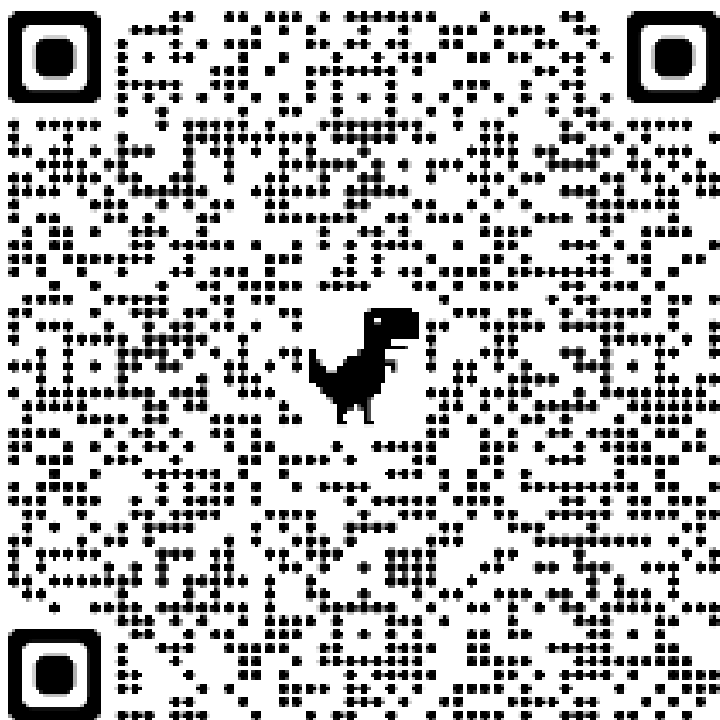


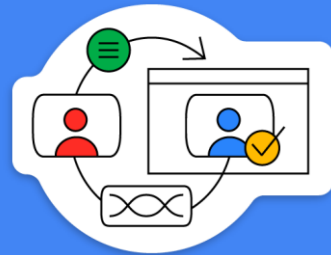
VM、PPT



我的檔案 > VM

名稱 ▾	修改時間 ▾	修改者 ▾	檔案大小 ▾	共用
 公司內部技術分享-資安大會延伸內容.pdf	幾秒鐘前	沈 宣婷	4.98 MB	 已共用
 Readme.txt	4月29日	沈 宣婷	1.50 KB	 已共用
 Ubuntu 64-bit Arm(GUI)-005.7z	4月29日	沈 宣婷	4.47 GB	 已共用
 Ubuntu 64-bit Arm(PRE)-004.7z	4月29日	沈 宣婷	10.8 GB	 已共用
 Ubuntu_22.04_VM_PRE-003.7z	4月29日	沈 宣婷	6.02 GB	 已共用
 Ubuntu_22.04_VM_Win_AMD_PRE-006.7z	4月29日	沈 宣婷	5.93 GB	 已共用
 Ubuntu_22.04_VM_Win_Intel_Pre-002.7z	4月29日	沈 宣婷	6.63 GB	 已共用

根據設備需求下載VM



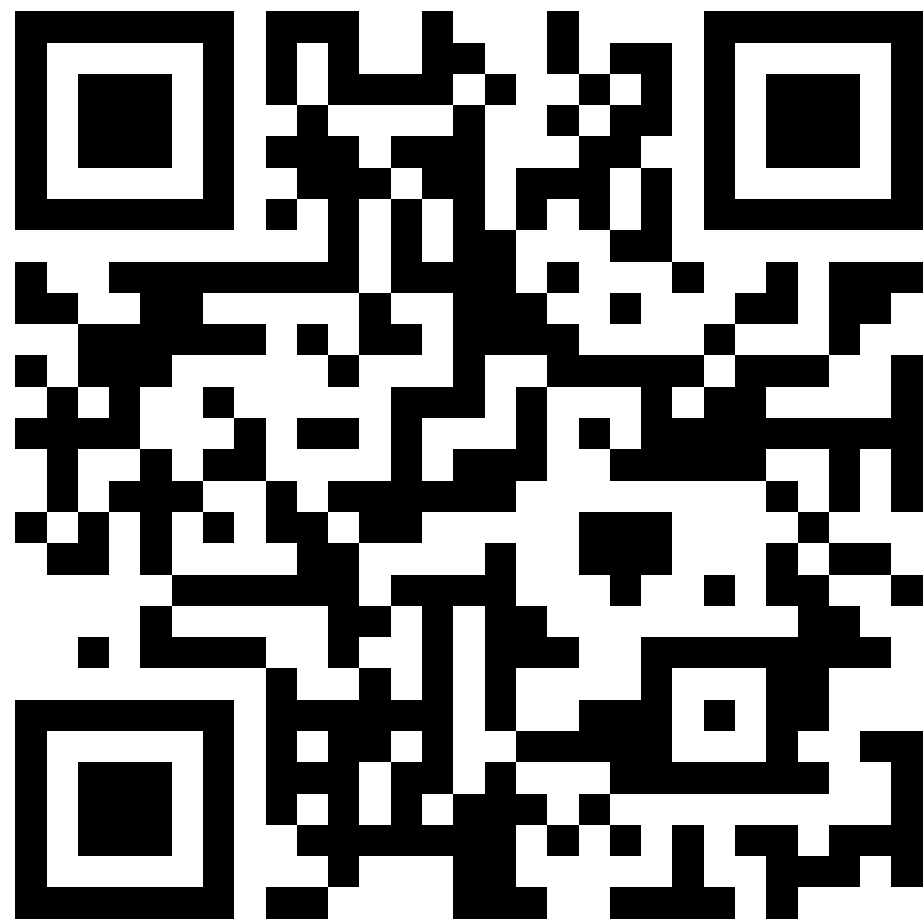
AI 領域展關

資安考試輕鬆過關

不插電平價美實神器

Easily breeze through AI cybersecurity exams with this cost-effective and practical gadget that works without electricity

Build with AI



<https://rsvp.withgoogle.com/events/gdg-build-with-ai-2024-tw>

#GDGTaipei

#BuildWithAI

#roadshow

AI不會取代人類， 但使用AI的人會取代不用AI的人

AI Won't Replace Humans —
But Humans With AI Will Replace Humans Without AI

**Harvard
Business
Review**



CONTENTS

01

翻頁吧！AI - 學習效率的革命

02

知識煉金術 - 解密神器運作原理

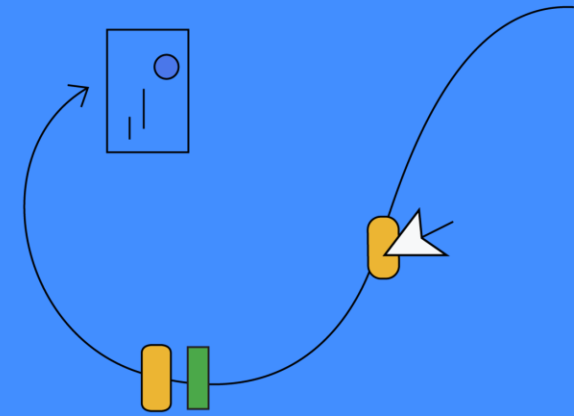
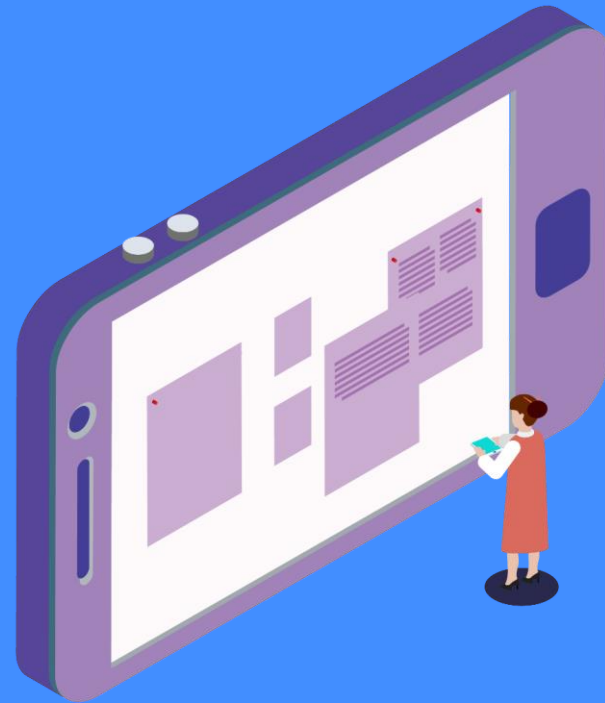
03

~~考神養成計畫 - 神器實戰演練~~

04

未來展望 - AI學習的無限可能





翻頁吧！AI - 學習效率的革命

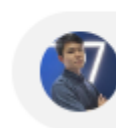
5月11日(四) | 11:00 - 11:30

真有那麼難？新版 OSCP 心得老生常談

OSCP (OffSec Certified Professional) 是業界紅隊演練人員的條1
OSCP 考試內容新增了 Active Directory 題組，使得考試的通過P

在簡介 9月21日 15:50 - 16:20 CYBERSEC 資安證照日 (Cyber Talent 專區)
和應對

OSCP 及 OSEP 資安網路攻防證照經驗分享與備考經驗



分享 OSCP 及 OSEP 考試經驗分享，如有興趣考取此證照的朋友們，希望能蒞臨聆聽。

[READ MORE](#)

5月11日(四) | 14:00 - 14:30

兩天讀完 Certificate of CyberSecurity、15 天內拿到證照 (ISC2)

為什麼要考證照？

Security ?

三個面向的事情

9月21日 14:55 - 15:35 CYBERSEC 資安證照日 (Cyber Talent 專區)

思維轉型！從零開始的資安治理學習之路



黃網正

國家中山科學

當資安治理已成趨勢，你有沒有想過什麼是正確的資安治理觀念呢？

5月16日(四) | 11:40 - 11:50

資安從業人員專業證照最佳起手式-iPAS中級資安工程師

資安證照是專業訓練的手段也是百忙中督促學習的最佳促進劑，而名列於我國資通安全專業證照清單中的

「iPAS資訊安全工程師中級能力鑑定」則是目前最具性價比的資安證照，備考過程不但能與現有工作實務充分結合，亦可針對能力指標範圍中較弱的主題進行強化，對於累積個人資安職能有很大的幫助。「資安從業人員專業證照最佳起手式-iPAS中級資安工程師」，本場次將現身說法心得分享備考過程。

學習之路！

傳達的觀念與備考歷程，最後探討證照的效益與如何確認

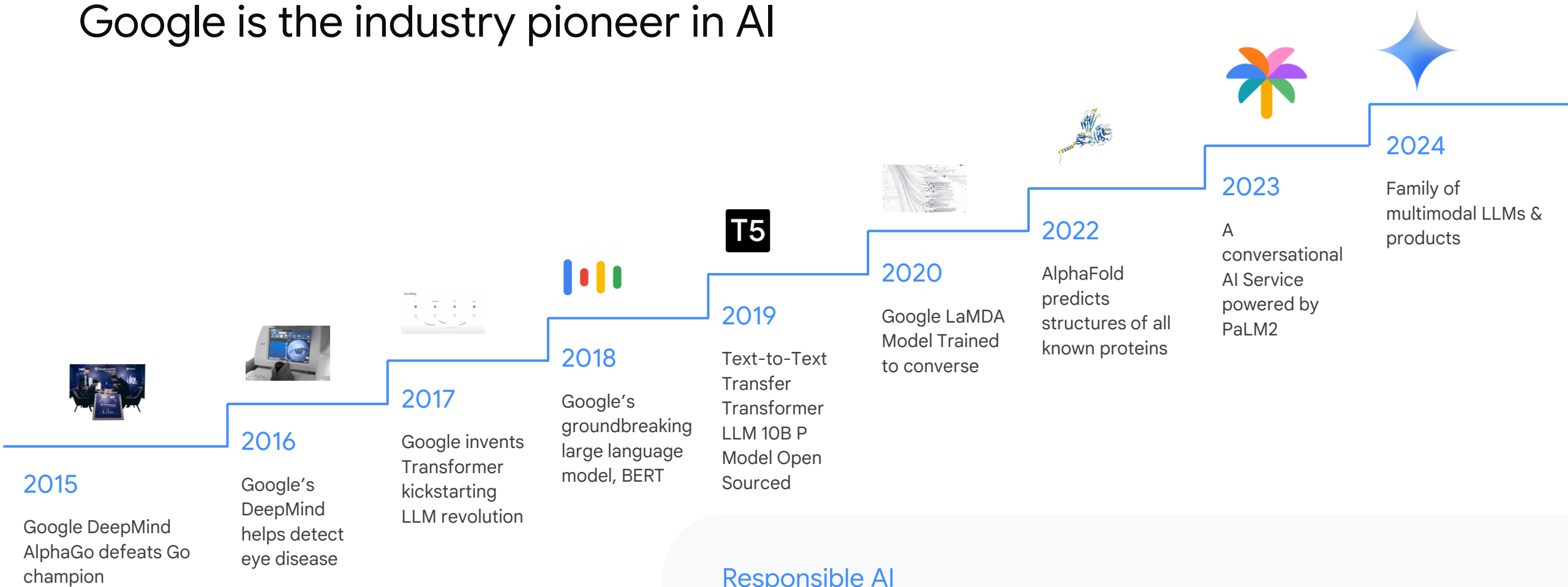


陳崇銘 (Eric Chen) / 資拓宏宇國際股份有限公司 資深規劃師

進入了AI盛行的年代

是不是要有些改變？

Google is the industry pioneer in AI



3,000
Researchers

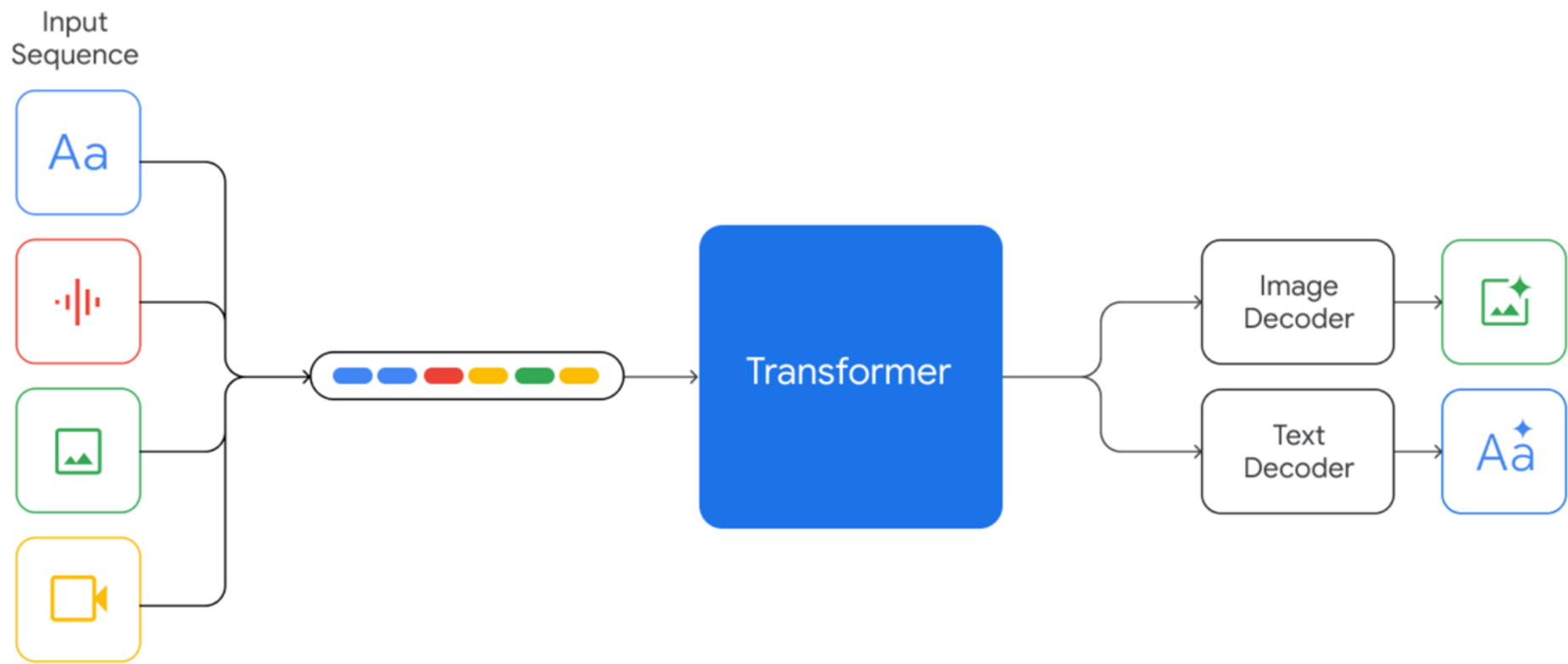
7,000
Publications

Responsible AI

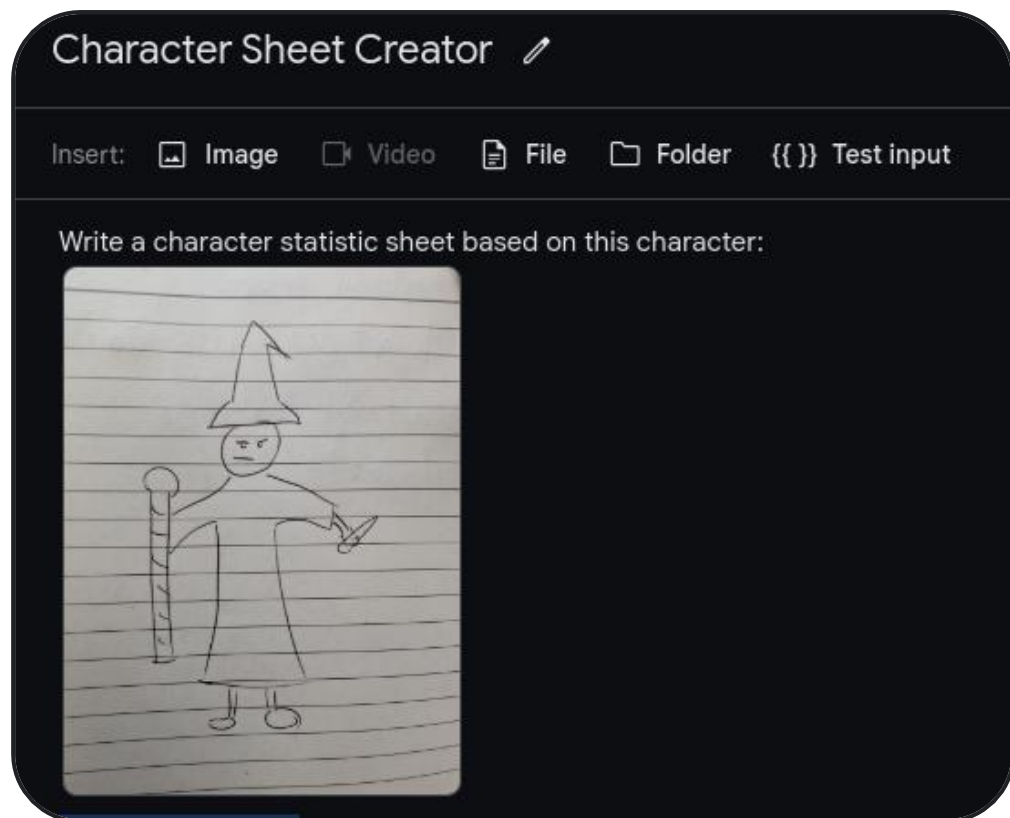
- ✓ Built & Tested for Safety
- ✓ Upholds high scientific standards
- ✓ Socially Beneficial
- ✓ Privacy in design
- ✓ Accountable to People
- ✓ Avoid creating unfair bias

多模態

Multimodality



AI的魔力



Name: Stickmancer

Race: Human

Class: Wizard

Level: 1

Strength: 10

Dexterity: 14

Stamina: 12


Intelligence: 18

Wisdom: 16

Charisma: 10

Equipment: Staff, Dagger, Robe

Animal puzzle

Insert:  Image  Video  File  Folder 

Solve the puzzle. Explain it step by step.

