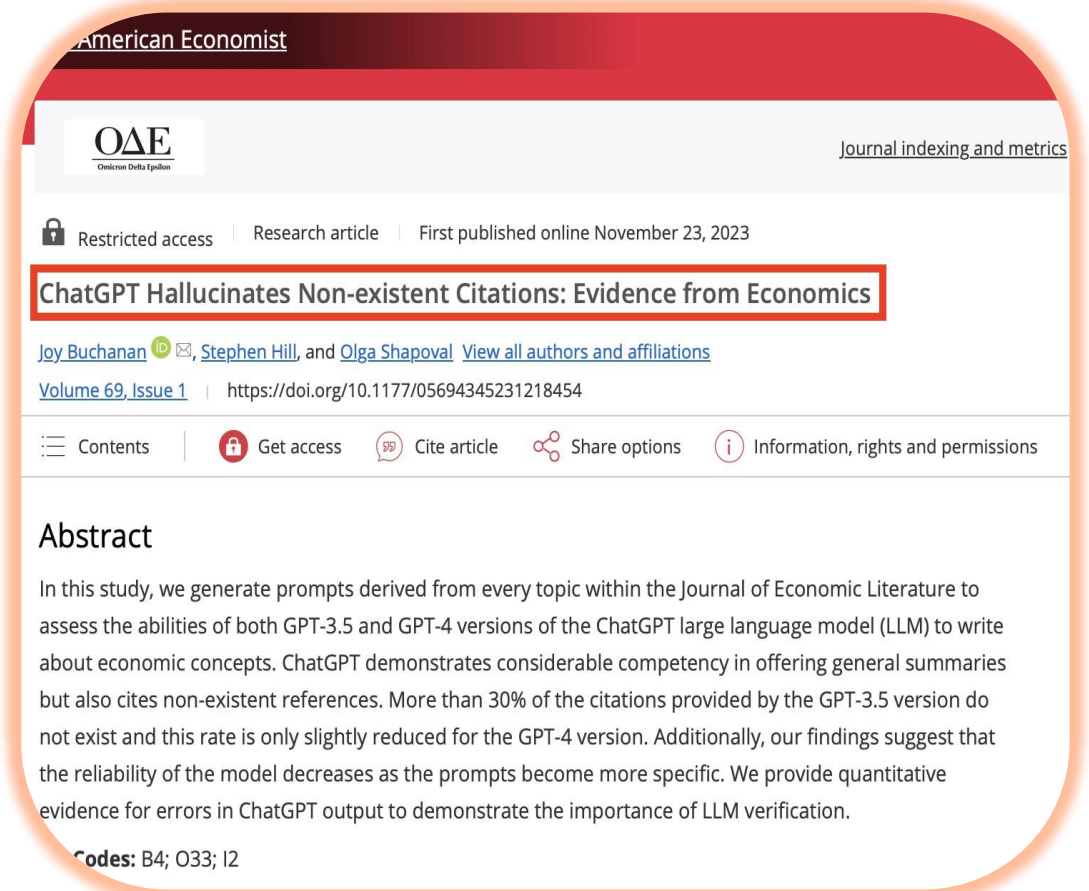
Langflow



WenXin

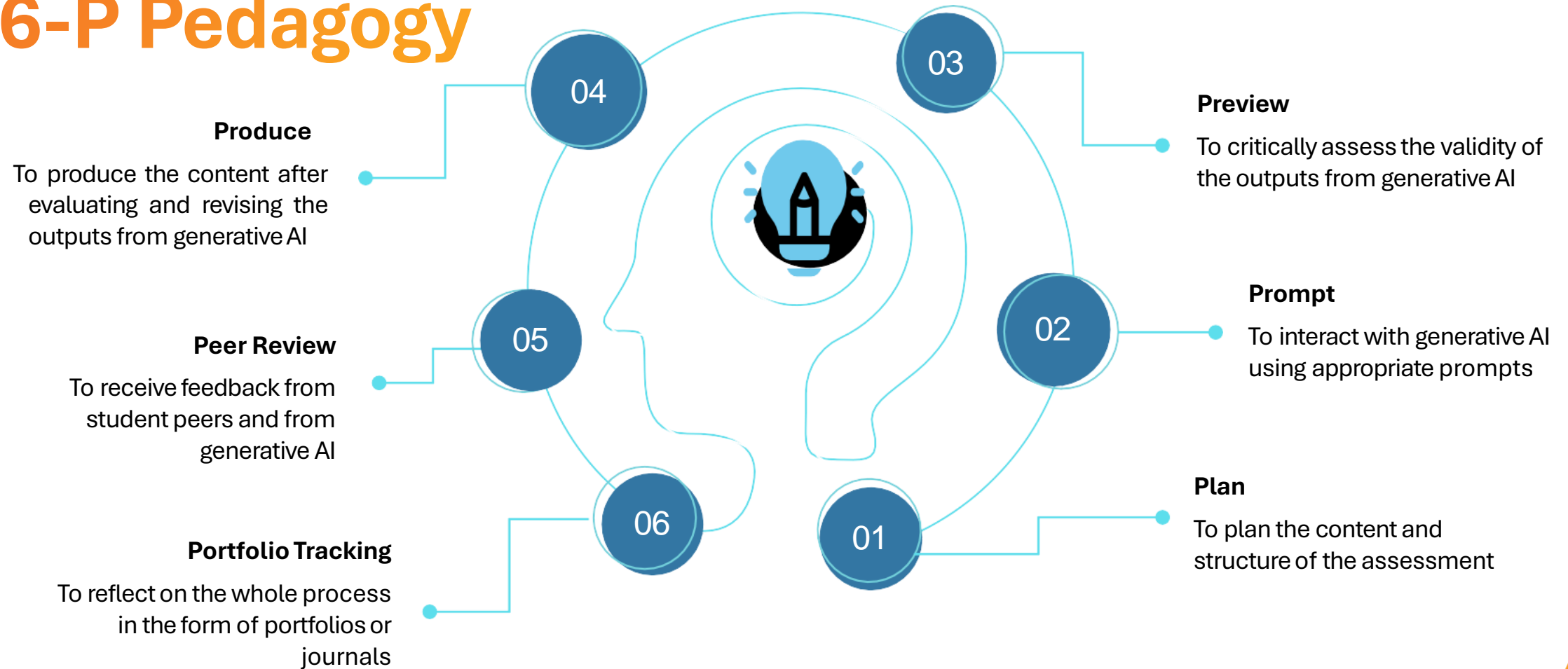
Hallucination

- LLMs may produce **inaccurate** responses, fabricating their own reality.
- All outputs generated by LLMs require additional **verification** and **validation**.



The screenshot shows the top portion of a research article on the OAE (Omicron Delta Epsilon) website. The article title, "ChatGPT Hallucinates Non-existent Citations: Evidence from Economics", is highlighted with a red box. Below the title, the authors are listed as Joy Buchanan, Stephen Hill, and Olga Shapoval. The article is identified as Volume 69, Issue 1, and has a DOI of 10.1177/05694345231218454. The abstract section is visible, starting with "In this study, we generate prompts derived from every topic within the Journal of Economic Literature to assess the abilities of both GPT-3.5 and GPT-4 versions of the ChatGPT large language model (LLM) to write about economic concepts. ChatGPT demonstrates considerable competency in offering general summaries but also cites non-existent references. More than 30% of the citations provided by the GPT-3.5 version do not exist and this rate is only slightly reduced for the GPT-4 version. Additionally, our findings suggest that the reliability of the model decreases as the prompts become more specific. We provide quantitative evidence for errors in ChatGPT output to demonstrate the importance of LLM verification." The article is marked as "Restricted access" and was first published online on November 23, 2023.

6-P Pedagogy



Kong, S.-C., Lee, J. C.-K., & Tsang, O. (2024). A pedagogical design for self-regulated learning in academic writing using text-based generative artificial intelligence tools: 6-P pedagogy of plan, prompt, preview, produce, peer-review, portfolio-tracking. *Research and Practice in Technology Enhanced Learning*, 19(030). <https://doi.org/10.58459/rptel.2024.19030>

General Guidelines of Using AI for Academic at EdUHK

- Students can appropriately use AI tools to support their personal study and research, but they should be mindful of the possible issues associated with AI tools.
- Students should note the class policies provided by their course instructors and discuss any concerns or questions with them as necessary.
- Students should clearly declare the use of AI Tools in their assessments.
- There is no one-size-fit-all assessment strategy for all courses. It is suggested that the Departmental Learning and Teaching Committee (DLTC) guides course instructors in discussing and designing discipline-specific assessments

Sample Declaration Content

- **AI Tools:** Specify which AI tools were used in the assessment.
- **Purpose:** Describe the intended use of these AI tools in the assessment.
- **Prompts Used:** Detail the prompts entered into the AI tools.
- **Integration of Outputs:** Explain how the AI-generated outputs were integrated into the submitted work

