

We'll be starting  
at 910!

Abstract geometric lines in the top-left corner of the slide, consisting of several overlapping, irregular polygons and lines that create a complex, layered effect.

# INSIGHTS TO OPENAI API

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ASRJC / BuildingBloCS

BuildingBloCS June Conference (Day 2)

# OVERVIEW

WHOAMI

Prompting Techniques

Introduction to CHATGPT API

Building the Code

Understanding the Code

Conclusion

# WHOAMI

- ASRJC / STEM
- ICT Champion



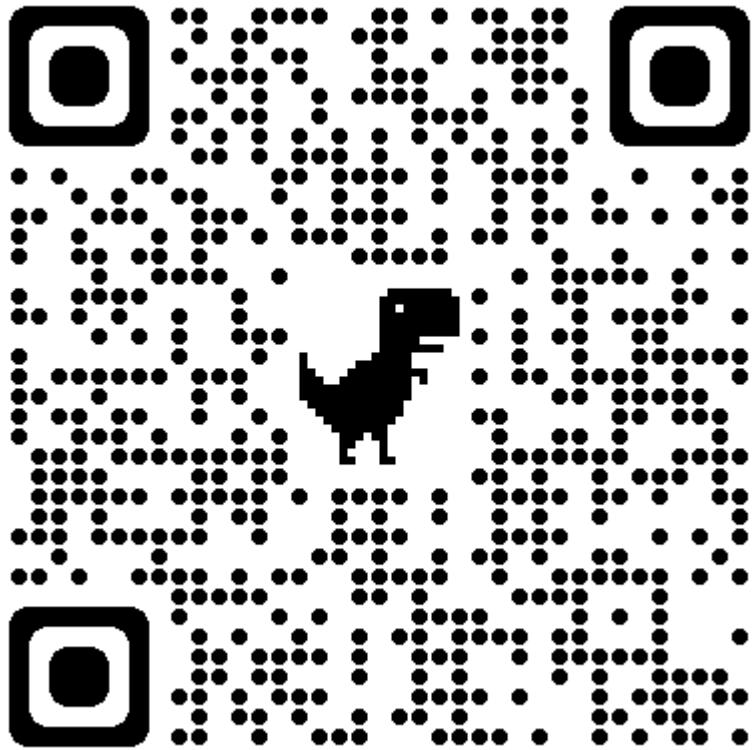
# PROMPT TECHNIQUES

(Do use this to help in your schoolwork!)

# GIVE SPECIFIC CONTEXT

- Can you summarise George Orwell's Animal Farm?
- Can you summarise George Orwell's Animal Farm relating to the theme of “Power”?

# GIVE PERSONA



<https://prompts.chat>

# GIVE PERSONA

- Explain to me how to identify a hyperbola and its vertical asymptote.
- Acting as a **H2 Math Teacher from Junior College**, explain to me how to identify a hyperbola and its asymptote.



# AVOID JARGON

- Can you give me some intel on DD & SS interacting in “A” level Econs Syllabus?
- Can you provide me a summary on Demand and Supply Curve interactions in “A” level Economics Syllabus?

# SINGLE QUESTION RULE

- What is a **neural network** and a **convolutional neural network**?
- What is a **neural network**?
- What is a **convolutional neural network**?

# CHAIN PROMPTING

The odd numbers in this group add up to an even number: 4, 8, 9, 15, 12, 2, 1.

A: Adding all the odd numbers (9, 15, 1) gives 25. The answer is False.

The odd numbers in this group add up to an even number: 17, 10, 19, 4, 8, 12, 24.

A: Adding all the odd numbers (17, 19) gives 36. The answer is True.

The odd numbers in this group add up to an even number: 16, 11, 14, 4, 8, 13, 24.

A: Adding all the odd numbers (11, 13) gives 24. The answer is True.

The odd numbers in this group add up to an even number: 17, 9, 10, 12, 13, 4, 2.

A: Adding all the odd numbers (17, 9, 13) gives 39. The answer is False.

The odd numbers in this group add up to an even number: 15, 32, 5, 13, 82, 7, 1.

A:



# PIP & IMPORT

- pip
- import

# PIP

- Python Package Manager
- Installs from Python Package Index (PyPI)
- Allows you to get projects from other developers to be used in Python



- Learn how to use CHATGPT API in our Python code!