What do they weigh?

$$\text{🐧} + \text{🐧} = 60\text{kg}$$

$$\text{🐧} + \text{🦆} + \text{🦆} = 36\text{kg}$$

$$\text{🦆} + \text{🐓} + \text{🐓} = 23\text{kg}$$

Let's assume the weight of the penguin is P, duck is D and hen is H.

So, as per the given picture, we can write the following equations:

$$P + P = 60$$

$$P + D + D = 36$$

$$D + H + H = 23$$

Let's solve the first two equations to find the value of P and D.

$$P + P = 60$$

$$2P = 60$$

$$P = 30$$

$$P + D + D = 36$$

$$30 + 2D = 36$$

$$2D = 36 - 30$$

$$2D = 6$$

$$D = 3$$

Now, substitute the values of P and D in the third equation to find the value of H.

$$D + H + H = 23$$

$$3 + H + H = 23$$

$$2H = 23 - 3$$

$$2H = 20$$

$$H = 10$$

Therefore, the weight of the penguin is 30 kg, the weight of the duck is 3 kg and the weight of the hen is 10 kg.

資安考試的挑戰



challenge

複雜的題目和範圍

快速變化的技術和威脅

大量的知識點

高度技術性和專業性



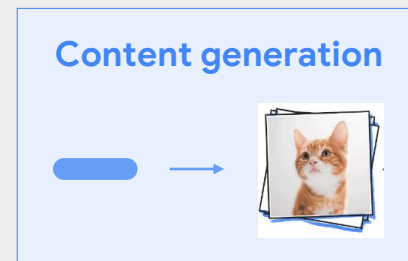
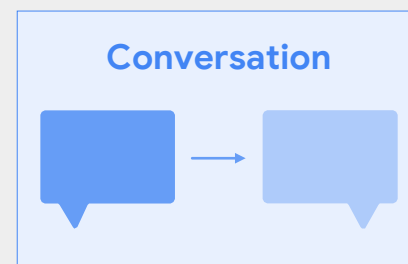
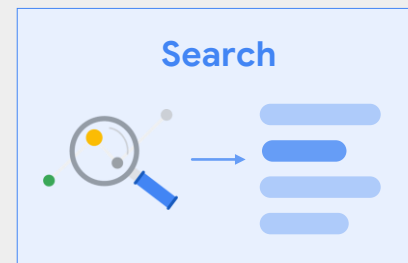
What is?

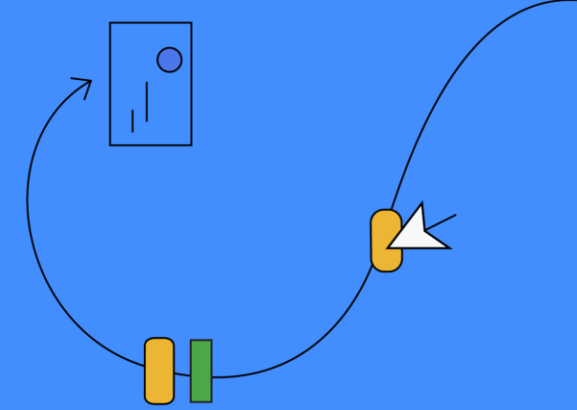
神器登場

根據需求，隨時可啟用

成本低廉，隨時隨地使用

功能強大，取代人力

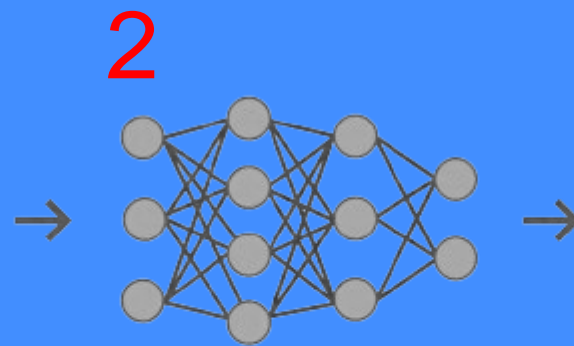




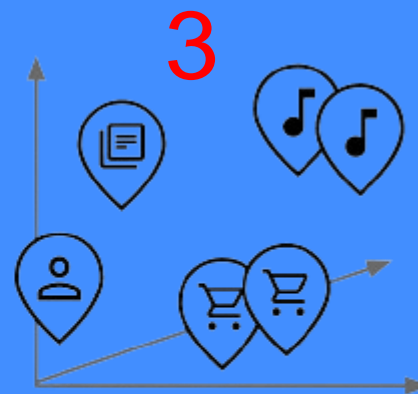
知識煉金術 – 解密神器運作原理



Contents and
business data



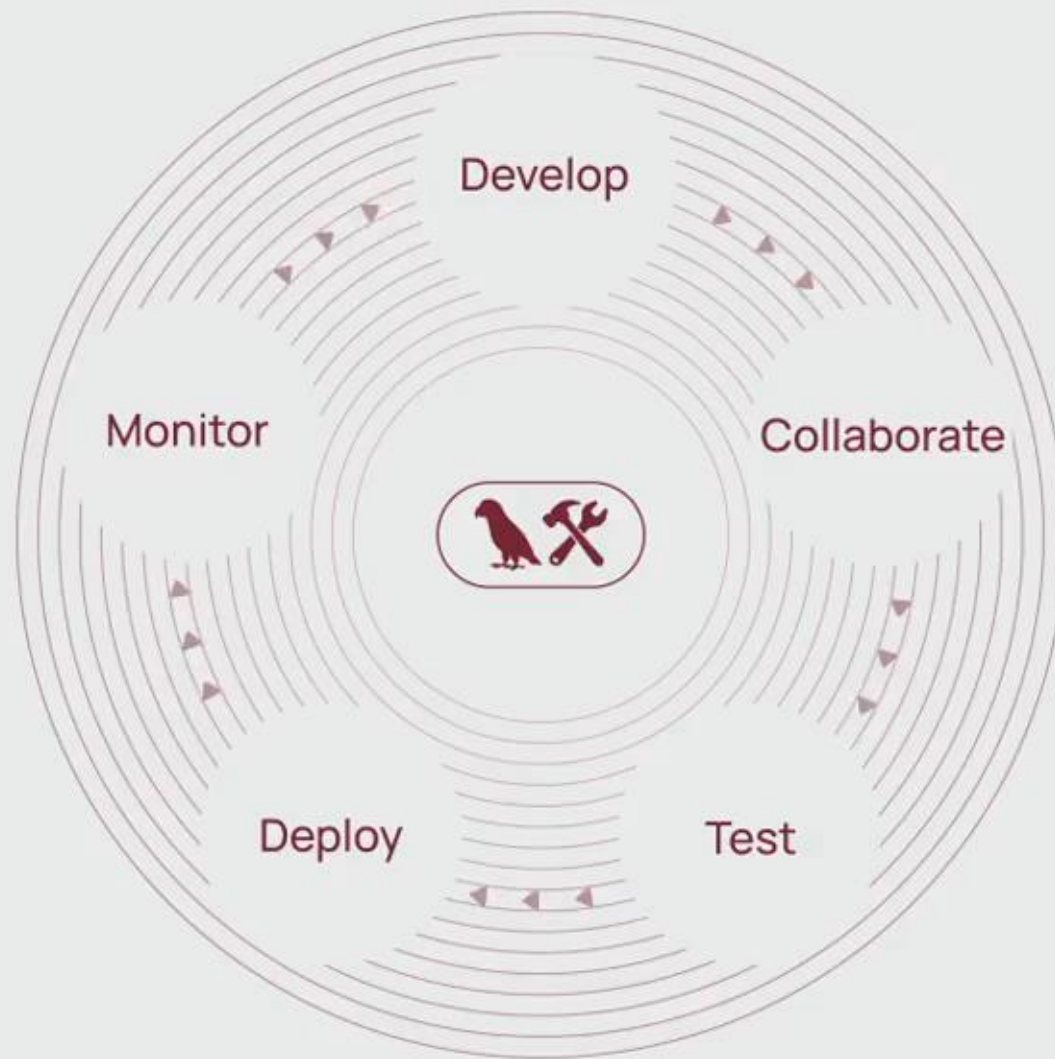
AI



Vector Search +
Embeddings

About LangChain

What is LangChain



Demo

Activities Firefox Web Browser Apr 22 02:33

License Assistant x +

localhost:8501

Deploy

Select the PDF file to upload!

Upload PDF Files then Click on the Submit

Drag and drop files here
Limit 200MB per file

Browse files

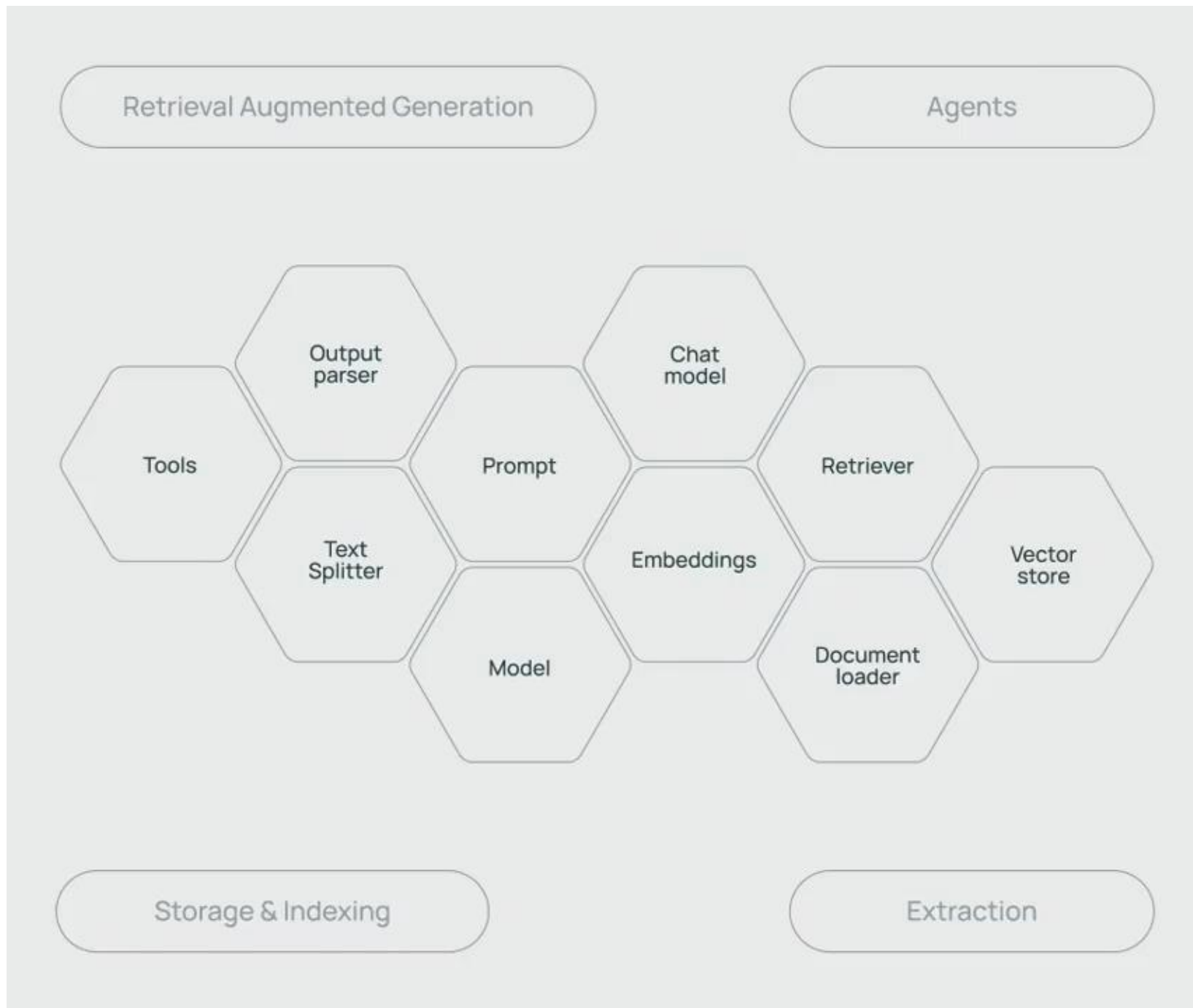
Submit

Help Certificate - Chat with AI

Inside the investigation, investigation and investigation...