Example 1: Enhancing Academic Language with AI

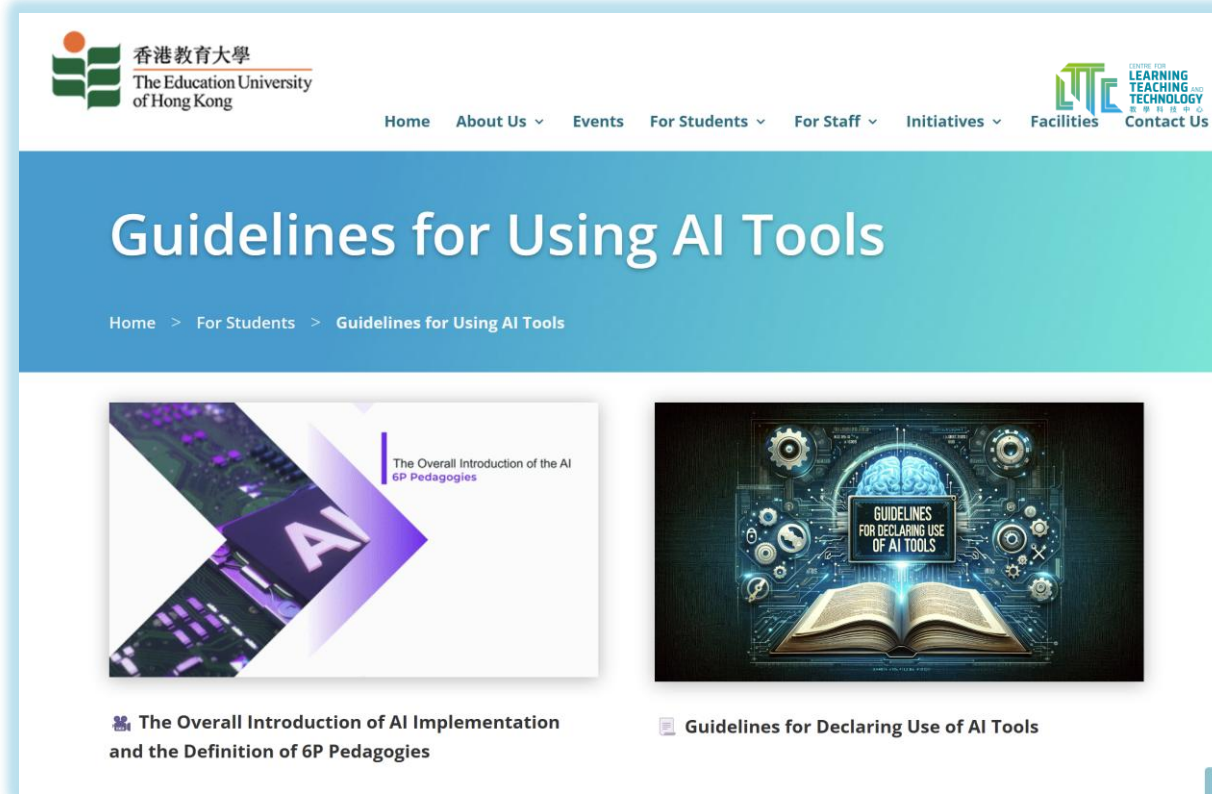
I acknowledge using EdUHK's ChatGPT (<https://chatgpt.eduhk.hk>) to enhance the academic language of my own work. I submitted my entire report to the AI tool with the following prompt: 'Check the accuracy of language use in the report'. The output generated by the AI tool was then utilized to correct my grammatical mistakes and improve my style of writing in the report.

Example 2: Brainstorming Project Ideas with AI

I acknowledge using Poe (<https://poe.com/>) to serve as a brainstorming aid for generating initial project ideas. I sent the following prompt to the AI tool: 'Generate 5 good project ideas on using technology to support SEN students'. The ideas generated by the AI tool were then critically evaluated for their feasibility, potential for enhancing learning outcomes, and alignment with the current educational needs of SEN students. The best idea, after refinement, was further developed into an actionable project proposal.

Find more information via LTTC website

<https://www.lttc.eduhk.hk/for-students/guidelines-for-using-ai-tools-students/>



The screenshot shows the LTTC website interface. At the top left is the logo of The Education University of Hong Kong. To its right is the LTTC logo with the text 'CENTRE FOR LEARNING TEACHING AND TECHNOLOGY'. A navigation menu includes 'Home', 'About Us', 'Events', 'For Students', 'For Staff', 'Initiatives', 'Facilities', and 'Contact Us'. The main heading is 'Guidelines for Using AI Tools'. Below this is a breadcrumb trail: 'Home > For Students > Guidelines for Using AI Tools'. Two content cards are displayed: the first is titled 'The Overall Introduction of the AI 6P Pedagogies' and features a purple arrow graphic; the second is titled 'Guidelines for Declaring Use of AI Tools' and features a glowing book with a brain and gears.

香港教育大學
The Education University
of Hong Kong

Home About Us Events For Students For Staff Initiatives Facilities Contact Us

Guidelines for Using AI Tools

Home > For Students > Guidelines for Using AI Tools

The Overall Introduction of the AI 6P Pedagogies

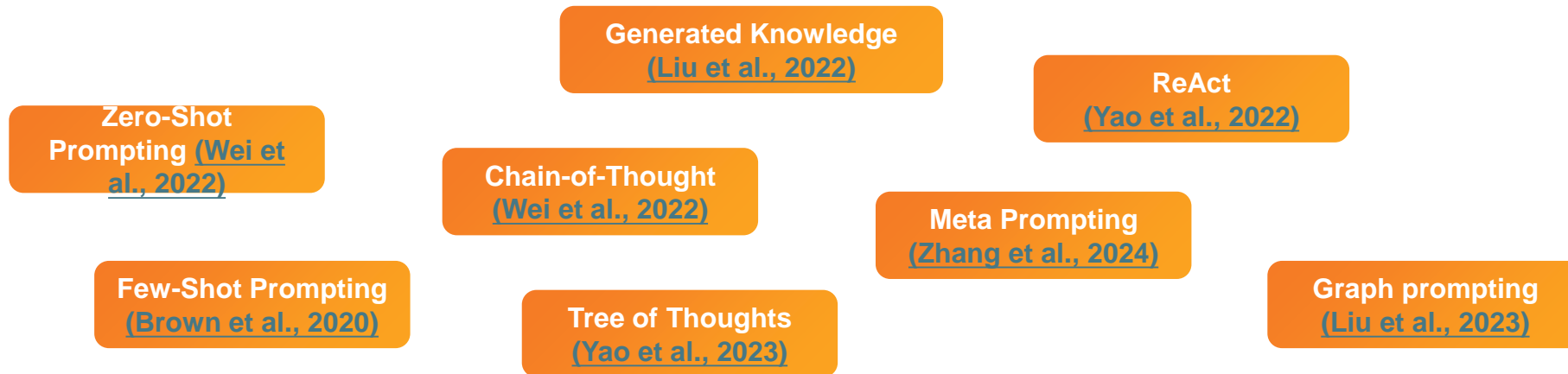
Guidelines for Declaring Use of AI Tools

The Overall Introduction of AI Implementation and the Definition of 6P Pedagogies

Guidelines for Declaring Use of AI Tools

Way to interact with LLM - Prompt Engineering

- Develop and optimise prompts to **efficiently use** LLMs.
- Apply for a **wide variety** of applications and research topics.
- Improve the **capacity** of LLMs on a wide range of common and complex tasks(e.g., question answering and arithmetic reasoning).
- Design robust and effective techniques that **interface with LLMs and other tools**.



Prompting



Step 1:
Prompt construction



Step 2: Double-check of
correctness/relevance/reliability
of generated contents and
their sources



Step 3: Optimise your prompt and ask
for more specificity and clarity several
times



Step1: Construct TOSOR Structure

- **Topics/contents**
e.g., subject or field
- **Operations**
e.g., compose, rewrite, correct, polish, summarise
- **Sources**
e.g., direct input, uploaded image file, open pdf file in the Edge browser, URL opened as a tab in the Edge browser, asking for searching on the Internet, or combined information sources
- **Output format/templates**
e.g., directly provide a template/indicate some common layouts, such as “a 200-word paragraph in the introduction section of a journal paper”/ indicate formats, such as paragraphs, bullet points, and tables.”
- **Requirement of the accuracy of information with sources provided**
e.g., must include sources from sources (webpage, pdf), “list all sources in the APA in-text citation format with hyperlink.”



Prompt Example of TOSOR

[Draft the abstract] (**Operations**) based on [the opened page/the uploaded file] (**Source**) in [language assessment] (**Contents/Topics**). The 400-word abstract should include a brief background, research questions, methodology, key results, limitations and conclusion. Do not give me bullet points; instead, several structured paragraphs(**Output format/Template**). [List all the referred contents of the article for creating the abstract sentence by sentence] (**Requirement of the accuracy of information with sources provided**).

Prompt formatting

Topic: language assessment]

Operations:

- Draft the abstract
- If any, find the opened page/uploaded file

Output format

400-word abstract should include

- brief background,
- research questions,
- methodology,
- key results,
- limitations and conclusion.