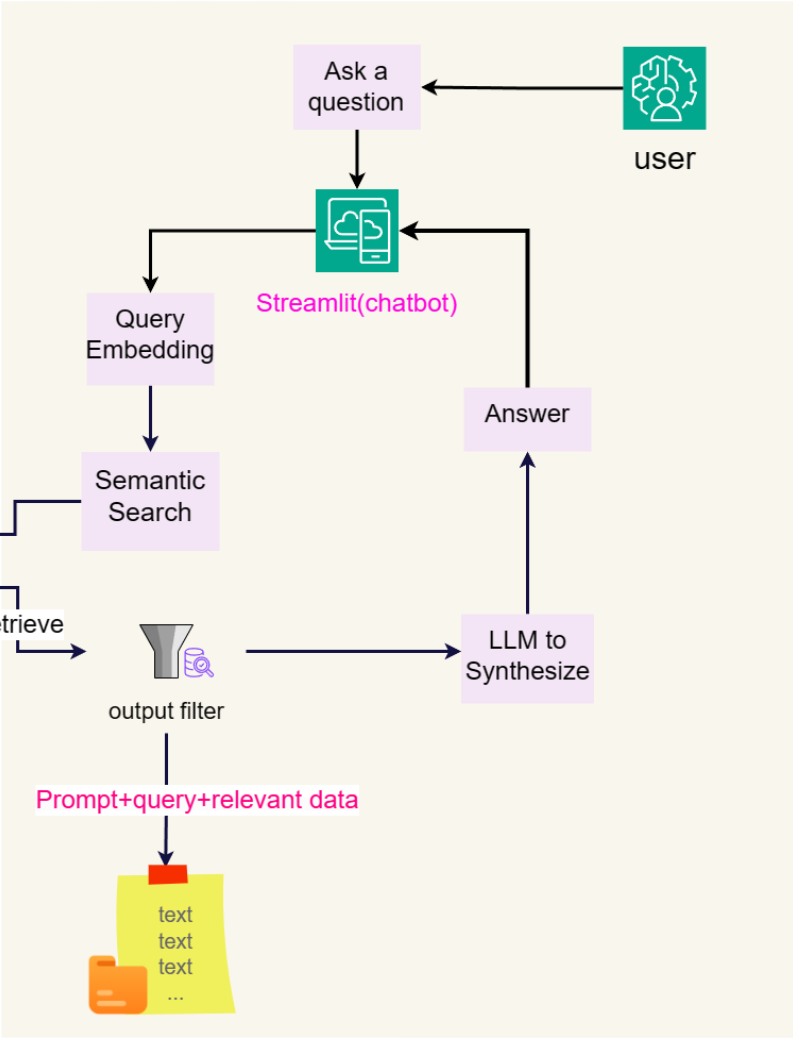
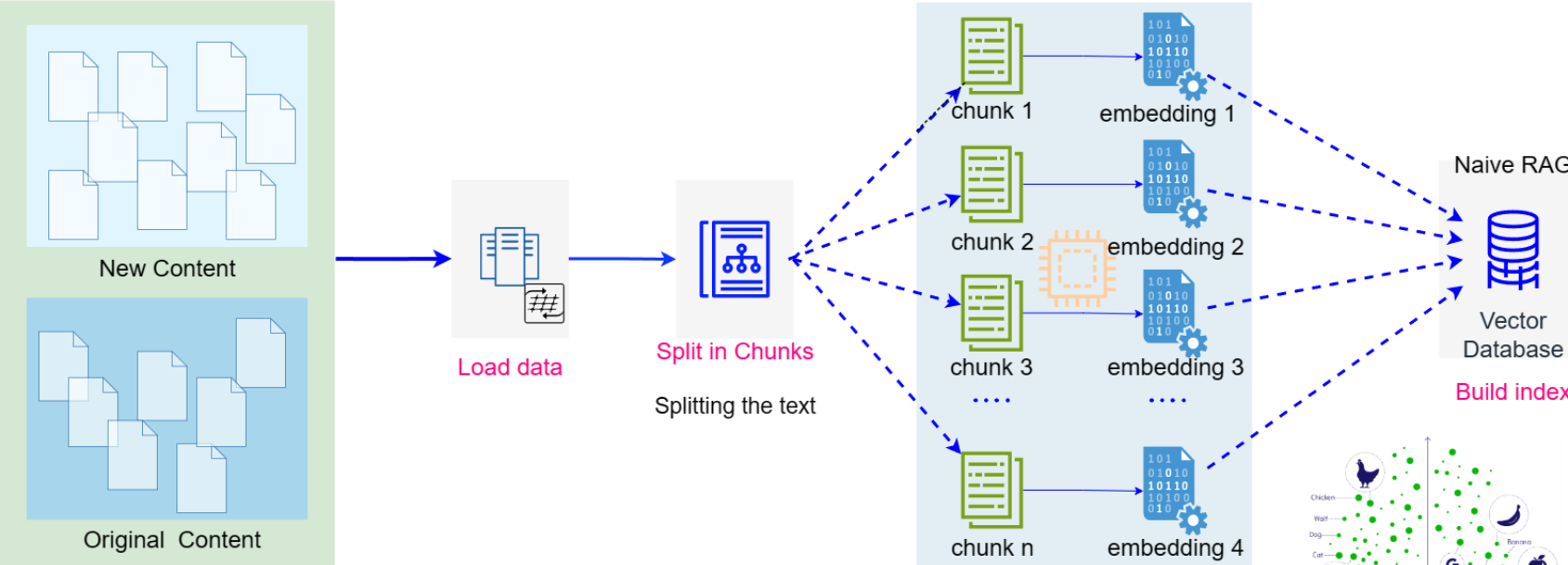
About LangChain

What is LangChain



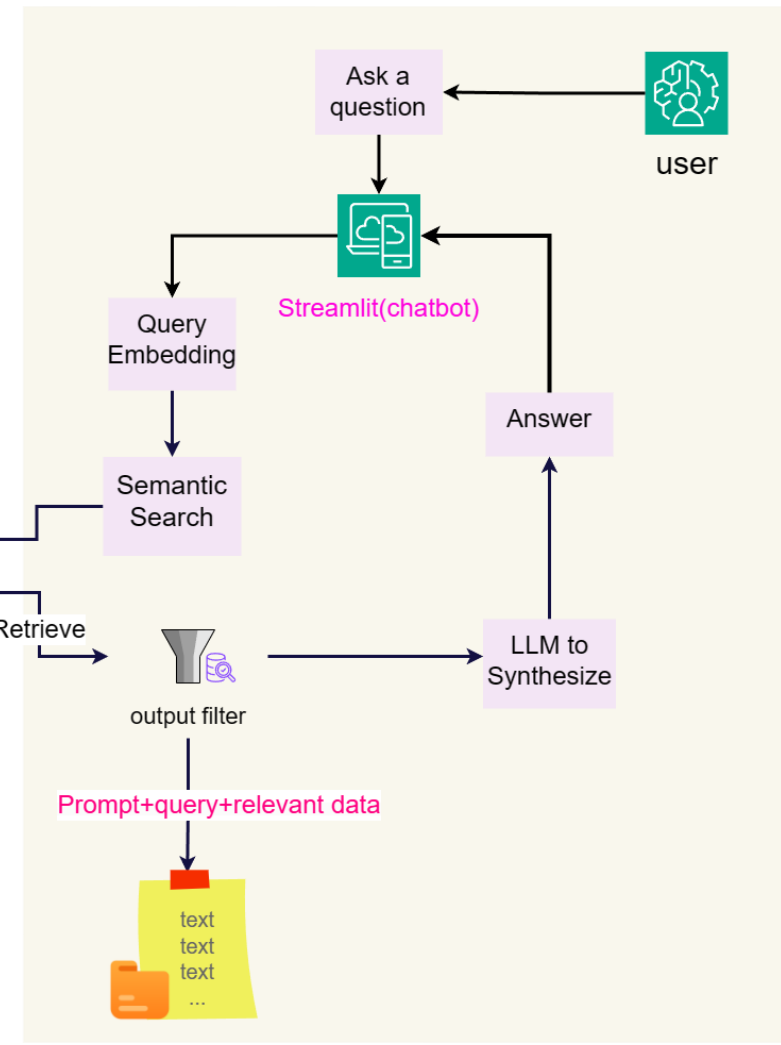
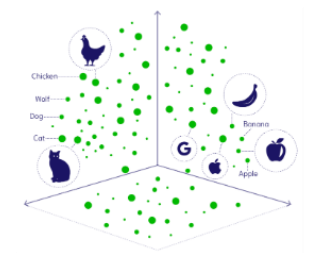
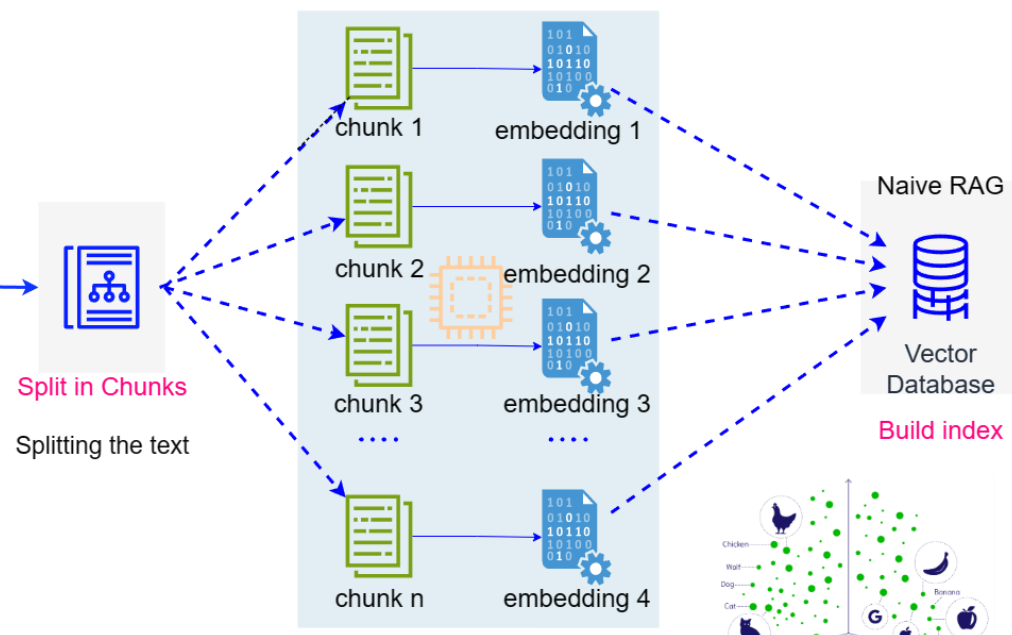
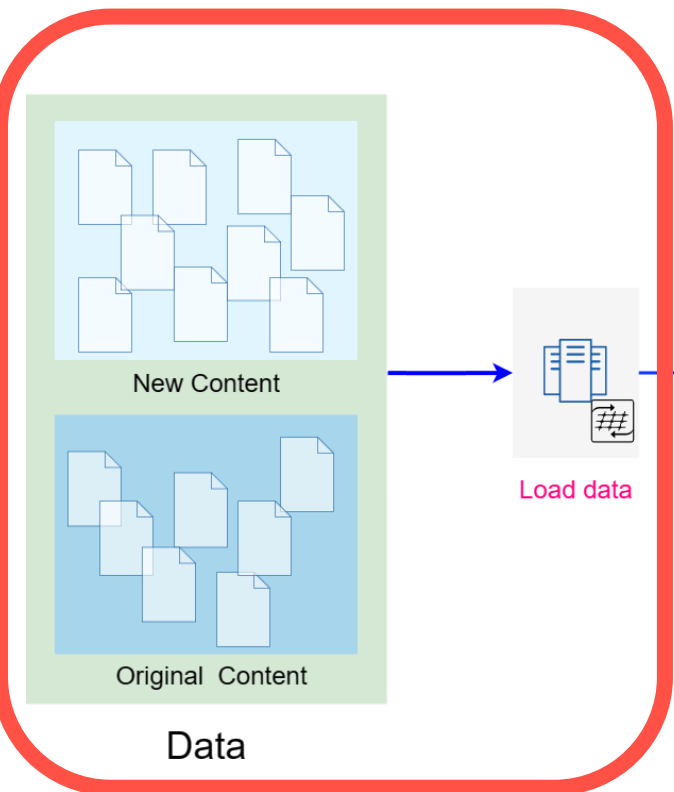
About LangChain

LangChain Architecture



About LangChain

Architecture Decryption



Load Data

```
import PyPDF2 as PdfReader

def get_pdf_text(pdf_docs):
    text = ""
    for pdf in pdf_docs:
        pdf_reader = PdfReader(pdf)
        for page in pdf_reader.pages:
            text += page.extract_text()
    return text
```

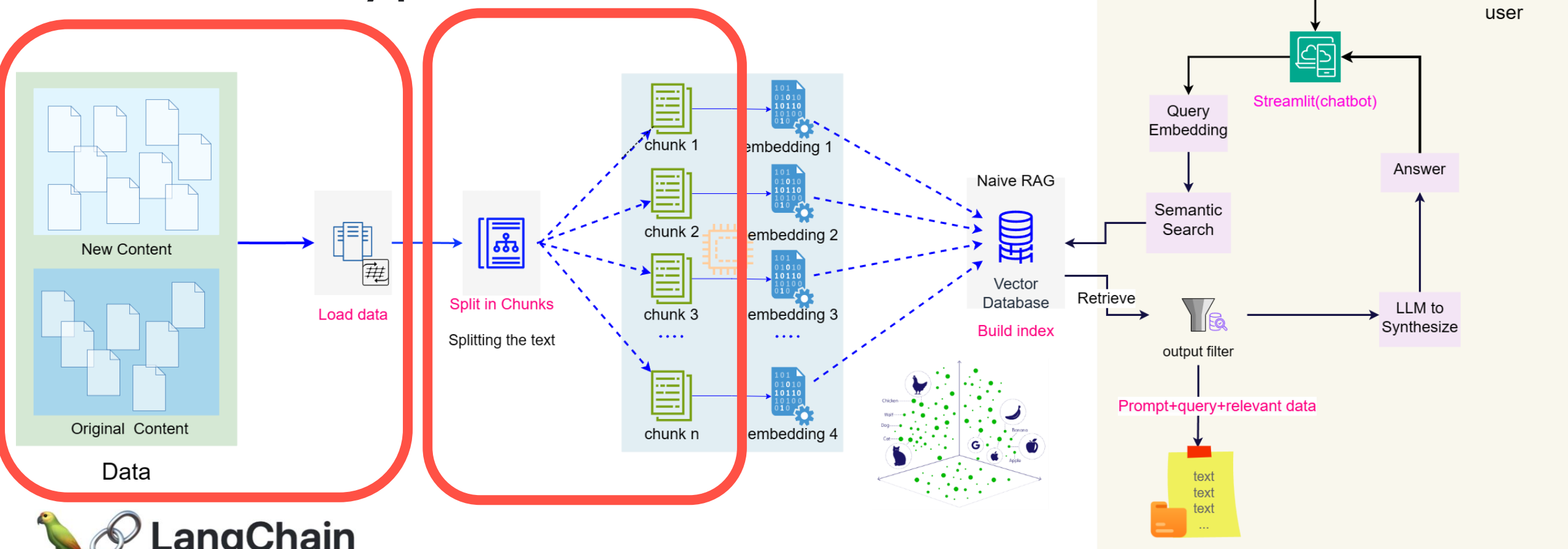
Load Data

```
import streamlit as st

with st.sidebar:
    st.title("Select the PDF file to upload!")
    pdf_docs = st.file_uploader(
        "Upload PDF Files then \n Click on the Submit",
        accept_multiple_files=True)
    if st.button("Submit"):
        with st.spinner("Processing..."):
            raw_text = get_pdf_text(pdf_docs)
            st.success("Done")
```

About LangChain

Architecture Decryption



Text splitter

```
from langchain.text_splitter import RecursiveCharacterTextSplitter

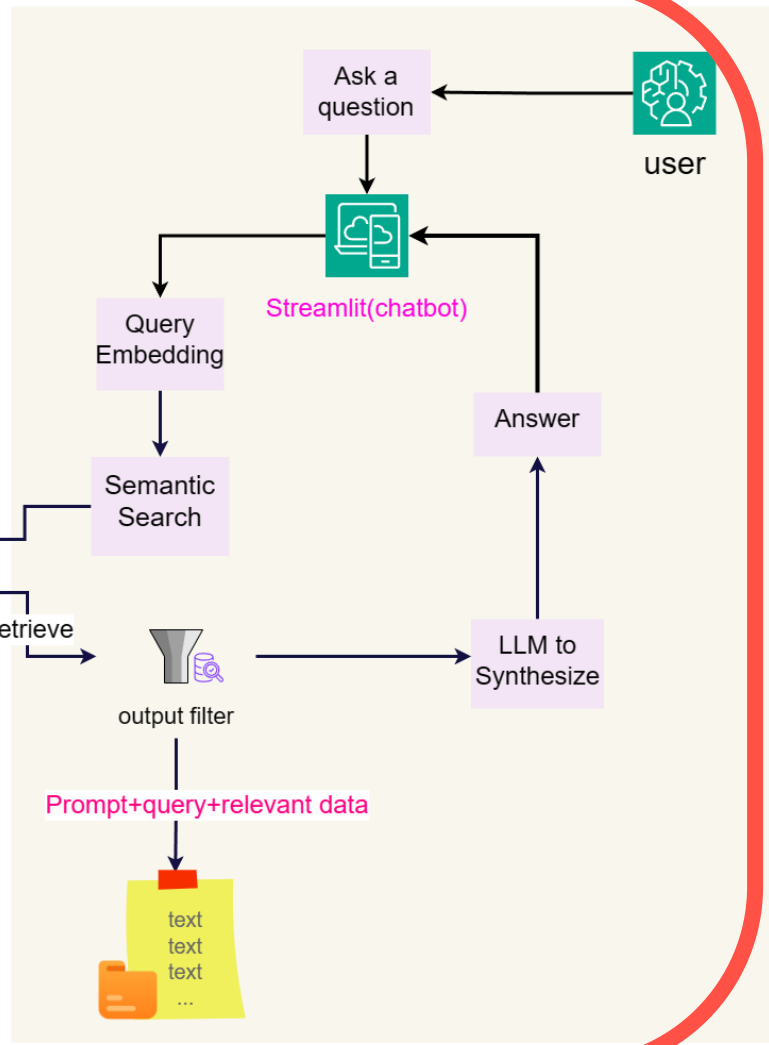
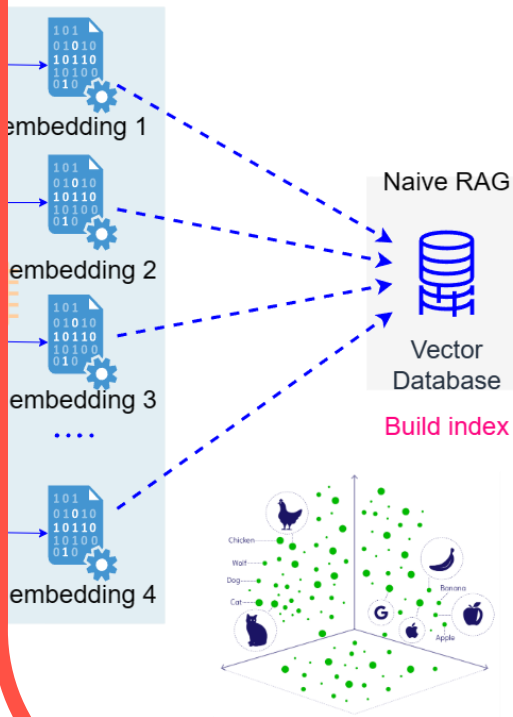
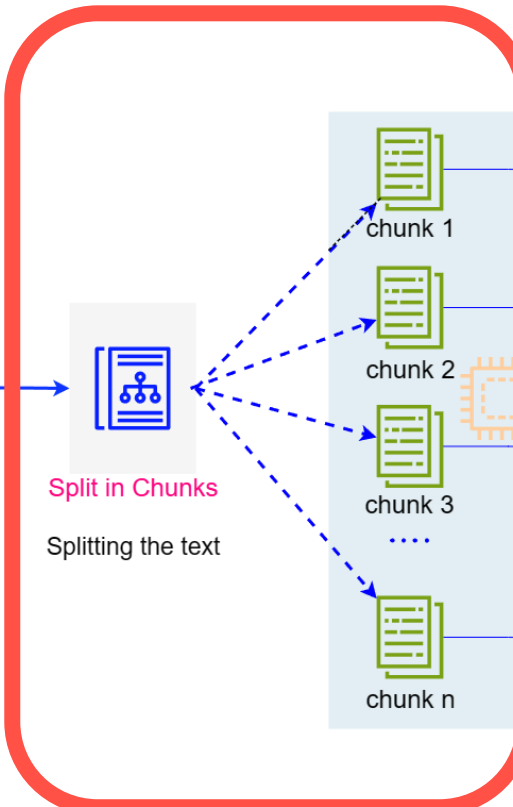
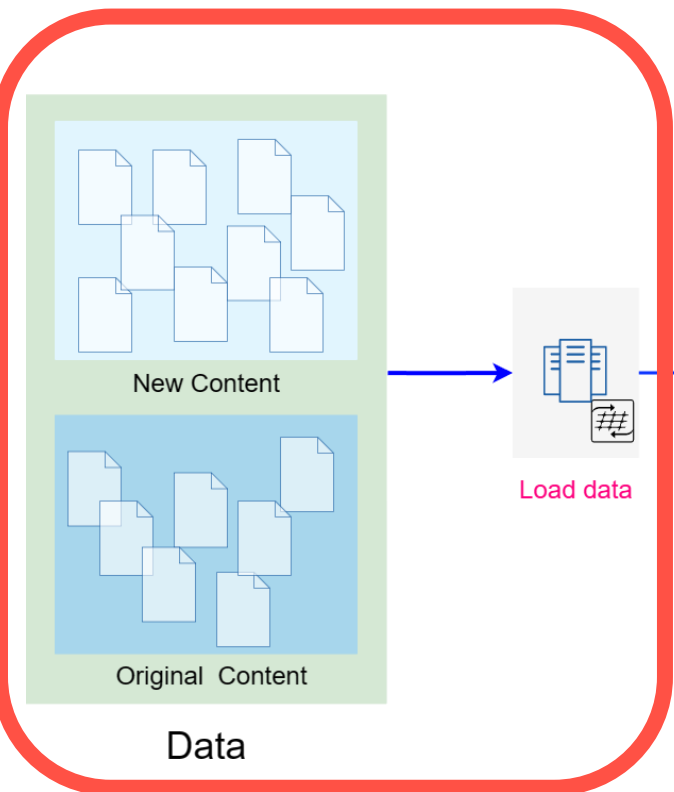
def get_text_chunks(text):
    text_splitter = RecursiveCharacterTextSplitter(
        chunk_size = 10000, chunk_overlap = 1000)
    chunks = text_splitter.split_text(text)
    return chunks
```

chunk

```
with st.sidebar:
    st.title("Select the PDF file to upload!")
    pdf_docs = st.file_uploader(
        "Upload PDF Files then \n Click on the Submit",
        accept_multiple_files=True)
    if st.button("Submit"):
        with st.spinner("Processing..."):
            raw_text = get_pdf_text(pdf_docs)
            text_chunks = get_text_chunks(raw_text)
            get_vector_store(text_chunks)
            st.success("Done")
```

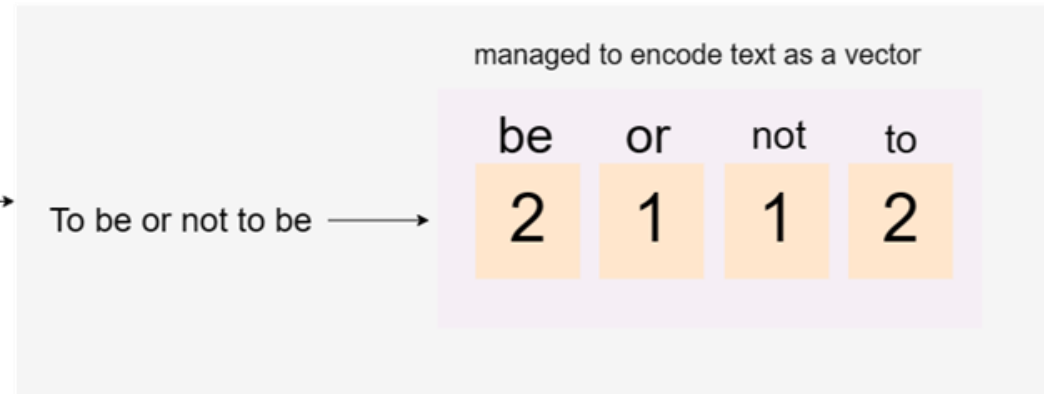
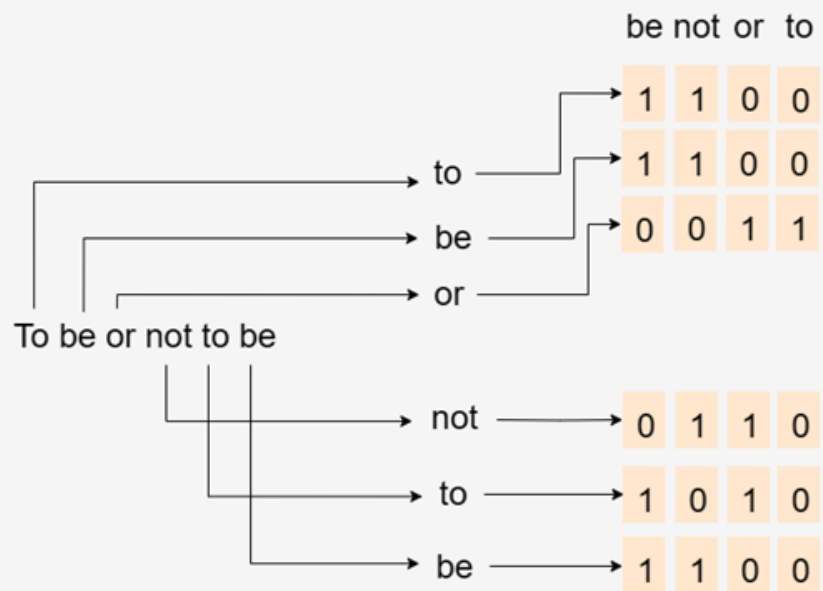
About LangChain

Architecture Decryption



Embedding

embedding text

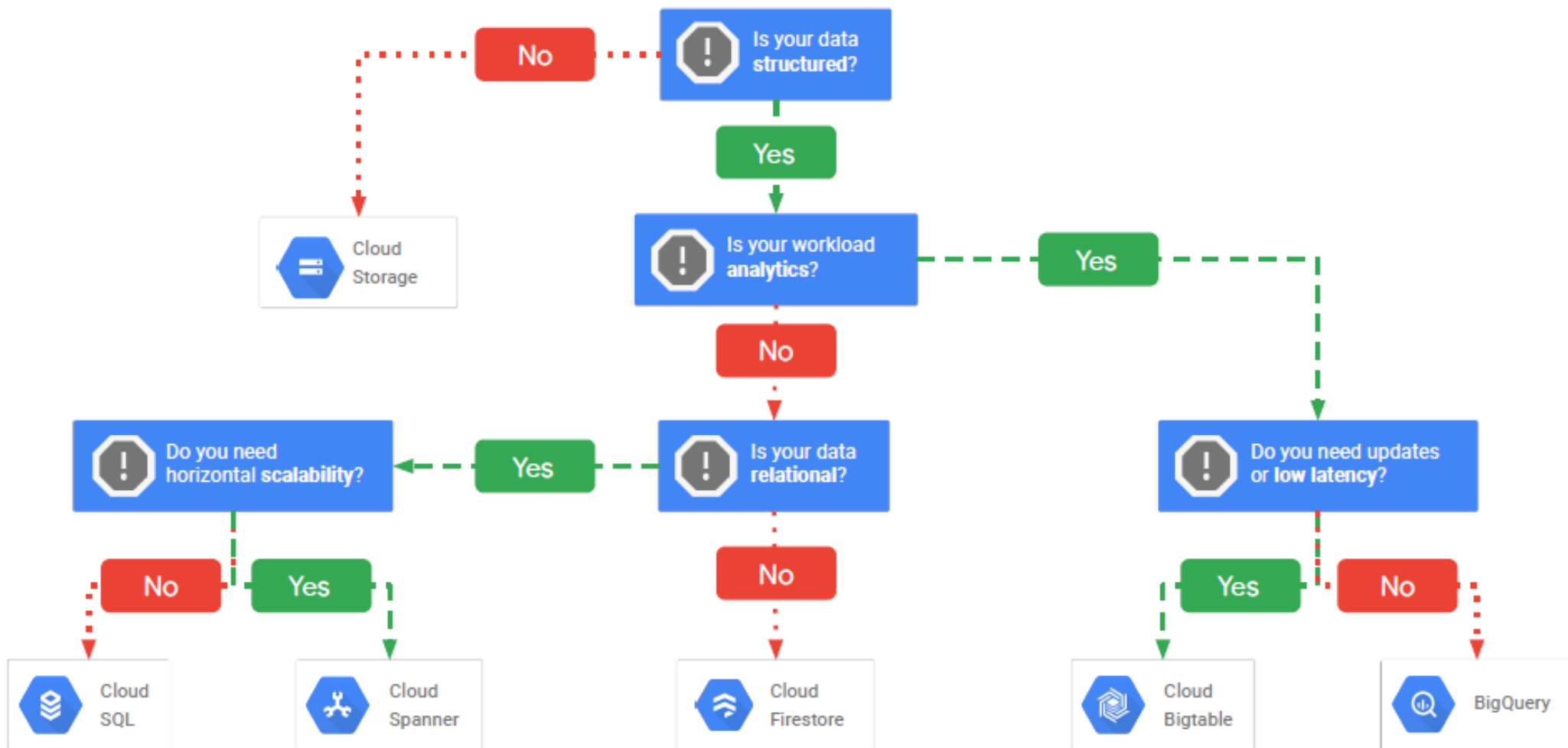


Store vector data - FAISS

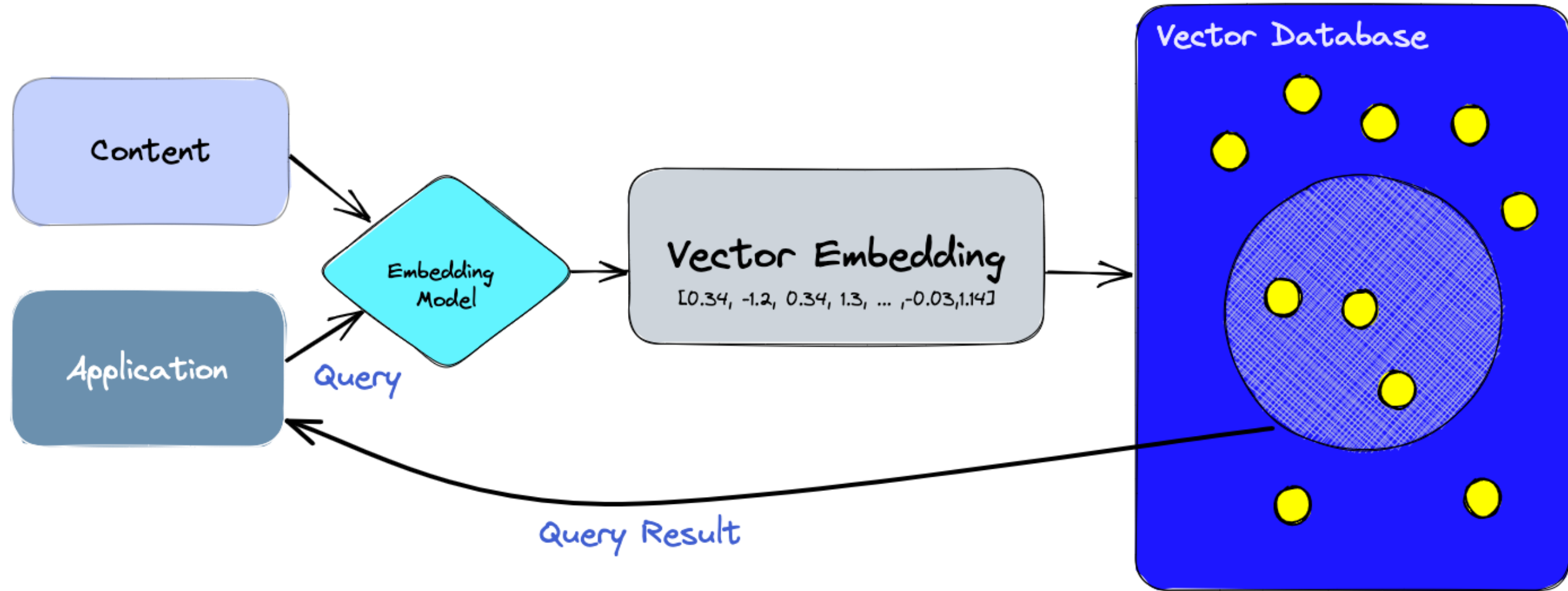
- 不犧牲品質的情況下壓縮向量
- 優化儲存空間同時保持基本資訊完整性的技術
- 可以處理 RAM 無法容納的資料大小

Decision Tree

- get_vector_store



Vector Database



Choose?

Ease of Use

Flexibility

Performance

Reliability

Scalability



Embedding

```
from langchain_google_genai import GoogleGenerativeAIEmbeddings
from langchain.vectorstores import FAISS

def get_vector_store(text_chunks):

    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")
    vector_store = FAISS.from_texts(text_chunks, embedding=embeddings)
    vector_store.save_local("faiss_index")
```

Query Embedding

```
def user_input(user_question):  
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")  
    new_db = FAISS.load_local("faiss_index",  
                             embeddings, allow_dangerous_deserialization=True)
```

Dangerous?

what this

`allow_dangerous_deserialization=True`

Dangerous?

Code Blame 1231 lines (1086 loc) · 44.8 KB

```

1052
1053     @classmethod
1054     def load_local(
1055         cls,
1056         folder_path: str,
1057         embeddings: Embeddings,
1058         index_name: str = "index",
1059         *,
1060         allow_dangerous_deserialization: bool = False,
1061         **kwargs: Any,
1062     ) -> FAISS:
1063         """Load FAISS index, docstore, and index_to_docstore_id from disk.
1064
1065         Args:
1066             folder_path: folder path to load index, docstore,
1067                 and index_to_docstore_id from.
1068             embeddings: Embeddings to use when generating queries
1069             index_name: for saving with a specific index file name
1070             allow_dangerous_deserialization: whether to allow deserialization
1071                 of the data which involves loading a pickle file.
1072                 Pickle files can be modified by malicious actors to deliver a
1073                 malicious payload that results in execution of
1074                 arbitrary code on your machine.
1075             asynchronous: whether to use async version or not
1076         """
1077         if not allow_dangerous_deserialization:
1078             raise ValueError(
1079                 "The de-serialization relies loading a pickle file. "
1080                 "Pickle files can be modified to deliver a malicious payload that "
1081                 "results in execution of arbitrary code on your machine."
1082                 "You will need to set `allow_dangerous_deserialization` to `True` to "
1083                 "enable deserialization. If you do this, make sure that you "
1084                 "trust the source of the data. For example, if you are loading a "
1085                 "file that you created, and no that no one else has modified the file, "
1086                 "then this is safe to do. Do not set this to `True` if you are loading "
1087                 "a file from an untrusted source (e.g., some random site on the "
1088                 "internet)."
```

Dangerous?

When to Override to True?

`allow_dangerous_deserialization=True`

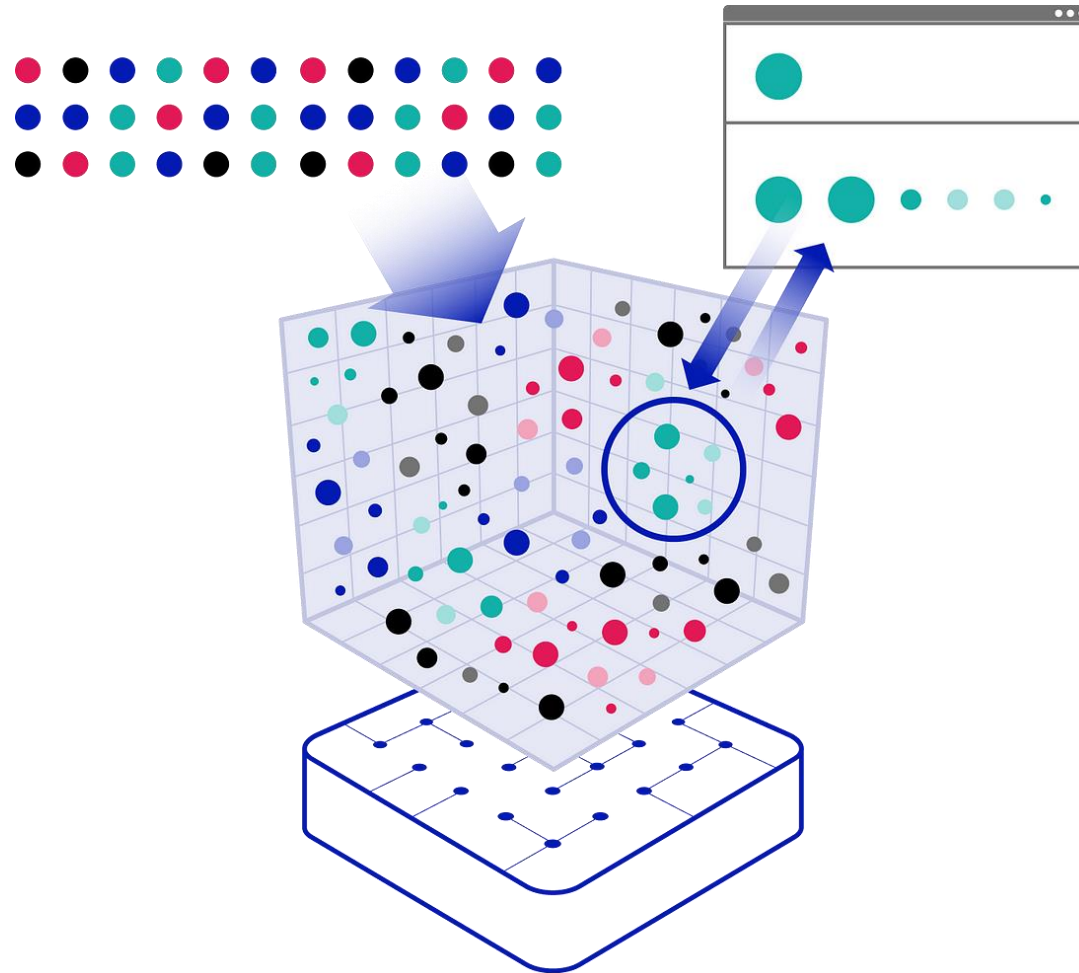
Dangerous?