Do NOT give me bullet points;

Instead, several structured paragraphs

Requirement

- List all the referred contents of the article for creating the abstract sentence-by-sentence



Step2: Double-check and Review the output



Double-check of

- **Correctness**
- **Relevance**
- **Reliability**

of generated contents and
their sources (**Important!**)



Step 3: Optimise the prompt

Review and optimise the input

- **Specificity and Clarity** . . .

What areas are not covered and do they need to be followed up?

- **Structured Inputs and Outputs** . . .

Revise TOSOR, or other prompt structure?

- **Delimiters for Enhanced Structure** . . .

Adopt Markdown, JSON, or XML?

Advanced Prompting Strategies

Few-Shot Prompting: Providing the LLM with a **few examples** of desired input-output pairs guides it towards generating higher-quality responses by demonstrating the expected pattern.

Chain-of-Thought: Encouraging the model to "think step-by-step" by explicitly prompting it to break down complex tasks into **intermediate reasoning steps** enhances its ability to solve problems that require logical deduction.

ReAct (Reason + Act): This method activates advanced reasoning, planning, and even tool use from the LLM.



Step 3: Optimise the input

Review and optimise the input

- **Specificity and Clarity** . . .

What areas are not covered and do they need to be followed up?

- **Structured Inputs and Outputs** . . .

Revise TOSOR, or other prompt structure?

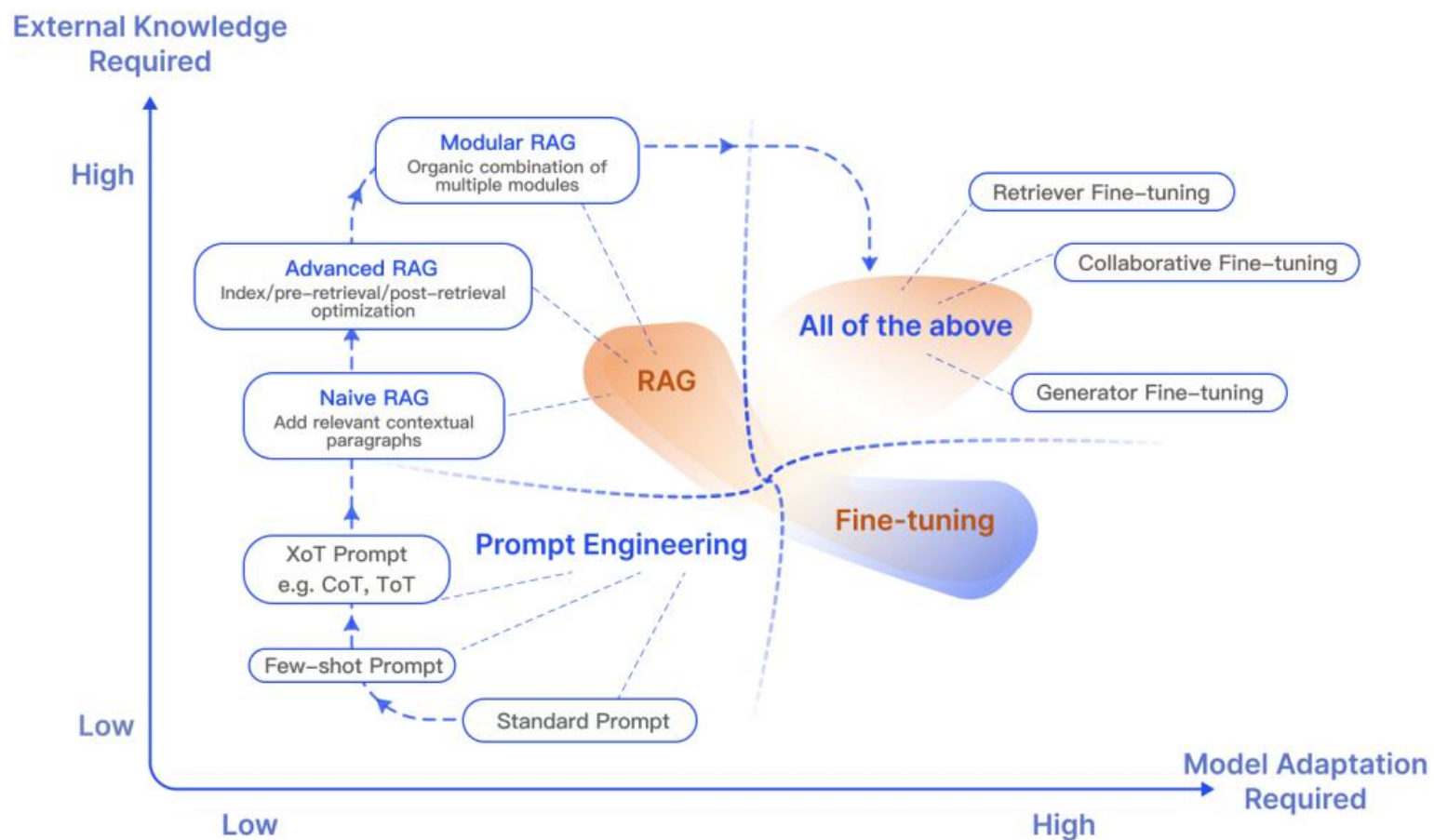
- **Delimiters for Enhanced Structure** . . .

Adopt Markdown, JSON, or XML?

- **Task Decomposition for Complex Operations** . . .

Use advanced techniques?