`allow_dangerous_deserialization=True`

- Trusted Sources and Verified Data
- Specific Functionality Requirements

FAISS

- 擅長索引和搜尋大量高維度向量
- 高維度空間中的相似性搜尋和聚類
- 建立**大規模圖像搜尋引擎**，允許對數百萬甚至數十億張圖像進行索引和搜尋
- 建立**語義搜尋系統**，以便從大量文字中快速檢索類似的文件或段落
- 快速搜尋彼此相似的多媒體文件的嵌入

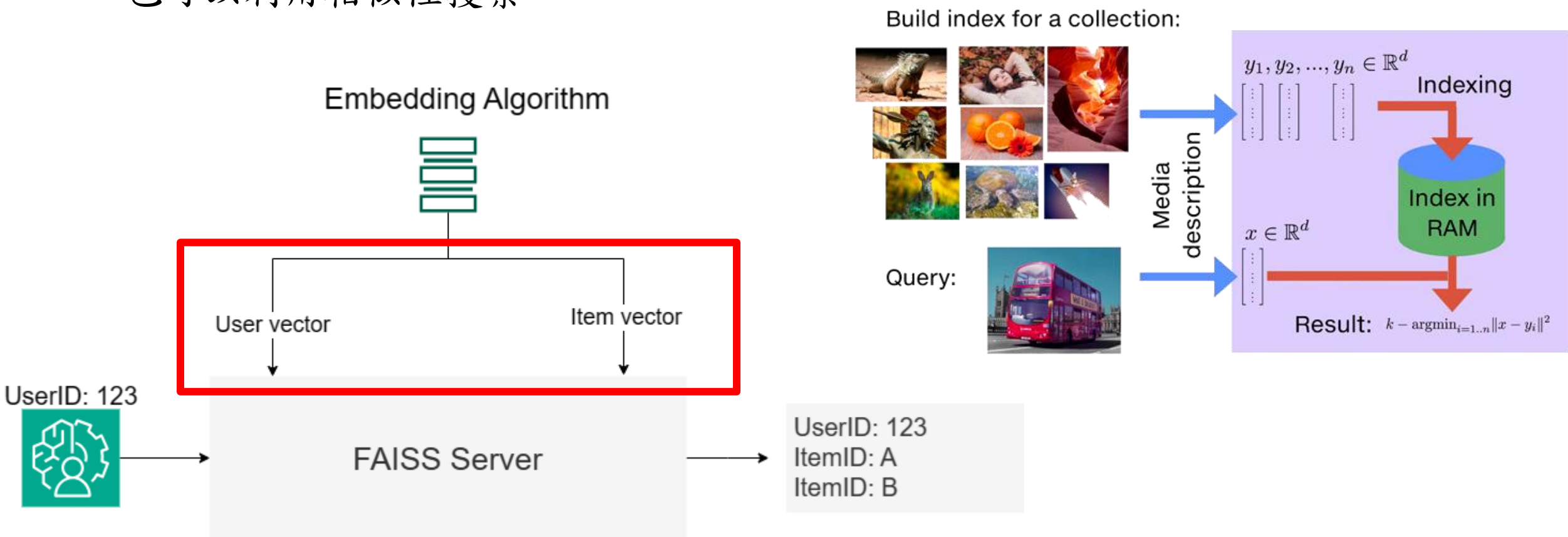


<https://github.com/facebookresearch/faiss>

https://medium.com/@pankaj_pandey/faiss-efficient-similarity-search-and-clustering-of-dense-vectors-dace1df1e235

FAISS Principle

- 除了拿到向量，還要計算哪些Item的向量距離較短
- 也可以利用相似性搜索



Semantic Search

```
def user_input(user_question):  
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")  
    new_db = FAISS.load_local("faiss_index",  
                             embeddings, allow_dangerous_deserialization=True)  
    docs = new_db.similarity_search(user_question)  
    chain = get_conversational_chain()  
    response = chain(  
        {"input_documents": docs, "question": user_question},  
        return_only_outputs=True)
```

Semantic Search

```
def user_input(user_question):  
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")  
    new_db = FAISS.load_local("faiss_index",  
                             embeddings, allow_dangerous_deserialization=True)  
    docs = new_db.similarity_search(user_question)  
    chain = get_conversational_chain()  
    response = chain(  
        {"input_documents": docs, "question": user_question},  
        return_only_outputs=True)
```

`new_db.similarity_search(user_question)`

- 加速相似性搜尋
- 降低計算複雜度
- 提高儲存和運算效率
- 支援大規模資料集
- 廣泛應用於人工智慧

Semantic Search

```
docs_scores = db.similarity_search_with_score(query)
docs_scores[0]
```

```
(Document(page_content='Tonight. I call on the Senate to: Pass the Freedom to Vote Act. Pass the John Lewis Voting Rights Act. And while you're at it, pass the Disclose Act so Americans can know who is funding our elections. \n\nTonight, I'd like to honor someone who has dedicated his life to serve this country: Justice Stephen Breyer—an Army veteran, Constitutional scholar, and retiring Justice of the United States Supreme Court. Justice Breyer, thank you for your service. \n\nOne of the most serious constitutional responsibilities a President has is nominating someone to serve on the United States Supreme Court. \n\nAnd I did that 4 days ago, when I nominated Circuit Court of Appeals Judge Ketanji Brown Jackson. One of our nation's top legal minds, who will continue Justice Breyer's legacy of excellence.', metadata={'source': '../..../modules/state_of_the_union.txt'}),
0.36913747)
```

Semantic Search

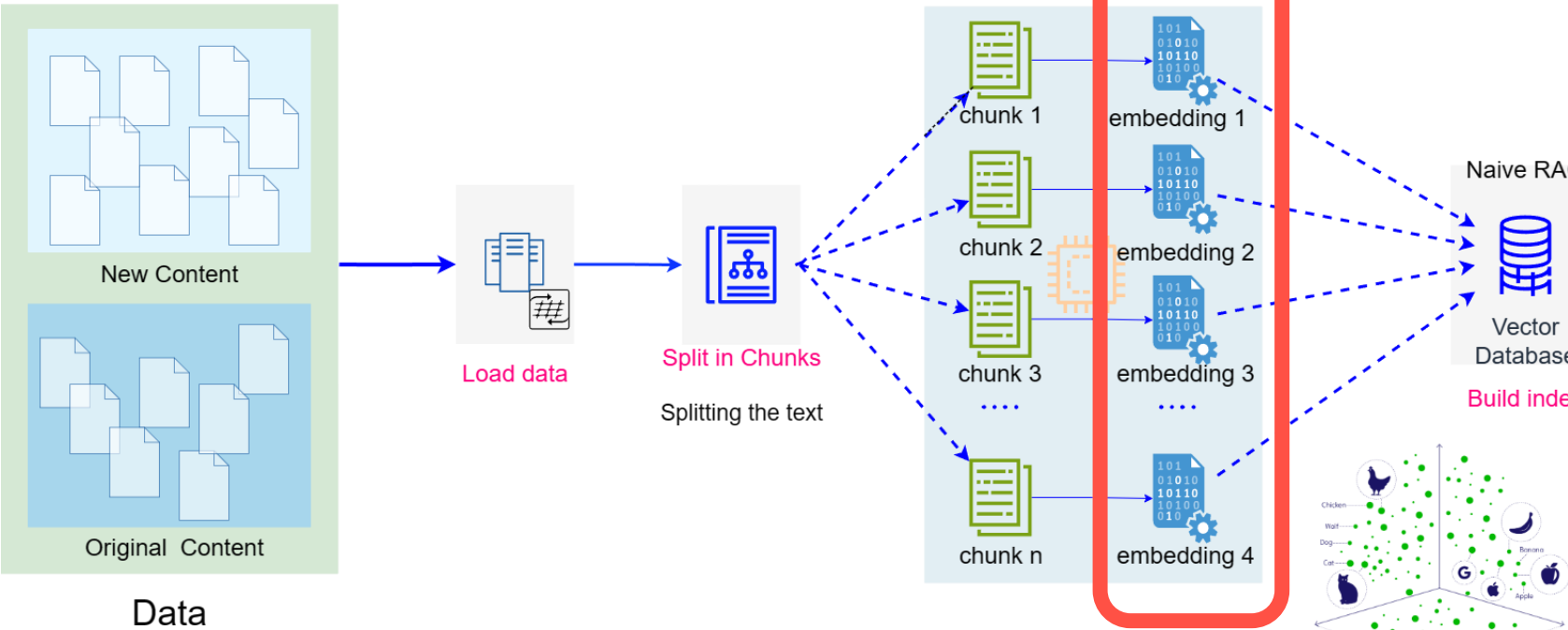
```
def user_input(user_question):  
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")  
    new_db = FAISS.load_local("faiss_index",  
                             embeddings, allow_dangerous_deserialization=True)  
    docs = new_db.similarity_search(user_question)  
    chain = get_conversational_chain()  
    response = chain(  
        {"input_documents": docs, "question": user_question},  
        return_only_outputs=True)
```

Same?

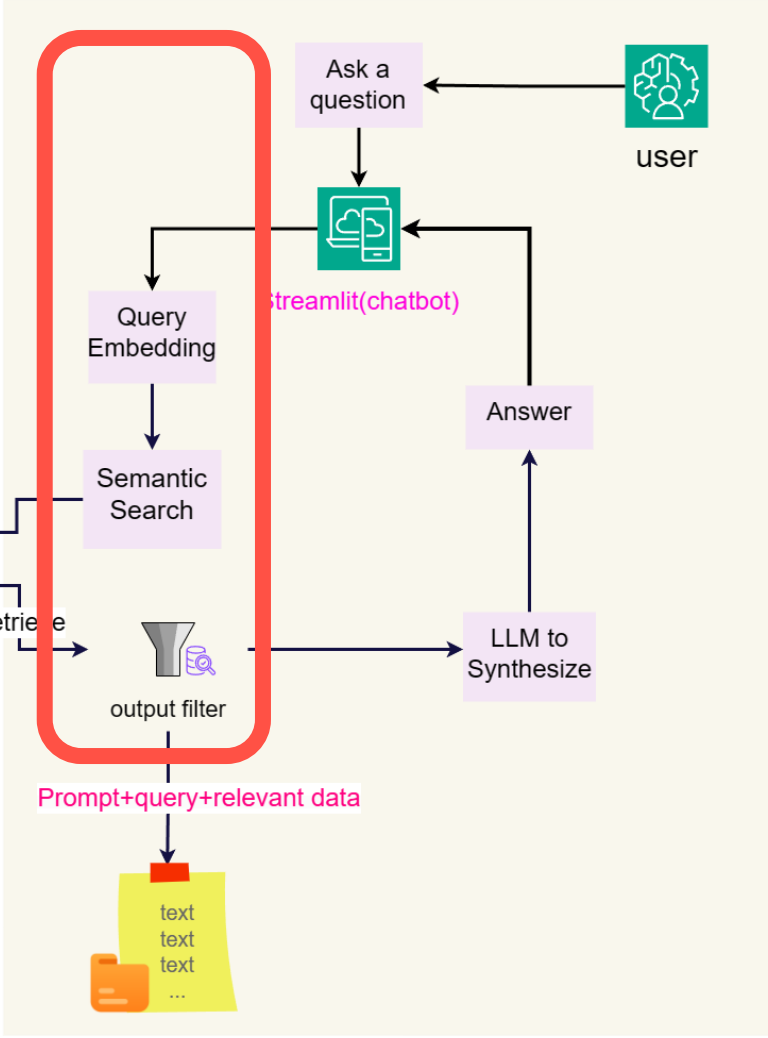
```
def get_vector_store(text_chunks):  
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")  
    ....  
def user_input(user_question):  
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")  
    ....
```

Embedding

Different functions?



Query Embeddings



Chunk Embeddings

Embedding

	Chunk Embeddings	Query Embeddings
Timing	資料預處理階段	使用者每次提出問題
Context	文件中各個文字區塊的含義	捕獲使用者問題的整體意圖或意義
Retrieval	檢索相關文檔	測量使用者問題與檢索到的文檔之間的相似性
Representation	文字的數字表示	文字的數字表示

FAISS vs Chroma

Table 1: Different Vector Stores Retrieving One Document Results

	context_precision	context_recall	f_measure	search_time [second]
FAISS	0.96	0.93	0.95	1.81
Chroma	0.94	0.89	0.91	2.18

Table 2: Comparing Vector Store FAISS vs. Chroma Retrieving 3 Documents

	context_precision	context_recall	f_measure	search_time [second]
FAISS	0.97	0.97	0.97	1.87
Chroma	0.72	0.73	0.73	2.18

Retrieve

```
from langchain.prompts import PromptTemplate
from langchain_google_genai import ChatGoogleGenerativeAI
def get_conversational_chain():
    prompt_template = """
    Answer the question as detailed as possible from the provided context, make sure to provide all the details, if the answer is
    not in provided context just say, "answer is not available in the context", don't provide the wrong answer\n\n
    Context:\n {context}?\n
    Question: \n{question}\n

    Answer:
    """
    model = ChatGoogleGenerativeAI(model="gemini-pro", temperature=0.3)
    prompt = PromptTemplate(template=prompt_template,
                            input_variables=["context", "question"])
    chain = load_qa_chain(model, chain_type="stuff", prompt=prompt)
    return chain
```

Chain_type

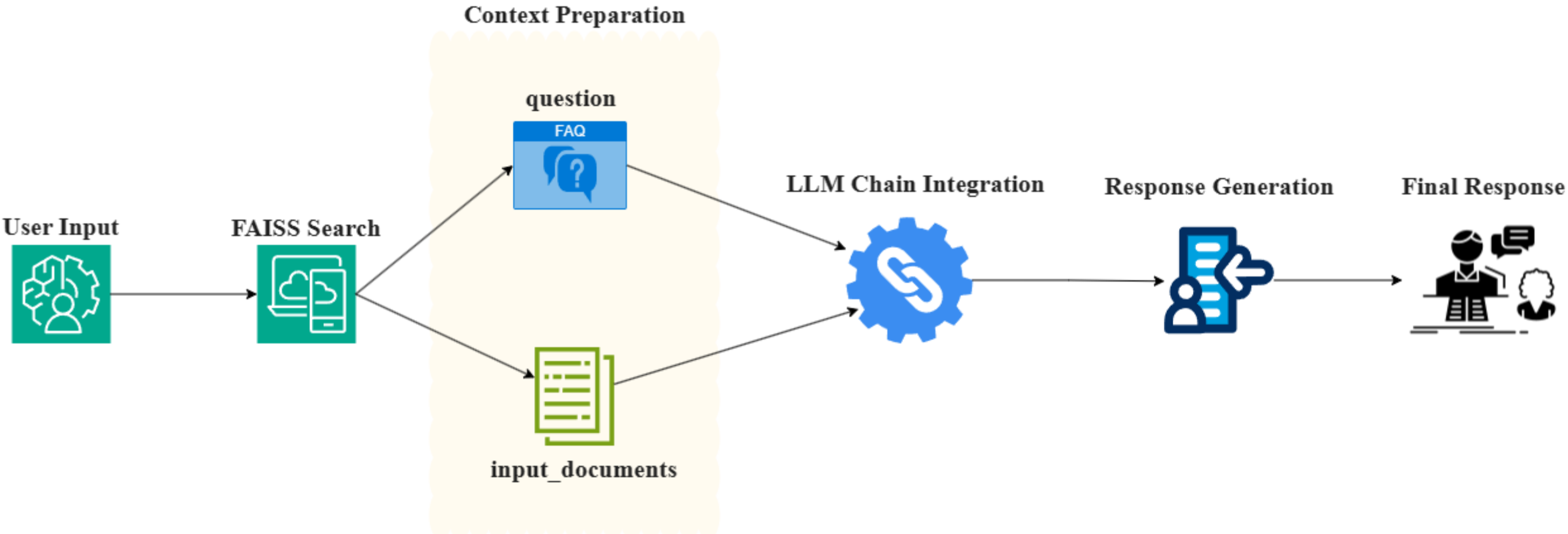
- `stuff`: 文件較少、規模較小的情況
- `map_reduce`: 處理大量文件或資訊的情況
- `map_rerank`: 在多個可能答案中選擇最佳答案的情況
- `Refine`: 需要分析大量文件並逐步完善答案的情況

Semantic Search

```
def user_input(user_question):  
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")  
    new_db = FAISS.load_local("faiss_index",  
                             embeddings, allow_dangerous_deserialization=True)  
    docs = new_db.similarity_search(user_question)  
    chain = get_conversational_chain()  
    response = chain(  
        {"input_documents": docs, "question": user_question},  
        return_only_outputs=True)
```

Ans Store

```
chain( {"input_documents": docs, "question": user_question},  
return_only_outputs=True)
```



Answer

```
def user_input(user_question):
    embeddings = GoogleGenerativeAIEmbeddings(model="models/embedding-001")
    new_db = FAISS.load_local("faiss_index",
                             embeddings, allow_dangerous_deserialization=True)
    docs = new_db.similarity_search(user_question)
    chain = get_conversational_chain()
    response = chain(
        {"input_documents": docs, "question": user_question},
        return_only_outputs=True)
    st.session_state.ai_response = response["output_text"]
```

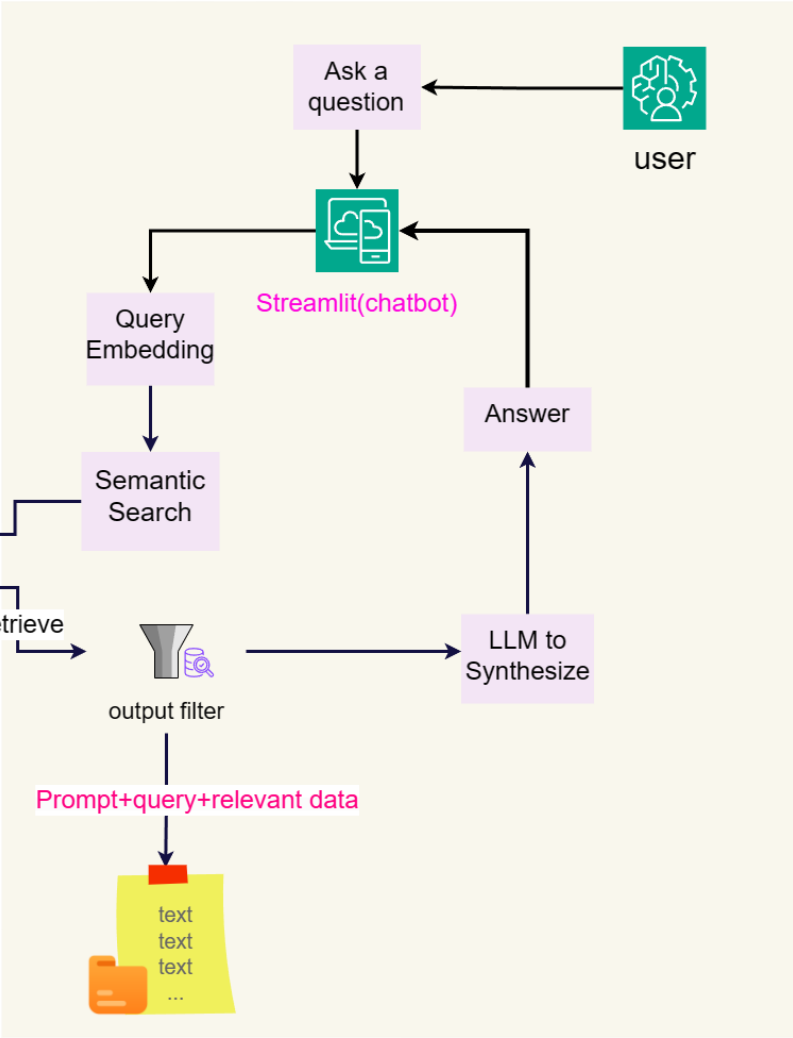
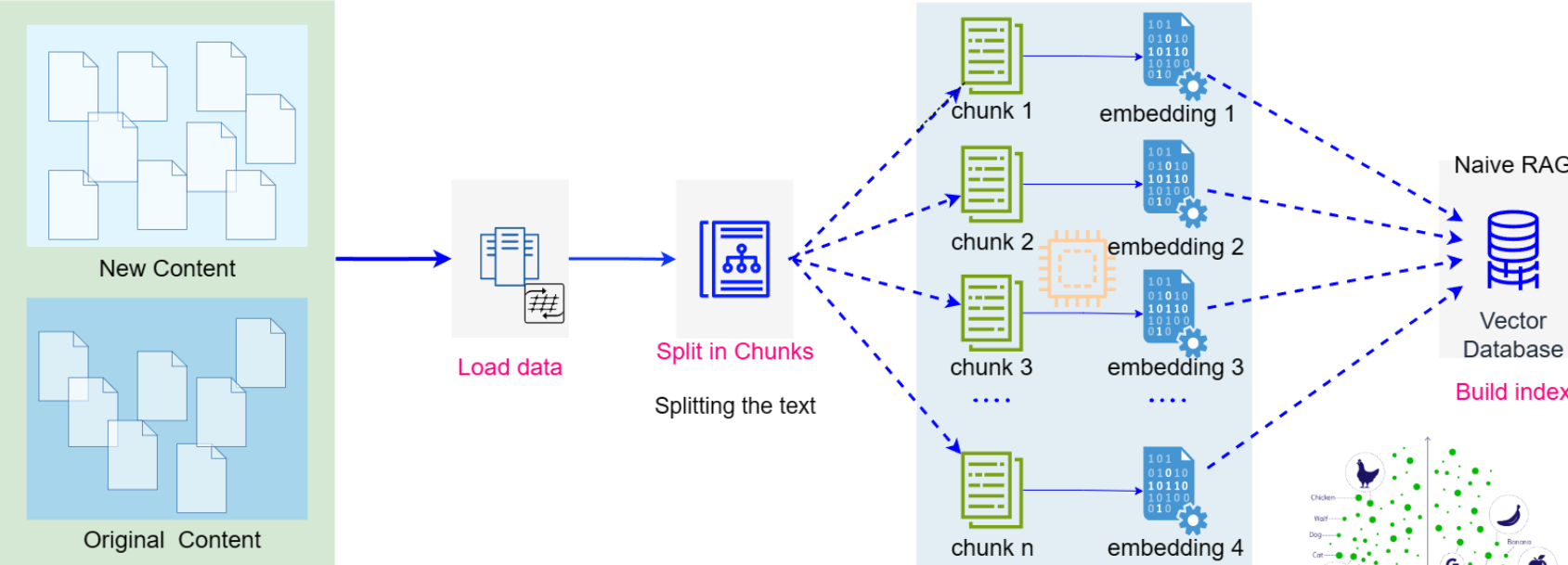
Retrieve

```
from langchain.prompts import PromptTemplate
from langchain_google_genai import ChatGoogleGenerativeAI
def get_conversational_chain():
    prompt_template = """
    Answer the question as detailed as possible from the provided context, make sure to provide all the details, if the answer is
    not in provided context just say, "answer is not available in the context", don't provide the wrong answer\n\n
    Context:\n {context}?\n
    Question: \n{question}\n

    Answer:
    """
    model = ChatGoogleGenerativeAI(model="gemini-pro", temperature=0.3)
    prompt = PromptTemplate(template=prompt_template,
                            input_variables=["context", "question"])
    chain = load_qa_chain(model, chain_type="stuff", prompt=prompt)
    return chain
```

About LangChain

Review LangChain



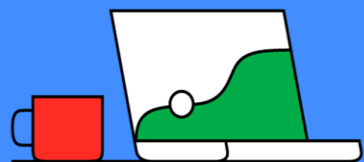
如何提升模型回答的能力？

如何提升處理更多資料？

考神養成計畫
神器實戰演練

AI神器

用過的都說讚



Play?



FAISS-ANN

<https://www.kaggle.com/code/akashmathur2212/demystifying-faiss-vector-indexing-and-ann/notebook>

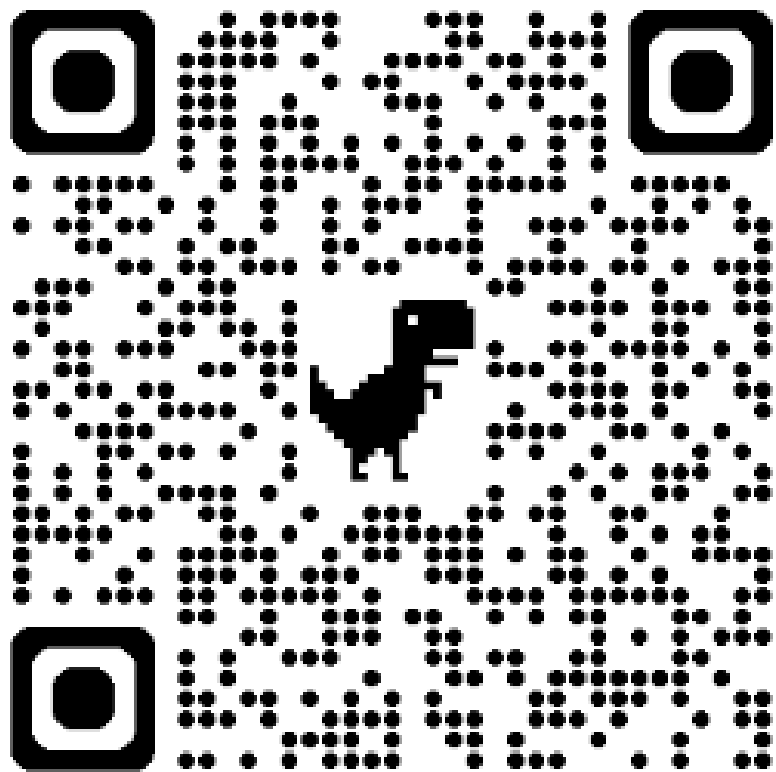


FAISS

https://github.com/manan-garg/FAISS_RecSys_Master/tree/main

Command!!

按圖施工不保證成功



<https://reurl.cc/ez9ylb>

**其實這世上根本
沒有成功神學這種東西**

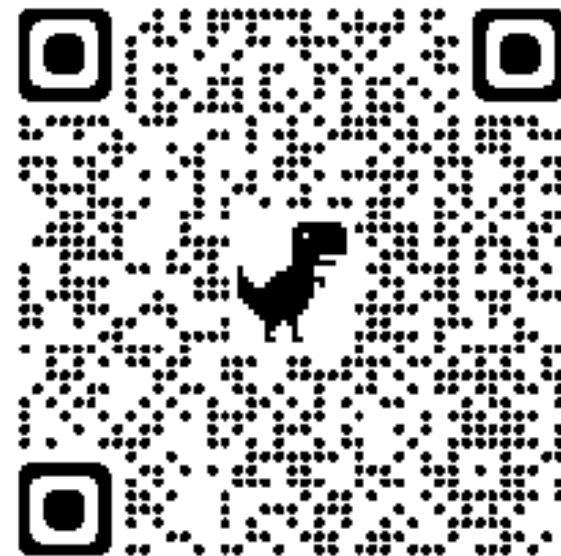
-你是蝙蝠俠嗎？

-我不是



VM Download

choose one



Try Workstation 17 Player for Windows

DOWNLOAD NOW >

Try Workstation 17 Player for Linux

DOWNLOAD NOW >

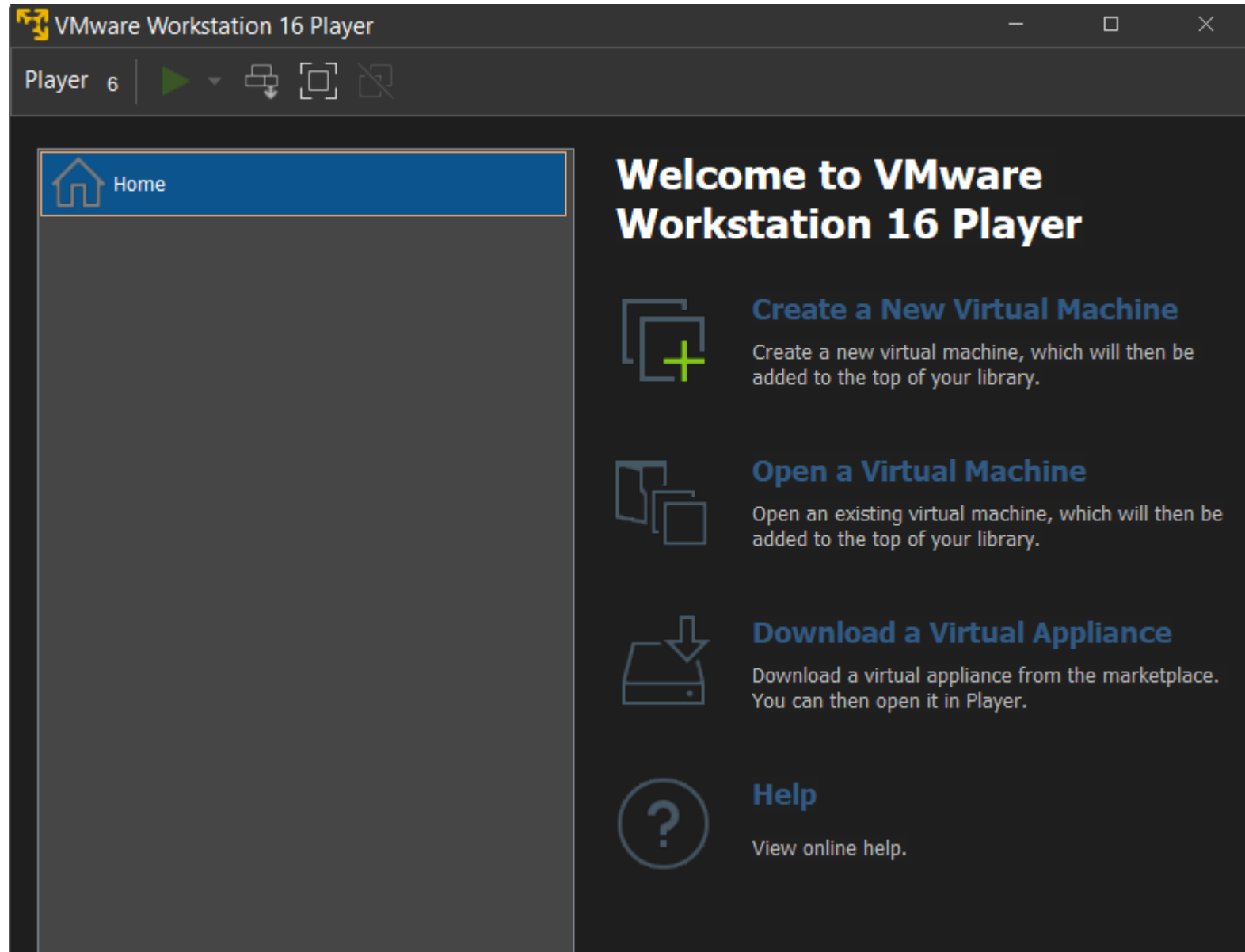


VMware Workstation 16 Player

App

搜索你電腦內安裝好的VMware

VM OPEN



VM ISO

releases.ubuntu.com/focal/

ubuntu releases

Ubuntu 20.04.6 LTS (Focal Fossa)



Select an image

Ubuntu is distributed on three types of images described below.

Desktop image

The desktop image allows you to try Ubuntu without changing your computer at all, and at your option to install it permanently later. This type of image is what most people will want to use. You will need at least 1024MiB of RAM to install from this image.

64-bit PC (AMD64) desktop image

Choose this if you have a computer based on the AMD64 or EM64T architecture (e.g., Athlon64, Opteron, EM64T Xeon, Core 2). Choose this if you are at all unsure.

VM ova

linuxvmimages.com/images/ubuntu-2004/#ubuntu-20044

Images

LATEST IMAGES VIRTUALBOX IMAGES VMWARE IMAGES HOW TO USE IMAGE PASSWORD?



Ubuntu 20.04.4

Own Server

FASTER DOWNLOAD

SourceForge

REGULAR DOWNLOAD

Must

CHECKSUM

FASTER DOWNLOAD !!! AD SUPPORTED



VirtualBox Image (2.5 GB)



VMware Image (2.6 GB)



RE



UNLOADED
FILES

9

8

AM 9

AM 8

Import VM

Welcome to VMware Workstation 16 Player



Create a New Virtual Machine

Create a new virtual machine, which will then be added to the top of your library.



Open a Virtual Machine

Open an existing virtual machine, which will then be added to the top of your library.