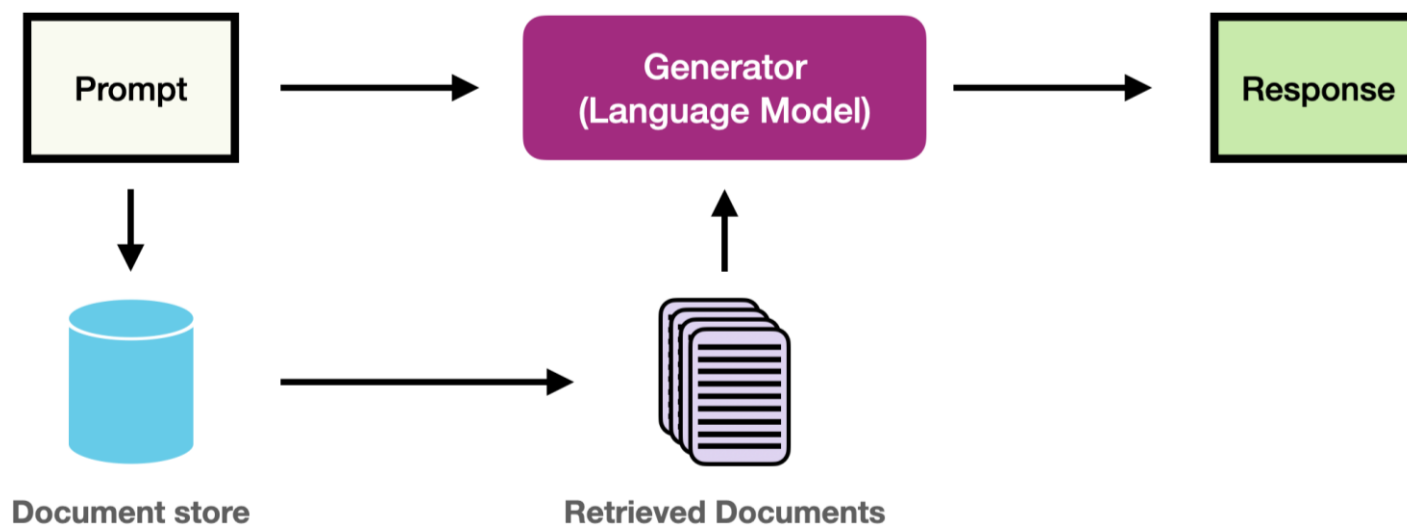
Way to Reduce Hallucinations - RAG



Way to Reduce Hallucinations - RAG

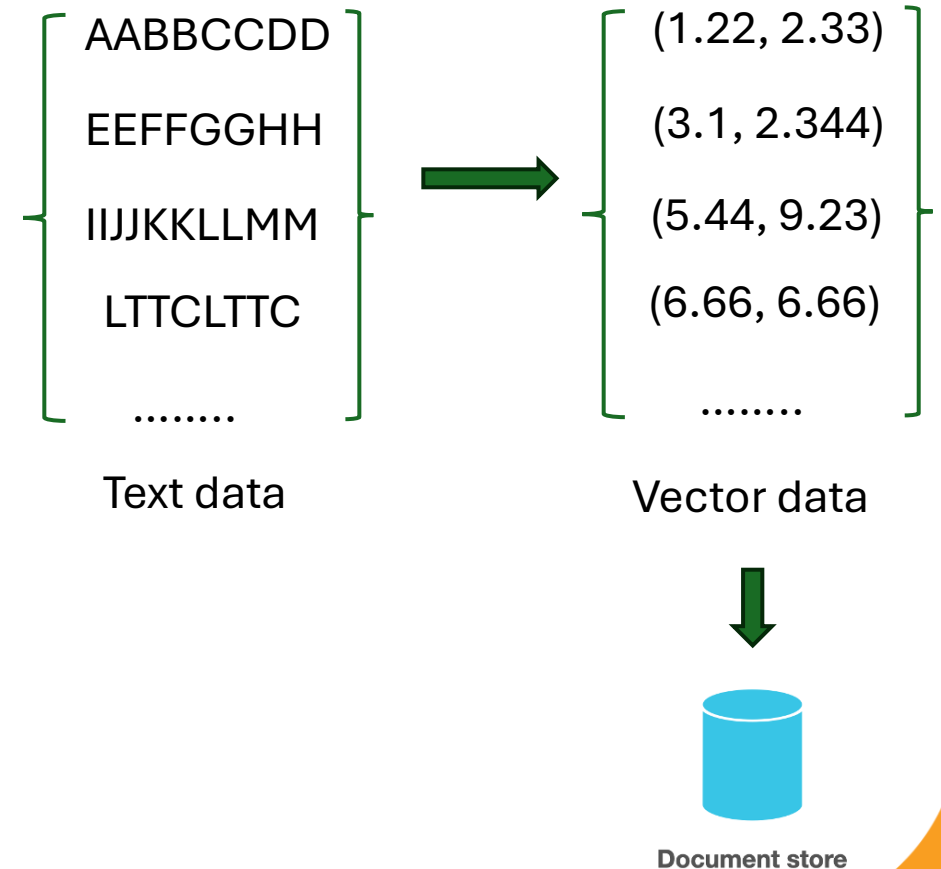
- Provide more contextual and related information for generation
- Retrieval Augmented Generation (RAG)

Why RAG?
No source
Out of date



Knowledge Base for RAG

- Knowledge base is a centralized collection of information that an AI system can access to retrieve accurate and relevant data.
- RAG combines this knowledge base with generative AI models.
- When a user asks a question
 - (1) retrieves relevant information from the knowledge base
 - (2) uses that information with LLM to generate a more precise and contextually appropriate response.

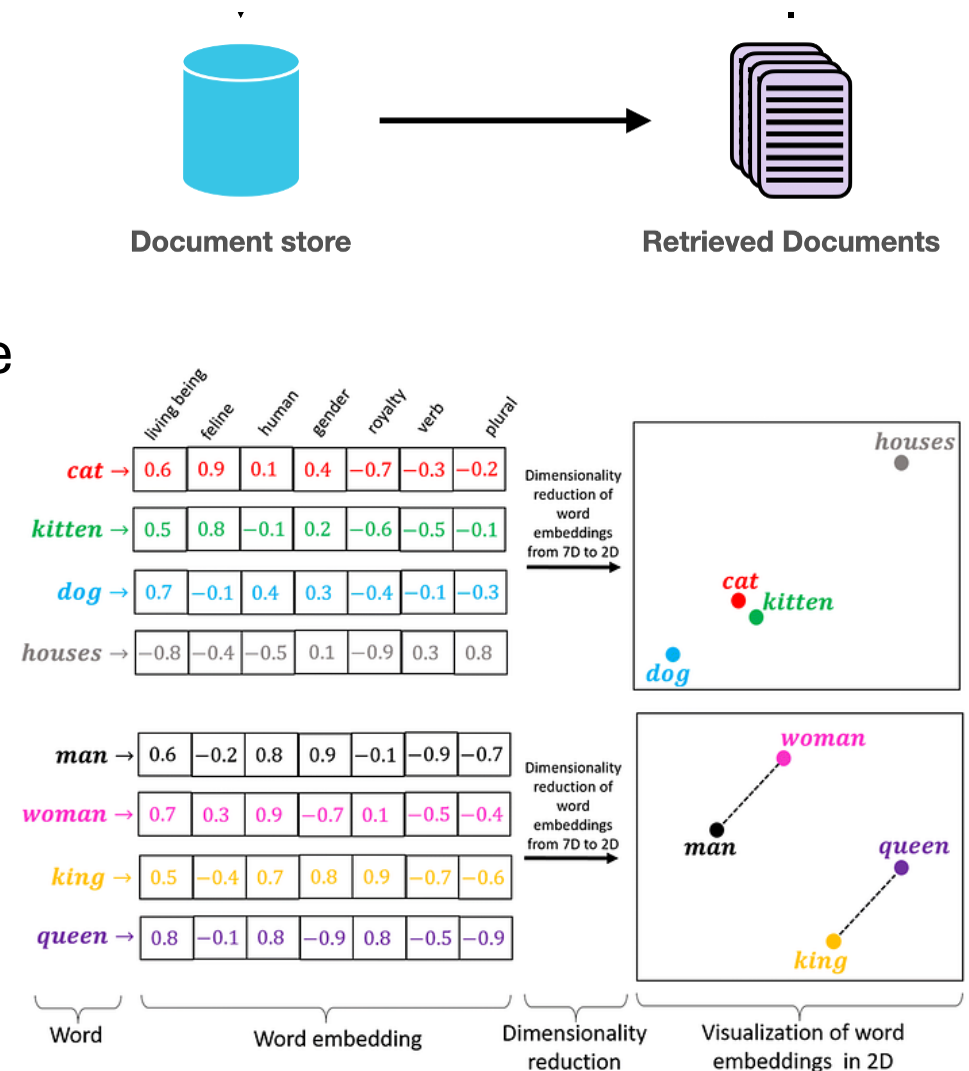


Embedding

Word2Vec is a technique for converting words into numeric vectors that capture the **semantic relationships** between words.

It “understands” the **similarities** and associations between words.

It helps the system more accurately find information that is relevant to the user's query, thus **generating more targeted responses**.



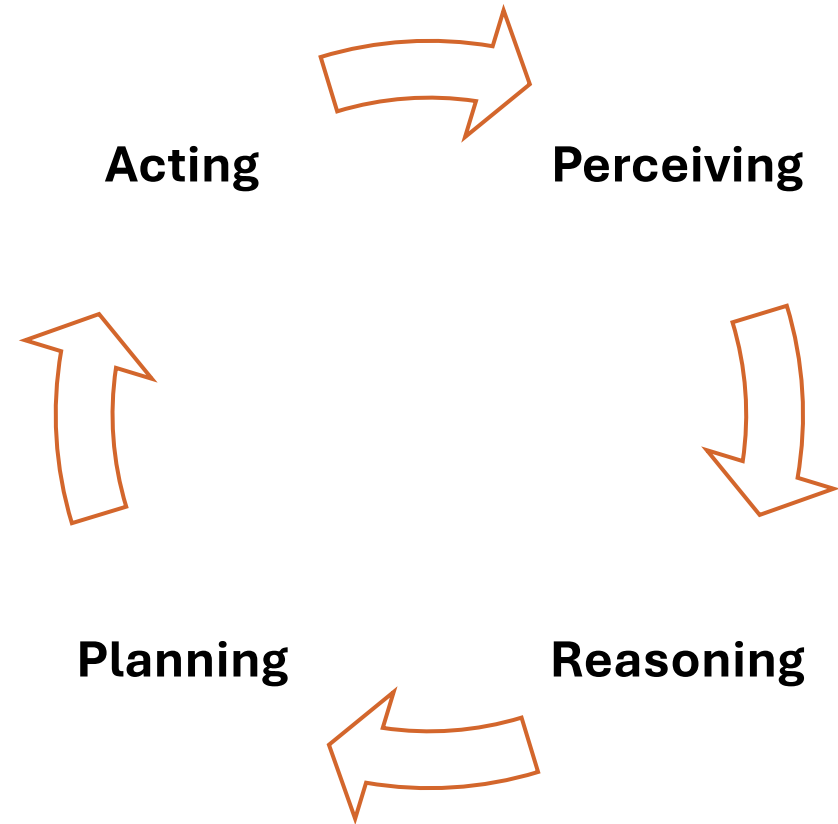
Limitations



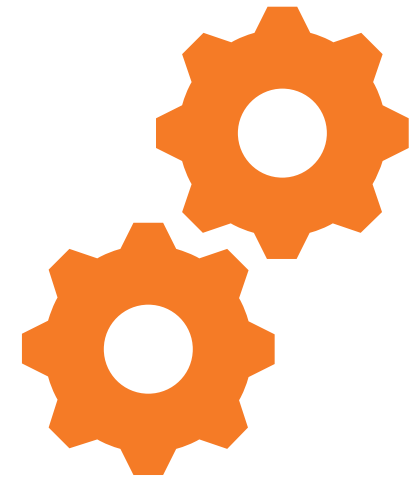
- 1. Bias and Fairness:** AI models can carry forward biases inherent in their training data, leading to unequal outcomes and raising concerns about fairness and equity.
- 2. Complexity and Transparency:** Many AI systems operate as 'black boxes', making it challenging to understand how certain conclusions are derived.
- 3. Dependency:** There is a risk of over-relying on AI solutions, which might overshadow the human aspects of data analysis. Important qualitative factors may be overlooked in favour of algorithmic outcomes.
- 4. Hallucination:** AI models may produce inaccurate responses, fabricating their reality. All outputs generated by AI require additional verification and validation.
- 5. Data Quality:** Ensuring the quality of data used for AI is crucial. Poor data quality can lead to inaccurate results.