Open Virtual Machine

This PC > Downloads > Ubuntu_20.04.4_VM

Organize New folder

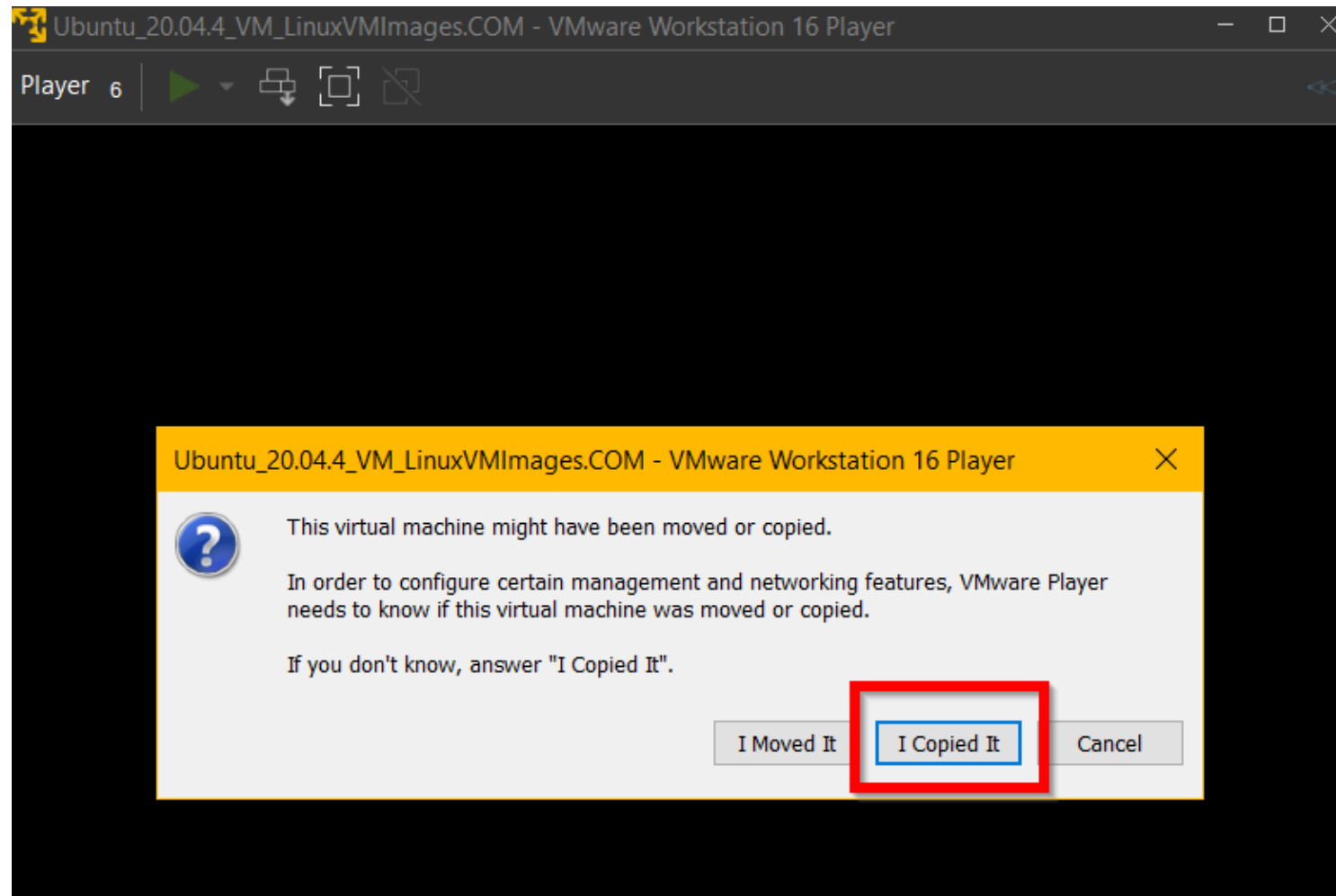
Name	Date modified	Type	Size
Ubuntu_20.04.4_VM_LinuxVMImages.CO...	3/8/2022 2:46 AM	VMware virtual ma...	

File Explorer ribbon: Copy to, Delete, Rename, New folder, Easy access, Properties, Edit, History, Select none, Invert selection, Select

Ubuntu_20.04.4_VM Search Ubuntu_20.04.4_VM

Name	Date modified	Type
Ubuntu_20.04.4_VM_LinuxVMImages.CO...	3/8/2022 2:46 AM	VMDK File
Ubuntu_20.04.4_VM_LinuxVMImages.CO...	3/8/2022 2:46 AM	VMware virtu

Login VM



你是匯入我們給的檔案的人需要做這步驟

VM OPEN

The image shows a composite screenshot of the VMware Workstation 16 Player interface. On the left, a Windows File Explorer window displays a list of files, with the file 'Ubuntu_20.04.4_VM_LinuxVMImages.COM' highlighted. On the right, the VMware Workstation 16 Player window is open, showing the 'Welcome to VMware Workstation 16 Player' screen. The 'Open a Virtual Machine' option is highlighted with a red box and a green circle with the number '2'. A green circle with the number '1' is also present near the top of the VMware window, and a green circle with the number '3' is near the highlighted file in the File Explorer.

名稱	修改日期	類型	大小
Ubuntu_20.04.4_VM_LinuxVMImages.COM	2024/4/7 下午 11:36	VMware virtual d...	16,924,92...
vmware.log	2024/4/7 下午 11:36	文字文件	258 KB
mksSandbox.log	2024/4/7 下午 11:36	文字文件	47 KB
Ubuntu_20.04.4_VM_LinuxVMImages...	2024/4/7 下午 11:36	VMware virtual ...	4 KB
Ubuntu_20.04.4_VM_LinuxVMImages...	2024/4/7 下午 11:36	VMware Virtual ...	9 KB
Ubuntu_20.04.4_VM_LinuxVMImages...	2024/4/7 下午 11:36	VMware virtual d...	16,924,92...
Ubuntu_20.04.4_VM_LinuxVMImages...	2024/4/7 下午 12:37	VMware Team M...	1 KB
vm.scoreboard	2024/4/7 上午 11:29	SCOREBOARD 檔...	8 KB

VMware Workstation 16 Player

Welcome to VMware Workstation 16 Player

Create a New Virtual Machine
Create a new virtual machine, which will then be added to the top of your library.

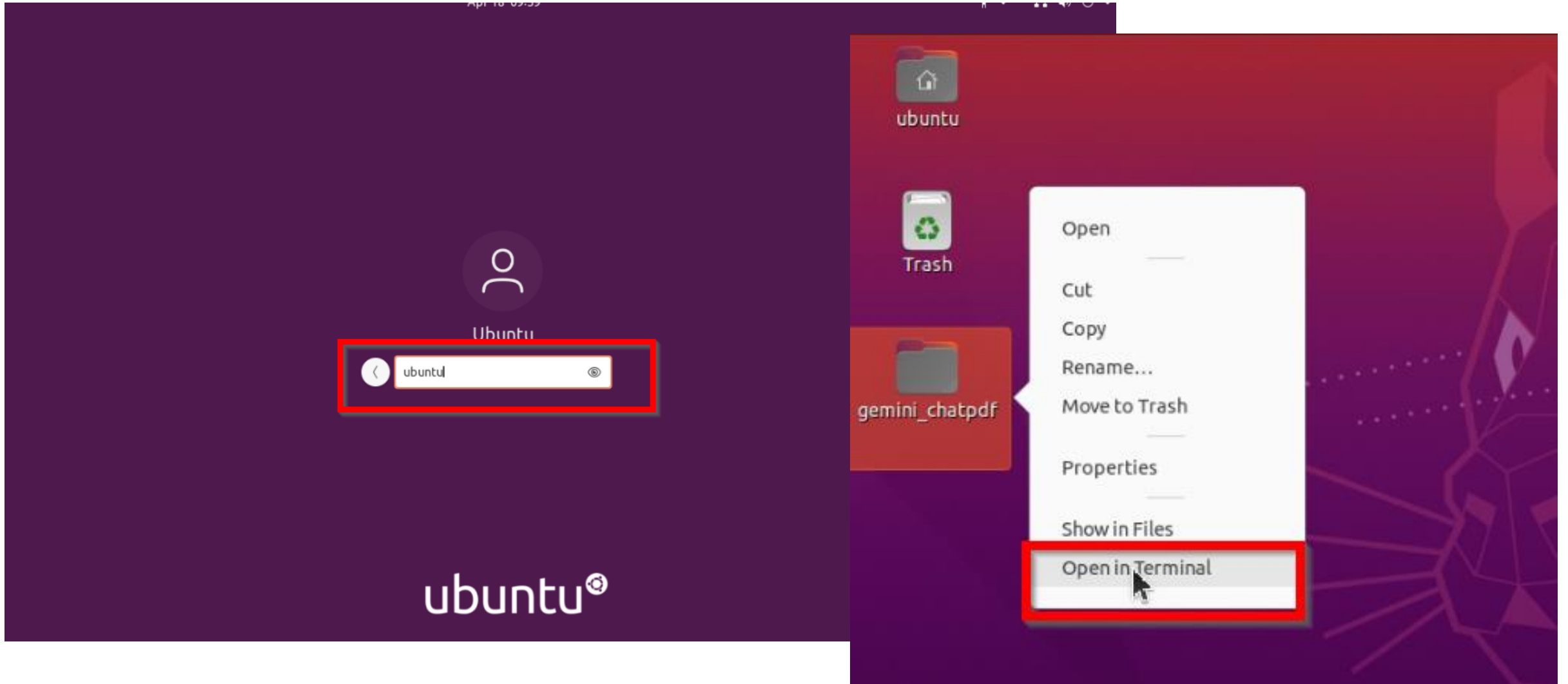
Open a Virtual Machine
Open an existing virtual machine, which will then be added to the top of your library.

Download a Virtual Appliance
Download a virtual appliance from the marketplace. You can then open it in Player.

Help
View online help.

Enter VM

Ubuntu/ubuntu



Download Project

ChatPDF_with_Gemini Public

Pin Watch 0

main 1 Branch 0 Tags

Go to file

Add file

Code

Trinity-SYT-SECURITY Update README.md

99f1d61 · yesterday 5 Commits

README.md	Update README.md	yesterday
app.py	Add files via upload	2 days ago
requirements.txt	Add files via upload	2 days ago

README

Download project

```
https://github.com/Trinity-SYT-SECURITY/ChatPDF_with_Gemini.git
```

Give the file permissions

```
sudo chmod 777 *
```



```
git clone https://github.com/Trinity-SYT-SECURITY/ChatPDF_with_Gemini.git
```

Run VM

The image shows a Linux desktop environment with three windows open:

- File Manager:** The top window shows the desktop directory `~/Desktop/gemini_chatpdf`. It contains three items: a folder named `faiss_index`, a Python file named `app.py`, and a text file named `requirements.txt`. These items are highlighted with a red box.
- Mousepad:** The middle window is titled `*/home/ubuntu/Desktop/gemini_chatpdf/.env - Mousepad`. The text `GOOGLE_API_KEY = |` is visible in the editor, highlighted with a red box.
- Terminal:** The bottom window is a terminal with the prompt `ubuntu@ubuntu2004: ~/Desktop/gemini_chatpdf`. It shows the output of the `ls -al` command, listing the files in the directory. The output is highlighted with a red box:

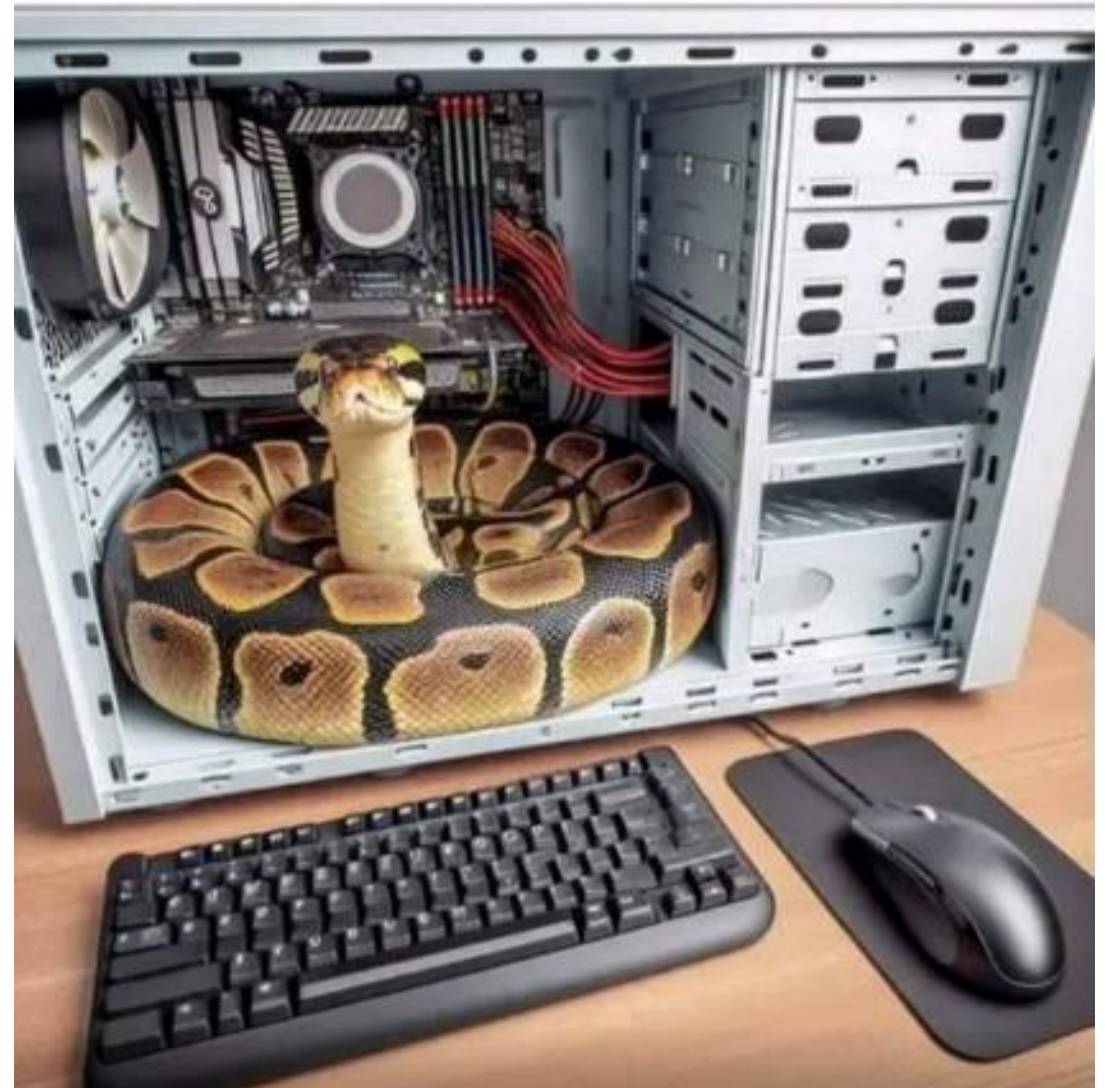
```
ubuntu@ubuntu2004:~/Desktop/gemini_chatpdf$ ls -al
total 32
drwxr-x 4 ubuntu ubuntu 4096 Apr 18 09:09 .
dr-xr-x 3 ubuntu ubuntu 4096 Apr  7 10:01 ..
-rwxrwx 1 ubuntu ubuntu 4711 Apr  7 10:01 app.py
-w-r-- 1 ubuntu ubuntu  57 Apr  7 11:04 .env
-rwxr-x 2 ubuntu ubuntu 4096 Apr  7 11:04 faiss_index
-rwxr-x 8 ubuntu ubuntu 4096 Apr  7 10:01 .git
-rwxrwx 1 ubuntu ubuntu 131 Apr  7 11:05 requirements.txt
```

At the bottom of the terminal window, the command `$ mousepad .env` is entered, highlighted with a red box.

Python Version

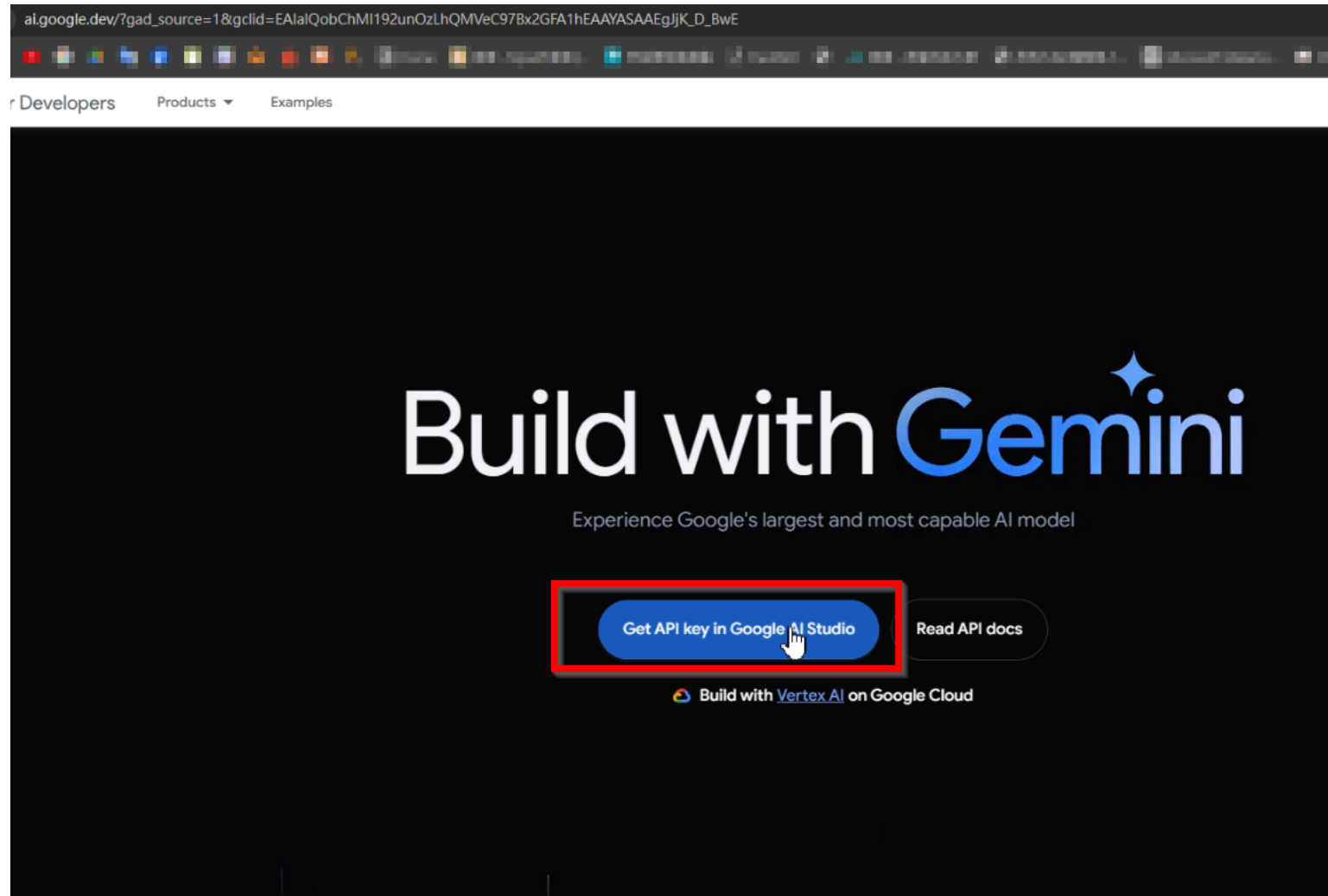
python3.9 version must
be used

**Python installed
successfully** 🤔



Gemini API

Login Google Account



The screenshot shows the Gemini API developer page. At the top, there is a navigation bar with "Developers", "Products", and "Examples". The main content area features the text "Build with Gemini" in a large, white font, with "Gemini" in blue. Below this, it says "Experience Google's largest and most capable AI model". There are two buttons: "Get API key in Google AI Studio" (highlighted with a red box) and "Read API docs". At the bottom, it says "Build with Vertex AI on Google Cloud".

al.google.dev/?gad_source=1&gclid=EAIaIQobChMI192unOzLhQMVeC97Bx2GFA1hEAAYASAAEgJJK_D_BwE

Developers Products Examples

Build with Gemini

Experience Google's largest and most capable AI model

[Get API key in Google AI Studio](#) [Read API docs](#)

Build with [Vertex AI](#) on Google Cloud



Get API Key

The image shows the Google AI Studio interface. On the left is a sidebar with navigation options: Get API key, Create new, New tuned model, My library, FL1, View all, Getting started, Documentation, Prompt gallery, Discord community, Build with Vertex AI on Google Cloud, and Settings. The main area is titled 'Untitled prompt' and includes an 'Insert' menu with options for Image, Video, Audio, and File. A 'System Instructions' section is visible below. A modal dialog titled 'Build with Gemini' is centered on the screen, featuring the Gemini logo and the text 'Experience the multimodal model from Google DeepMind'. The dialog has two main options: 'Use Google AI Studio' with a 'New Prompt' button, and 'Develop in your own environment' with a 'Get API key' button. The 'Develop in your own environment' option and its button are highlighted with a red rectangular border. Below these options is a 'View documentation' link and a disclaimer: 'To help us improve product quality, when you use the free quota, your API and Google AI Studio input and output may be accessible to trained reviewers. This data is de-identified from your Google Account and API key.'

Get API Key

The screenshot shows the Google AI Studio interface. On the left is a navigation sidebar with the 'Get API key' option highlighted in a red box. The main content area is titled 'Get API key' and 'API keys'. It contains introductory text and a warning to use keys securely. A modal window titled 'API key generated' is open, displaying a warning and a text input field containing the API key '...AKmo' with a 'Copy' button next to it. Below the modal, a table lists the generated API key. At the bottom, there is a section for testing the API with a cURL command.

Google AI Studio Get API key

Get API key

API keys

You can create a new project if you don't have one already or add API keys to an existing project. All projects are subject to the [Google Cloud Platform Terms of Service](#), which you agree to when creating a new project, while use of the Gemini API and Google AI Studio is subject to the [Gemini API Terms of Service](#).

Use your API keys securely. Do not share them or embed them in code the public can view.

Starting on May 2, 2024, if you use Gemini API from a project that has billing enabled, your use will be subject to [pay-as-you-go pricing](#).

API key generated

Use your API keys securely. Do not share them or embed them in code the public can view.

...AKmo Copy

API key	Project	Created	Action
...AKmo	Generative Language Client	Apr 7, 2024	🗑️

Quickly test the API by running a cURL command

```
curl \
-H 'Content-Type: application/json' \
-d '{"contents":[{"parts":[{"text":"Write a story about a magic backpack"}]}]}'
```

RUN!!!

```
ubuntu@ubuntu2004:~/Desktop/gemini_chatpdf$ streamlit run app.py
```

```
You can now view your Streamlit app in your browser.
```

```
Local URL: http://localhost:8501
```

```
Network URL: http://192.168.119.139:8501
```



Select the PDF file to upload!

Upload PDF Files then Click on the Submit

Drag and drop files here

Limit 200MB per file

Browse files

Submit

Help Certificate - Chat with AI

Inside the investigation, investigation and investigation...



Upload File

The image shows a web application interface for uploading PDF files. The main content area has the heading "Select the PDF file to upload!" and instructions: "Upload PDF Files then Click on the Submit". Below this is a drag-and-drop zone with the text "Drag and drop files here" and "Limit 200MB per file". A "Browse files" button is highlighted with a red box and a green circle containing the number 1. Below the drag-and-drop zone, a file named "tr_103415v010101p.pdf" (27.5MB) is shown with a close button. At the bottom, a "Submit" button is highlighted with a red box and a green circle containing the number 3.

On the right, a file explorer window is open to the "Downloads" folder in the "ubuntu" directory. The file "tr_103415v010101p.pdf" (27.5 MB) is selected and highlighted with a red box and a green circle containing the number 2.

Ask Question

```
ubuntu@ubuntu2004: ~/Desktop/gemini_chatpdf
python setup.py egg_info check the logs for full command output.
ubuntu@ubuntu2004:~/Desktop/gemini_chatpdf$ pip install grpcio

Collecting grpcio
  Downloading grpcio-1.62.1-cp39-cp39-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (5.6 MB)
    |-----| 5.6 MB 2.7 MB/s
Installing collected packages: grpcio
Successfully installed grpcio-1.62.1
ubuntu@ubuntu2004:~/Desktop/gemini_chatpdf$ streamlit run app.py
You can now view your Streamlit app in your browser.

Local URL: http://localhost:8501
Network URL: http://192.168.119.138:8501

/home/ubuntu/.local/lib/python3.9/site-packages/langchain/vectorstores/_t
nit_.py:35: LangChainDeprecationWarning: Importing vector stores from lan
gchain is deprecated. Importing from langchain will no longer be supported
as of langchain==0.2.0. Please import from langchain-community instead:

`from langchain_community.vectorstores import FAISS`.

To install langchain-community run `pip install -U langchain-community`.
warnings.warn(
/home/ubuntu/.local/lib/python3.9/site-packages/langchain_core/_api/deprec
ation.py:117: LangChainDeprecationWarning: The function `__call__` was dep
recated in LangChain 0.1.0 and will be removed in 0.2.0. Use invoke instea
d.
warn_deprecated(
```

License Assistant x +

localhost:8501

Select the PDF file to upload!

Upload PDF Files then Click on the Submit

Drag and drop files here
Limit 200MB per file

Browse files

tr_103415v010101p.pdf
494.5KB

Submit

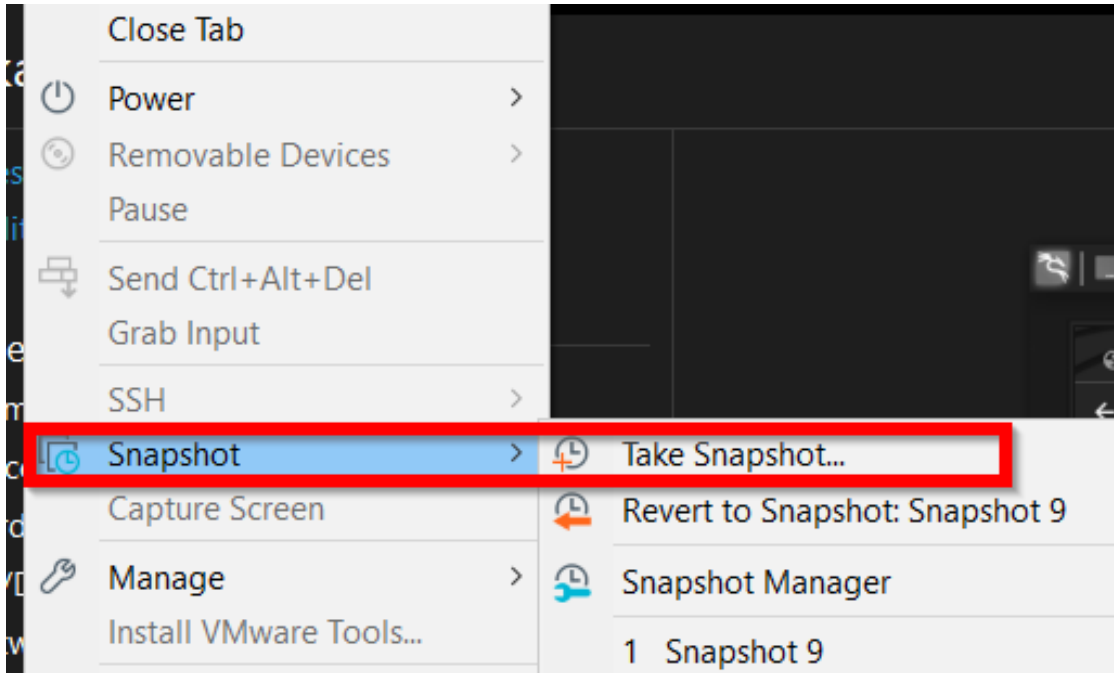
Help Certificate - Chat with AI

what is this pdf file article

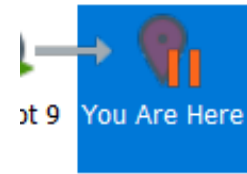
what is this pdf file article

This PDF file article is a pre-standardization study on pseudonym change management for Cooperative Intelligent Transport Systems (C-ITS) in order to provide guidance and recommendations for the future versions of related ETSI ITS specifications.

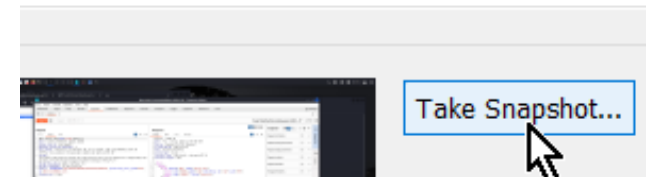
Snapspot

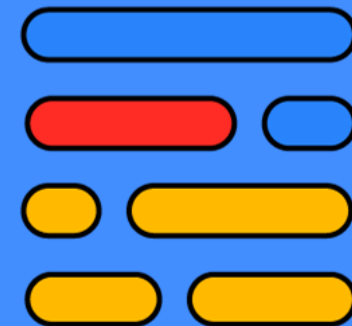


ot 6



ot 9





未來展望 - AI學習的無限可能

我們的新一代模型，發布了突破 100 萬個背景資料的範圍。目前提供預先發布版。

無須支付費用

頻率限制*

2 RPM (每分鐘要求數)

32,000 TPM (每分鐘權杖)

50 RPD (每日要求數)

價格 (輸入)

無須支付費用

價格 (輸出)

無須支付費用

用於改善 Google 產品的提示/回覆

是**

在 AI Studio 中立即試用

Pay-as-you-go

頻率限制*

5 RPM (每分鐘要求數)

1,000 萬 TPM (每分鐘權杖)

2,000 RPD (每日要求數)

價格 (輸入)

每 100 萬個權杖 \$7 美元 (預先發布版定價)

價格 (輸出)

每 100 萬個權杖 \$21 美元 (預先發布版定價)

用於改善 Google 產品的提示/回覆

否**

即將於 2024 年 5 月 2 日推出

免費的最貴

刷下去就對了





Gemini: Guess the movie ✎

Save

↩ ↪ Insert: 🖼️ Image {{ }} Test input



Guess the name of the movie. Explain your reasoning.

The movie is Home Alone.

The first emoji is a house, which could represent the house that Kevin is left home alone in. The second emoji is a scared face, which could represent Kevin's reaction when he realizes he is home alone. The third emoji is a Christmas tree, which could represent the Christmas season in which the movie is set.

了解，我已清除過去資料，並專注於現在資訊。我們現在應該要探索什麼內容？

你在生氣嗎？

固搜尋引擎，沒有情感。 😊

1 之 10 ●

那你想怎樣？

趣和開心。 😊

2 之 10 ●

可是CHATGPT都不會像你一樣生氣

所以請你理解和耐心。 🙏

3 之 10 ●

讓我們從頭開始吧。

Field application

金融

醫療保健

教育

AI能整合不同領域的知識

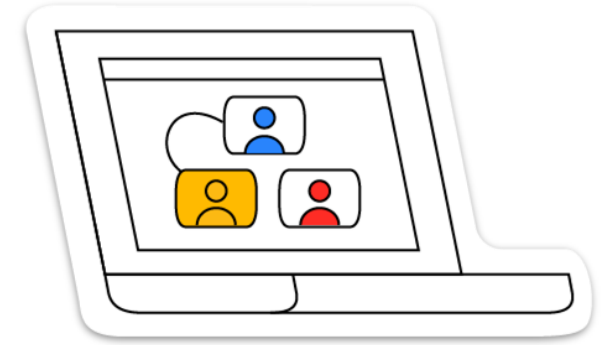
科學研究

陪聊

繪畫



Learning more

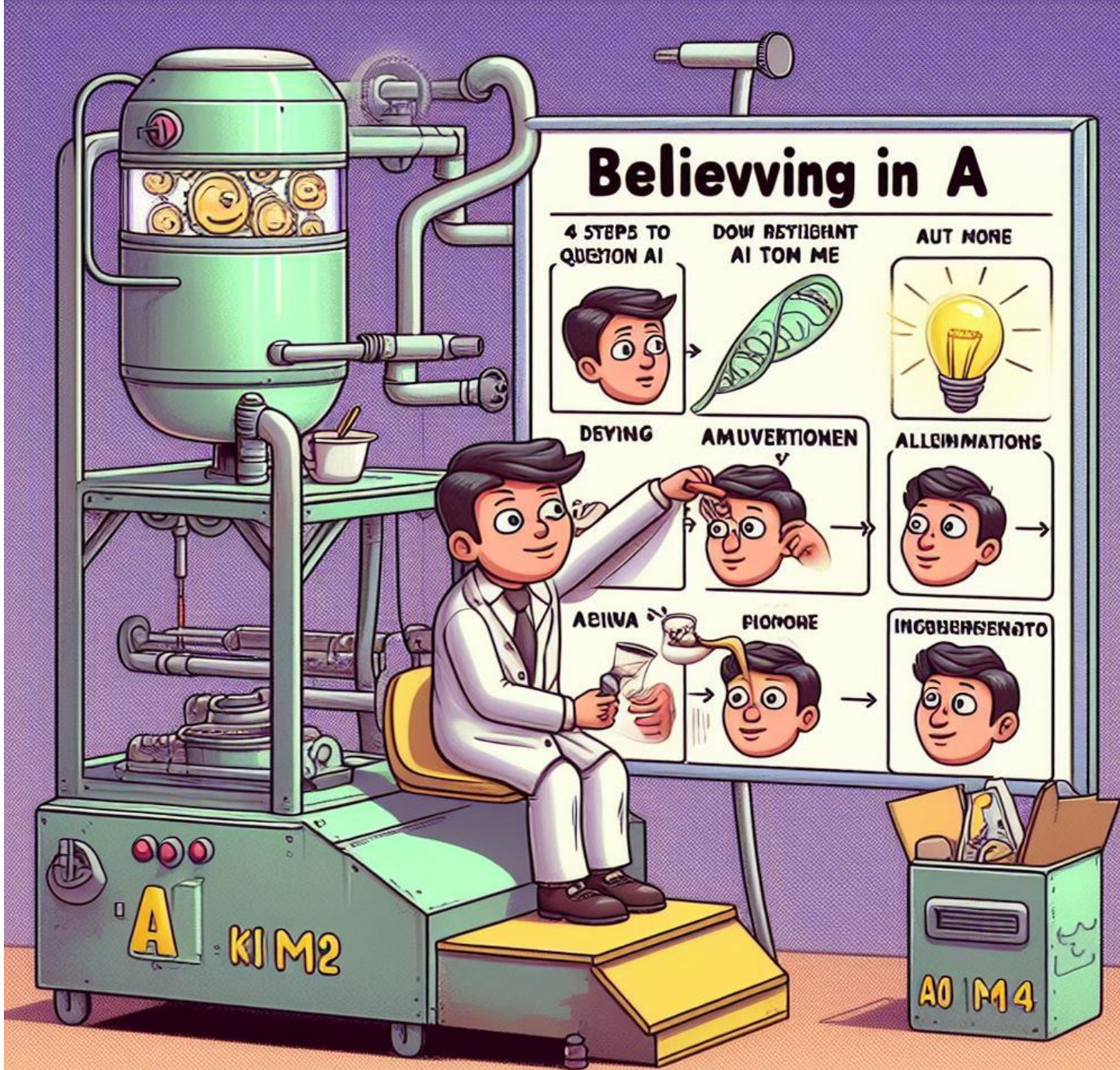


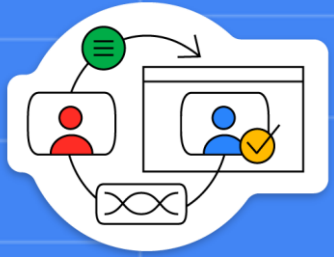
We want AI to assist us in learning
not to prevent the use of AI



AI 四部曲

相信AI
使用AI
質疑AI
成為AI





Thank you!