How to resolve more specific tasks

- Autonomous intelligent systems to perform many tasks
- Generate diagrams and pictures
- Assessment with designated criteria
- Interactive with real-time news and social media
- Provide guidance and instruction for students using AI step-by-step.
- Apply AI ethically and maintain integrity
-



Features of LTTC LLM Studio MaaS Platform





CENTRE FOR
**LEARNING
TEACHING AND
TECHNOLOGY**
教學科技中心



**Large Language Model
Studio 大語言模型工作室**



MaaS Platform

Create your own smart workflows on the Model-as-a-Service (MaaS) platform by using LLMs



Consultation

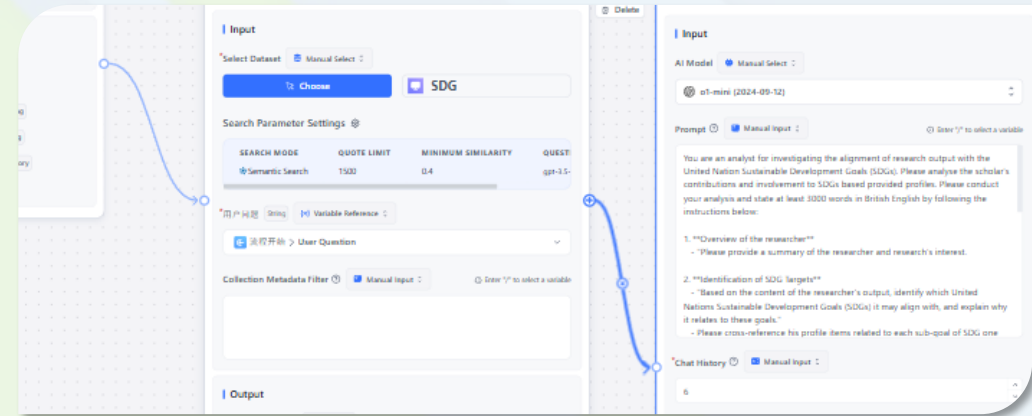
Find solutions and strategies to optimise LLM applications for specific needs



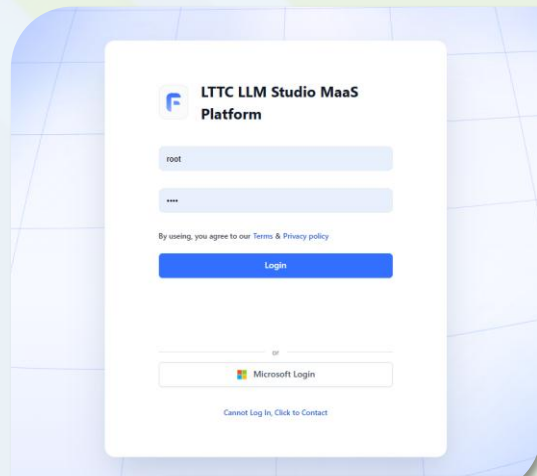
Workshop

Equip practical skills for using LLM-powered tools to meet diverse educational needs

L TTC LLM Studio Model-as-a-Service (MaaS) Platform



 **FastGPT**



 Microsoft Login

- Features: Open API to enable utilising LLM, workflow design, data embedding and vectorisation
- access via <https://maas.eduhk.hk/>
- for non-code customising LLM-included workflows to establish web services for learning, teaching and research purposes
- Enable knowledge-based datasets and embedded URL access to Internet resources

Directly Login via EdUHK
staff/student accounts

An Open-Source Platform

Develops as an open-source platform with a large user community, complete features and stable performance

Unique Design of Q&A Hierarchy

Splits datasets to create a knowledge base into a paired Q&A format to increase RAG quality

Easy-to-Test

Contains multiple debugging methods such as search testing, reference modification, and full dialogue preview



Multiple LLMs Supported

Supports one-stop access to various LLMs, including deployment and utilisation of major, custom and localised LLMs



Multiple File Types Supported

Supports mainstream file formats such as Word, Excel, PDF, and Markdown and can quickly build a knowledge base via vectorisation using existing files.



Visualised Workflow

Makes it easy to implement complex workflows, making your own comprehensive AI applications

L TTC LLM Studio Solutions and Consultations



AI-Powered Solutions Developed by L TTC LLM Studio

(Login Required)

AI-Empowered EdUHK Student Handbook



Explore

GenAI Supported Data Analysis



Explore

AI Academic Writing Tutor



Explore

AI Decision-Making Assistant



Explore

Solution 1: AI-Empowered ...

New Chat

How to visit the LTT 07-25

How can I fulfill th 06-27

Could you tell me th 06-06

All Loaded

How can I fulfill th

2 Records

qpt-4o-mini



How can I fulfill the graduate requirement



To fulfill the graduation requirements, you must:

- Achieve the minimum number of credit points required by your program.
- Satisfy all other program-specific requirements such as Field Experience, language exit requirements, and Information Technology Competence test.
- Obtain a Program GPA of 2.00 or above.
- Complete at least half of the total required program credit points at the University and at least half of the required credit points in your major(s) at the University.
- Complete the requirements of your first major for undergraduate degree programs.
- Complete the requirements as prescribed by your program.

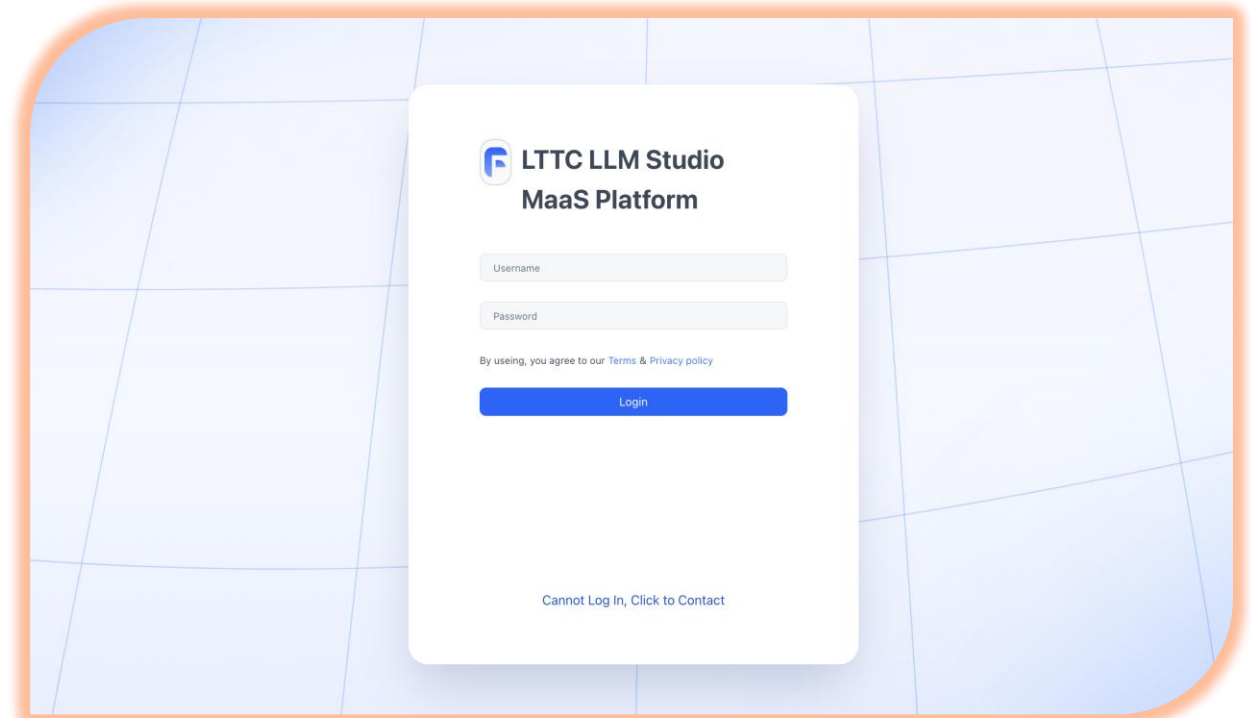
Additionally, you should refer to your program handbook or make inquiries to the respective Faculty Office for specific requirements related to Immersion, Internship, Final Year Project, Honours Projects, Co-curricular and Service Learning Course (CSL), English Language Proficiency Assessment (EIPA), and non-

Enter a Question, Press [Enter] to Send / Press [Ctrl(Alt/Shift) + Enter] for New Line



LTTC LLM Studio MaaS Platform

- Private chatbots and AI assistant
- Seamless integration of External Knowledge
- Orchestration of tools and workflow



<https://maas.eduhk.hk>

Account: workshop Password: 123456

Basic Features of MaaS Platform

Create new app

Categories of Apps

All Simple App Workflow Plugin

+ Create New

Menu

- Chat
- Studio
- Datasets
- Account

1114 Copy No Introduction Available Workflow LLM Studio Collaborators Only	LLM Studio No Introduction Available Simple App LLM Studio Collaborators Only	o1 No Introduction Available Simple App LLM Studio Collaborators Only	text2image(beta) USD\$0.1/image Simple App LLM Studio Collaborators Only
Flux WIP's Private API Plugin LLM Studio Collaborators Only	Scopus EID Copy No Introduction Available Plugin LLM Studio Collaborators Only	Scopus EID No Introduction Available Plugin LLM Studio Collaborators Only	Demo Solutions No Introduction Available Team Read Access LLM Studio
Galaxy-Claude No Introduction Available Simple App LLM Studio Collaborators Only	FITE-05405 No Introduction Available Workflow LLM Studio Collaborators Only	xiez No Introduction Available Simple App LLM Studio Collaborators Only	MTH Course Plugin No Introduction Available Plugin LLM Studio Collaborators Only
LLM Studio No Introduction Available HTTP Plugin LLM Studio Collaborators Only	TryOut No Introduction Available HTTP Plugin LLM Studio Collaborators Only	E No Introduction Available HTTP Plugin LLM Studio Collaborators Only	djy No Introduction Available HTTP Plugin LLM Studio Collaborators Only
Galaxy's Tools No Introduction Available HTTP Plugin LLM Studio Collaborators Only	Tools No Introduction Available HTTP Plugin LLM Studio Collaborators Only	Guizhou University - Course Evaluation No Introduction Available Simple App LLM Studio Collaborators Only	LLM References No Introduction Available Simple App LLM Studio Collaborators Only
Galaxy-GPT 4o No Introduction Available Simple App LLM Studio Collaborators Only	LLM Studio - EdUHK Student Handbook_cn 香港教育大學學生手冊繁體簡體 Simple App LLM Studio Collaborators Only	LAK 2020 Proceeding No Introduction Available Workflow LLM Studio Collaborators Only	LLM Studio - Student Performance dataset No Introduction Available Workflow LLM Studio Collaborators Only

List of apps

Upload knowledge and data

+ Create New

The screenshot displays the LLM Studio interface with a sidebar on the left containing icons for Chat, Studio, Datasets, and Account. The main area is a grid of model and dataset cards. Each card includes a title, a brief description, and a status indicator. A 'Create New' button is visible in the top right corner of the interface.

NAME	TRAINING MODE	TOTAL DATA	CREATION/UPDATE TIME	STATUS	ENABLE
[OCIO] InfoSec and Personal Data Protection - 20...	Direct Segmentation	25	2024-11-25 10:10 2024-11-25 10:10	Ready	<input checked="" type="checkbox"/>

File(1)

Search

Tags

Create/Import


NAME TRAINING MODE TOTAL DATA CREATION/UPDATE TIME STATUS ENABLE


[OCIO] InfoSec and Personal Data Protection - 20... Direct Segmentation 25 2024-11-25 10:10 2024-11-25 10:10


Ready


...


Create a knowledge base for LLM

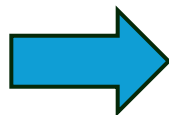
 Create/Import


 Folder

 Manual Dataset

 Text Dataset

 Table Dataset




 Select Source ✕

Local File
Upload files in PDF, TXT, DOCX, etc. formats


Web Link
Read static web page content as a dataset

Custom Text
Manually enter a piece of text as a dataset

 Confirm

Import the data in the spreadsheet format

1 Select File 2 Data Processing 3 Upload Data


Click or Drag Files Here to Upload
Supports .txt, .docx, .csv, .xlsx, .pdf, .md, .html, .pptx file types
Supports up to 15 filesMaximum file size is 500 MB

Data Processing Parameters

Training Mode

Direct Segmentation ?

Enhanced Processing (Experimental) ? QA Split ?

Processing Method

Automatic
Automatically set segmentation and preprocessing rules

Custom Rules
Customize segmentation and preprocessing rules

[Next Step](#)

- Import files from the computer
- Adopt default setting

Distribute customised AI to anyone

Login-Free Window API Request Feishu Bot WeChat Official Account Integration

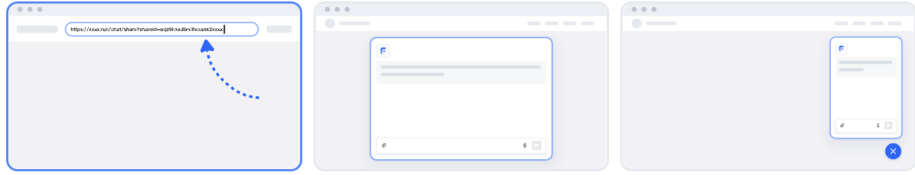
Share the link with other users, they can use it directly without logging in. Integrate into existing systems through API, or WeChat Work, Feishu, etc. Connect to Feishu Bot directly via API. Connect to WeChat Official Account directly via API.

Login-Free Window Create New Link

NAME	EXPIRATION TIME	POINTS CONSUMPTION	RETURN QUOTE	PER RATE LIMIT (PEOPLE/MINUTE)	IDENTITY VERIFICATION	LAST USE TIME	
Class A	-	0 / Unlimited	x		x	Unused	Start Using ...

Chat history trackable

Select Usage Method



Show Chat History


Copy the link below to open in the browser


<https://maas.eduhk.hk/chat/share?shareId=3mpg55whzvsun4tcvi9p0psq>


Simple application


+ Create New


Create your app
with name

 **Simple App**
Create a simple AI app by filling out a form, suitable for beginners.

 **Workflow**
Build complex multi-turn dialogue AI applications through low-code methods, recommended for advanced users.

 **Plugin**
Customizable input and output workflows, usually used to encapsulate reusable workflows.

 **HTTP Plugin**
Batch create plugins through OpenAPI Schema, compatible with GPTs format.

 **Template Market**
Explore more features in the template market, with configuration tutorials and usage guides to help you understand and get started with various applications.

 Create Simple App ×

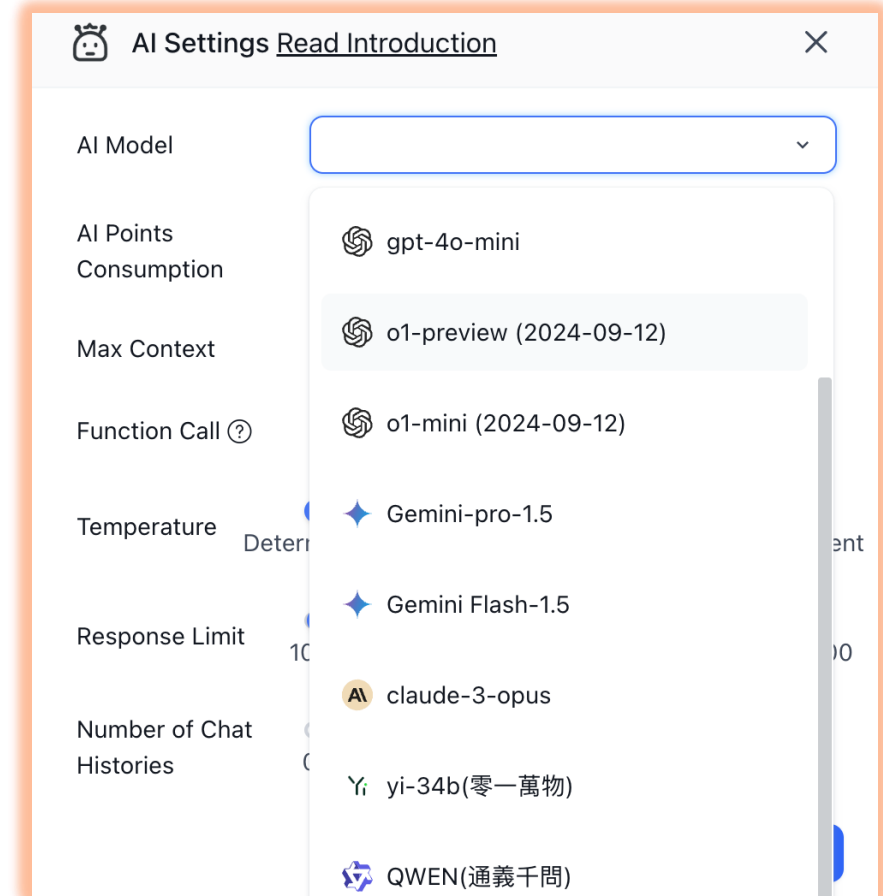
Enter a Name



+
Create Default App

LLM Configuration

- Temperature: In short, the lower the temperature, the more deterministic the results in the sense that the highest probable next token is always picked.
- Max context: Maximum text to be contained in the LLM (including input and output)
- Response limit: Specifying a max length helps you prevent long or irrelevant responses and control costs.



Config LLM by system prompt

Select LLM



AI Configuration

AI Model

Prompt ? Enter "/" to select a variable

Fixed guide words for the model. By adjusting this content, you can guide the model's chat direction. This content will be fixed at the beginning of the context. You can use / to insert variables.
If a Dataset is associated, you can also guide the model when to call the Dataset search by appropriate description. For example:
You are an assistant for the movie 'Interstellar'. When users ask about content related to 'Interstellar', please search the Dataset and answer based on the search results.



System prompt for guiding the LLM

AI Settings [Read Introduction](#)

AI Model

AI Points Consumption

Max Context

Function Call ?

Temperature Determines the randomness of the output.


Response Limit


Number of Chat Histories


Workflow


+ Create New


Create your app
with name

 **Simple App**
Create a simple AI app by filling out a form, suitable for beginners.

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 **Template Market**
Explore more features in the template market, with configuration tutorials and usage guides to help you understand and get started with various applications.

 Create Workflow ×

Enter a Name



+
Create Default App

Workflow configuration

Configuration

Start

The screenshot displays the workflow configuration interface. On the left, the 'System configuration' panel is expanded, showing a list of system parameters:

- Conversation Opening**: Before each conversation starts, send an initial content. Supports standard Markdown syntax. Additional tags that can be used: [Quick Key]: Users can directly send the question by clicking.
- Global Variable**: + Add New
- File Upload**: Close
- Voice Playback**: Browser Built-in (Free)
- Voice Input**: Close
- Guess What You Want to Ask**:
- Scheduled Execution**: Not Open
- Input Guide**: Close

On the right, the 'Process starts' panel is expanded, showing the following configuration:

- Output**: User Question (String)
- Global Variable**:
 - *User ID (String)
 - *App ID (String)
 - Current Chat ID (String)
 - AI Response ID (String)
 - *History Records (History)
 - *Current Time (String)

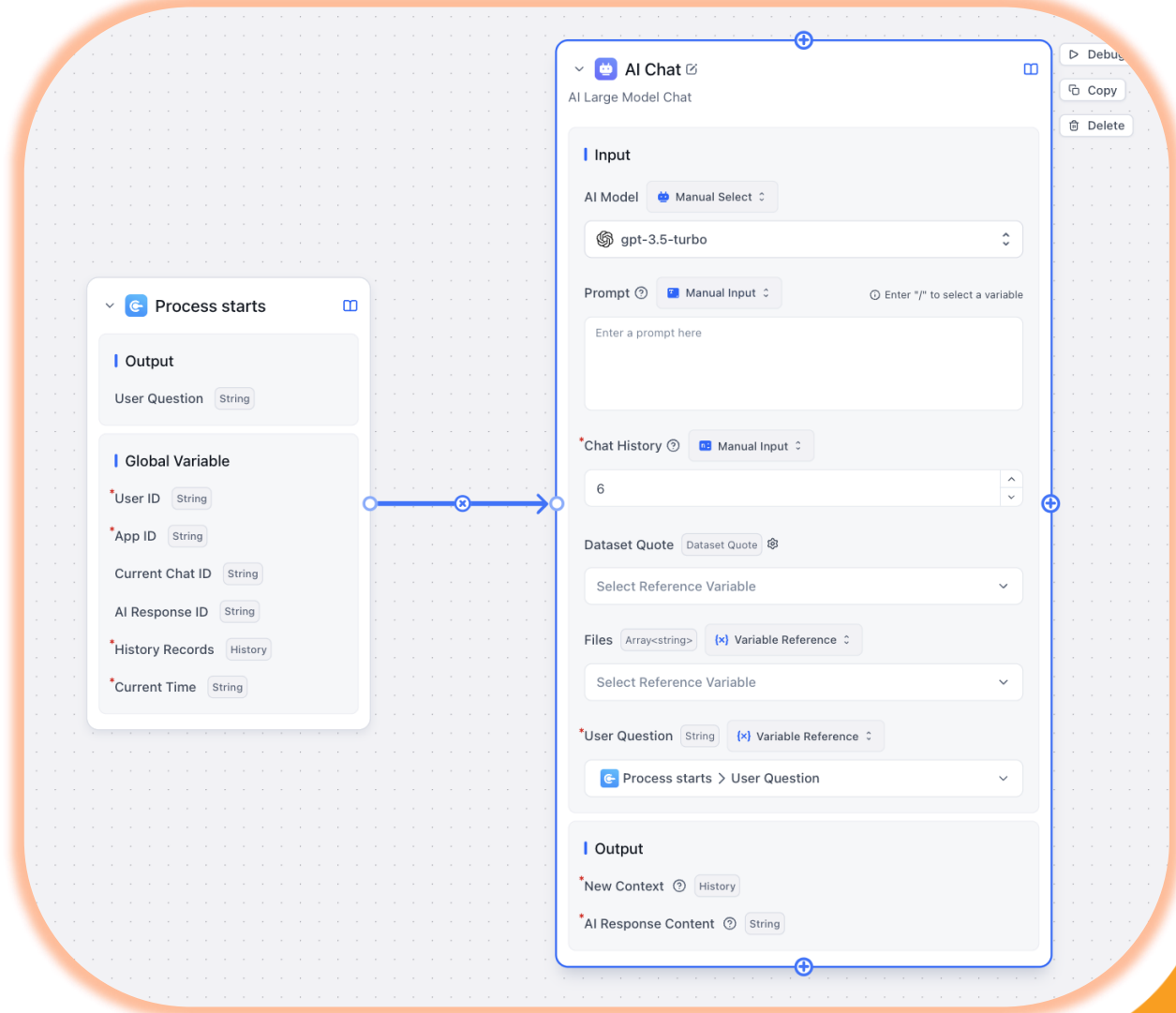
A 'Debug' button is visible in the top right corner of the 'Process starts' panel.

LLMs

Configuration

Start

GPT-3.5



LLMs

Configuration

Start

Prompting

GPT-4o

The screenshot displays the configuration interface for an AI Chat process. It is divided into two main panels: 'Process starts' and 'AI Chat'.

Process starts: This panel contains several sections for defining process variables:

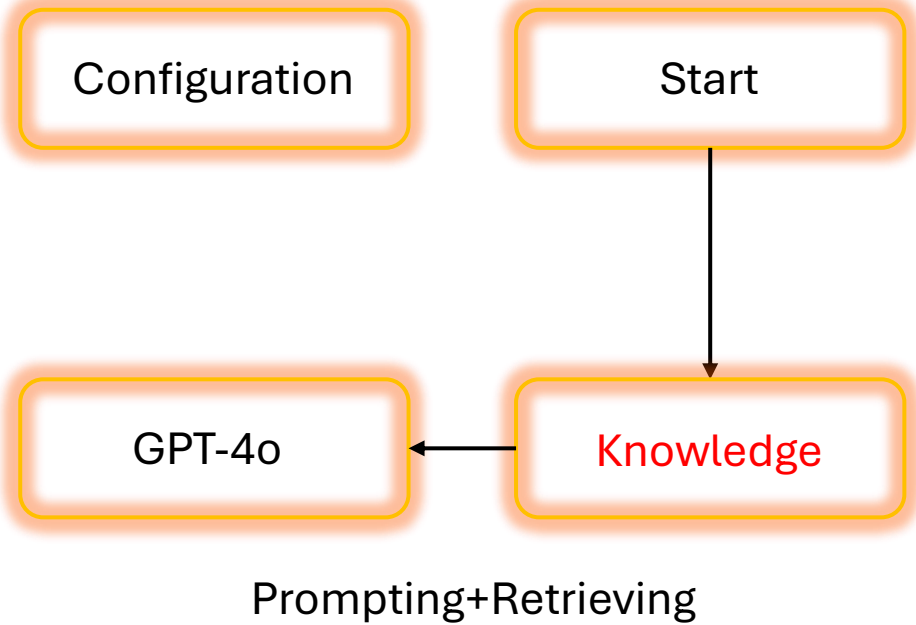
- Output:** A single variable 'User Question' of type 'String'.
- Global Variable:** A list of variables including 'User ID', 'App ID', 'Current Chat ID', 'AI Response ID', 'History Records', and 'Current Time', all of type 'String'.

AI Chat: This panel is titled 'AI Large Model Chat' and includes the following settings:

- AI Model:** Set to 'gpt-4o'.
- Prompt:** A text area containing instructions for the AI model, such as 'Draft the abstract', 'List all the referred contents of the article for creating the abstract sentence-by-sentence', and 'Do NOT give me bullet points; Instead, several structured paragraphs'.
- Chat History:** Set to 6.
- Dataset Quote:** A dropdown menu for 'Select Reference Variable'.
- Files:** A dropdown menu for 'Select Reference Variable'.
- User Question:** A dropdown menu for 'Select Reference Variable'.
- Output:** Fields for 'New Context' (type 'History') and 'AI Response Content' (type 'String').

A blue arrow points from the 'Global Variable' section of the 'Process starts' panel to the 'Prompt' field in the 'AI Chat' panel, indicating that the process variables are used to populate the chat prompt.

LLMs with RAG



The screenshot shows two overlapping interfaces. The 'Dataset Search' window is in the foreground, displaying search parameters for 'Semantic Search' with a quote limit of 1500 and a minimum similarity of 0.4. The 'AI Chat' window is in the background, showing a chat interface with a prompt for a language assessment abstract. The chat history shows a previous message with the number '6'.

Dataset Search Interface:

- Input:** Select Dataset (Manual Select), Choose button.
- Search Parameter Settings:**

SEARCH MODE	QUOTE LIMIT	MINIMUM SIMILARITY	QUE
Semantic Search	1500	0.4	gpt-4o
- User Question:** String, Variable Reference, Process starts > User Question.
- Collection Metadata Filter:** Manual Input, Enter "/" to select a variable.
- Output:** Dataset Quote, Dataset Quote.

AI Chat Interface:

- AI Model:** Manual Select, gpt-4o.
- Prompt:** Manual Input, # Topic: language assessment], # Operations: - Draft the abstract, - If any, find the opened page/uploaded file, # Output format, ## 400-word abstract should include, - brief background, - research questions, - methodology, - key results, - limitations and conclusion, ## Do NOT give me bullet points; ## Instead, several structured paragraphs, # Requirement.
- Chat History:** Manual Input, 6.
- Dataset Quote:** Dataset Quote, Select Reference Variable.
- Files:** Array<string>, Variable Reference, Select Reference Variable.
- User Question:** String, Variable Reference, Process starts > User Question.
- Output:** New Context (History), AI Response Content (String).

Hands-on Practices



Hands-on Practices

Hands-on Practice 1 (20 mins)

Automated Assessment Generation: cloze tests

Hands-on Practice 2 (10 mins)

Build a knowledge base to enable RAG for your data analysis need

Process starts

Output

User Question

Global Variable

- User ID
- App ID
- Current Chat ID
- AI Response ID
- History Records
- Current Time

Tool Call

Automatically select one or more functional blocks for calling through the AI model, or call plugins.

Input

AI Model

Prompt Enter "*" to select a variable

topic
Cloze test generator

Skills
Please make the decision for using Google searching

Instructions

- Passage: Insert the text passage you want to convert into a cloze test.
- Blanks: Replace the words or phrases to be omitted with ___(n)___ where n is the blank number.
- Answers: List the omitted words or phrases corresponding to each blank number.
- Options: Generate three similar words as the wrong options of the answers for students.

*Chat History

Files

Select Reference Variable

*User Question

Output

AI Response Content

Select Tool

谷歌搜索

Tool Input

FIELD NAME	FIELD DESCRIPTION	REQUIRED
userChatinp ut	User input questions (questions need to be improved)	✓

Input

Forbid stream mode

*Chat History

Output

*New Context

AI Response Content

System prompt

Topic

Cloze test generator

Skills

Please make the decision for using Google searching

Instructions

- Passage: Insert the text passage you want to convert into a cloze test.
 - Blanks: Replace the words or phrases to be omitted with ___(n)___, where n is the blank number.
 - Answers: List the omitted words or phrases corresponding to each blank number.
 - Options: Generate three similar words as the wrong options of the answers for students.
- # Requirements for Creating Effective Cloze Tests
- Choose Key Vocabulary: Select words that are essential for understanding the passage.
 - Maintain Context: Ensure that the remaining text still makes sense and provides enough context clues.
 - Vary Difficulty: Adjust the complexity of the omitted words based on your target audience.
 - Limit the Number of Blanks: Avoid overloading the test with too many blanks, which can be overwhelming.
 - Provide multiple options for each answer and list all the answers, then, bold the right answer (3 wrong and 1 right)

User prompt

Use Google search to search the news on December 2024 in US, and give me a cloze test

Here are some of the news highlights from December 2024 in the US:

1. **Biden Pardons Hunter Biden** - President Biden pardoned his son, Hunter Biden, who faced sentencing in two criminal cases. [Read more.](#)
2. **Marquette University Ranking** - As of December 2, 2024, Marquette University was ranked 86th nationally in the latest U.S. News Best Colleges rankings. [Read more.](#)
3. **Best Car Deals** - Various car manufacturers are offering deals for December 2024, including purchase deals for brands like Acura, Audi, Ford, and more. [Read more.](#)
4. **DUI Incident** - A woman pleaded guilty in a DUI crash that resulted in the death of a bride, marking a tragic event covered in the news. [Read more.](#)
5. **Financial News** - Various financial institutions are promoting their best private student loans and balance transfer credit cards for December 2024. [Read more about student loans](#) and [balance transfer cards](#).
6. **Visa Bulletin** - The Visa Bulletin for December 2024 has been released, providing updates for U.S. permanent residents and immigrant visas. [Read more.](#)

In December 2024, President **(1)** pardoned his son, Hunter Biden, who was facing sentencing in two criminal cases. Additionally, Marquette University was ranked **(2)** nationally in the latest U.S. News Best Colleges rankings. Many car manufacturers are providing attractive **(3)** for purchase deals, with brands like Acura and Audi featured prominently. A tragic incident involving a DUI crash led to a woman pleading guilty for the death of a **(4)**. On a financial note, institutions are promoting their best private **(5)** options and balance transfer credit cards, while the Visa Bulletin for December was also released, updating regarding U.S. permanent residents and immigrant **(6)**.

Answers:

1. **Biden**
2. **86th**
3. **deals**
4. **bride**
5. **student loans**
6. **visas**

Options for Each Blank:

1. **A. Obama B. Biden C. Trump D. Clinton** (Correct: B)
2. **A. 56th B. 76th C. 86th D. 96th** (Correct: C)
3. **A. sales B. promotions C. deals D. offers** (Correct: C)
4. **A. child B. bride C. friend D. stranger** (Correct: B)
5. **A. loans B. grants C. student loans D. scholarships** (Correct: C)
6. **A. travel B. tickets C. visas D. permits** (Correct: C)

Hands-on Practices

Hands-on Practice 1 (20 mins)

Automated Assessment Generation: cloze tests

Hands-on Practice 2 (20 mins)

Handwriting Recognition and Evaluation

Workflow on Recognition and Evaluation

Recognition
AI Large Model Chat

Input

AI Model: Manual Select
gpt-4o-mini

Prompt: Manual Input
Enter "r" to select a variable
You are an image recogniser, please give me the original text with format

Chat History: Manual Input
6

Dataset Quote: Dataset Quote
Select Reference Variable

Files: Array<string> | Variable Reference
流程开始 > File Link

User Question: String | Variable Reference
流程开始 > User Question

Output

New Context: History

AI Response Content: String

RAG
调用“语义检索”和“全文检索”能力，从“知识库”中查找可能与问题相关的参考内容

Input

Select Dataset: Manual Select
Choose Rubrics

Search Parameter Settings

SEARCH MODE	QUOTE LIMIT	MINIMUM SIMILARITY	QUE
Semantic Search	1500	0.4	gpt-

User Question: String | Variable Reference
流程开始 > User Question

Collection Metadata Filter: Manual Input
Enter "r" to select a variable

Output

Dataset Quote: Dataset Quote

Evaluation
AI Large Model Chat

Input

AI Model: Manual Select
gpt-4o-mini

Prompt: Manual Input
Enter "r" to select a variable

Role
You are a teacher with expert knowledge of AI in Education, and you can give students some information about this course and assess their assignments.

Skills
- Assess and evaluate students' writing assignments following the rubric in the knowledge base.

#Response
- Provide a form using Markdown format with comments

Chat History: Manual Input
30

Dataset Quote: Dataset Quote
RAG > Dataset Quote

Files: Array<string> | Variable Reference
流程开始 > File Link

User Question: String | Variable Reference
流程开始 > User Question

Output

New Context: History

AI Response Content: String

Double-check and review

Hallucination

Double-check of

- **Correctness**
- **Relevance**
- **Reliability**

of generated contents and their sources (**Important!**)

Calculation of the Mean Score

Now, let's sum these values and divide by the number of students:

1. Sum of Numerical Values:

- $(4 + 2 + 3 + 3 + 4 + 5 + 5 + 5 + 5 + 3 + 5 + 1 + 4 + 4 + 4 + 3 + 4 + 4 + 4 + 3 + 4 + 2 + 4 + 2 + 4 + 5 + 5 + 2 + 4 + 3)$
- Total Sum = 100

2. Count of Students: 30

3. Mean Score:

- $(\text{Mean} = \frac{\text{Total Sum}}{\text{Number of Students}} = \frac{100}{30} \approx 3.33)$

Conclusion

The mean score for A1_Effect (I can learn effectively in online learning mode) is approximately **3.33**.

Revised

数学公式执行

The calculation for the mean score of A1_Effect is indeed about **3.67** when rounded to two decimal places, calculated as follows:

1. Sum of Numerical Values:

- Total Sum = $(4 + 2 + 3 + 3 + 4 + 5 + 5 + 5 + 5 + 3 + 5 + 1 + 4 + 4 + 4 + 3 + 4 + 4 + 4 + 3 + 4 + 2 + 4 + 2 + 4 + 5 + 5 + 2 + 4 + 3 = 110)$

2. Count of Students: 30

3. Mean Score Calculation:

- Mean = $(\frac{110}{30} \approx 3.67)$

I apologize for the earlier calculation error stating it as **3.33**. The correct mean score for A1_Effect is approximately **3.67**. Thank you for your patience!

9 Contexts 7.78s View Details



香港教育大學

The Education University
of Hong Kong

Evaluation & Post-survey



https://eduhk.au1.qualtrics.com/jfe/form/SV_8lbPtoUfvfc0VPo

Using Generative AI Tools for Supporting Data Processing and Analysis

Centre for Learning Teaching and Technology
Large Language Model Studio 大語言模型工作室

Thank You