## USAGE

- In your local terminal: `pip install (package name)`
  - CMD
  - Terminal
- In Google Colab: `!pip install (package name)`

For today's lesson (Colab):

`!pip install openai`

## RESULTS

```
!pip install openai
```

```
158.8/158.8 KB 9.7 MB/s eta 0:00:00  
Installing collected packages: multidict, frozenlist, async-timeout, yarl, aiosignal, aiohttp, openai  
Successfully installed aiohttp-3.8.4 aiosignal-1.3.1 async-timeout-4.0.2 frozenlist-1.3.3 multidict-6.0.4 openai-0.27.2 yarl-1.8.2
```

# IMPORT

- After Installing the project, we would need to import it to our Python Notebook using import
- `import (package name)`

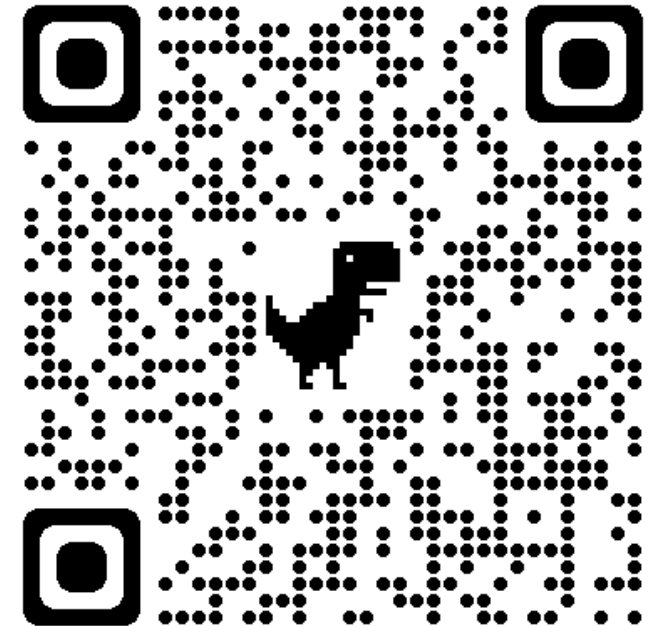
```
import openai
```



## API-KEY

- CHATGPT API is not free 😞
- Users are given \$18 free credits to use it 😊
- To Generate:  
<https://platform.openai.com/account/api-keys>

+ Create new secret key



## USING IN COLAB

- `openai.api_key = "(api key here)"`

```
openai.api_key = "sk-  
01pzaaaaaaaaaaaaaaaaaaaaaa  
aaaaaaaaaaaaaaaaaaaaaaaaaa  
aaaaa"
```

## 3.5-TURBO API

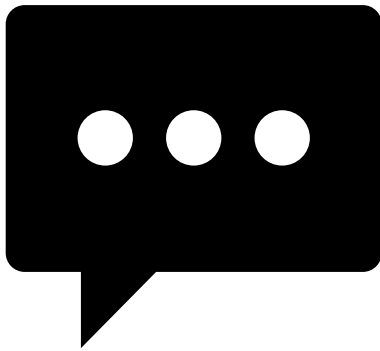
```
response = openai.ChatCompletion.create(  
    model = 'gpt-3.5-turbo',  
    messages = [{ 'role': 'system', 'content': 'You are a Singapore Teacher'},  
                 { 'role': 'user', 'content': 'Who is Singapore Prime Minister?'},  
                 { 'role': 'assistant', 'content': "Singapore Prime Minister is Lee Hsien Loong"},  
                 { 'role': 'user', 'content': 'When is his birthday?'}  
    ]  
)  
response
```



## SYSTEM

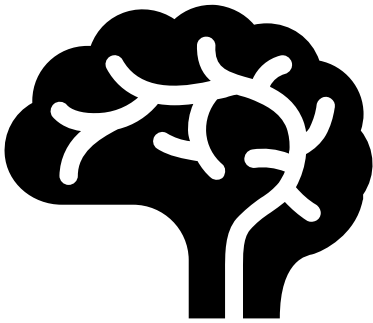
- “Persona”
- Controls CHATGPT Character
- Commonly used as the first “message” sent to CHATGPT

## USER



- Prompting
- The questions you would ask

## ASSISTANT



- Memory
- Gives ChatGPT the ability to remember

## TEMPERATURE

- Determines the **degree of randomness** or **creativity** in the model responses
- Ranges from 0 to 2
- Lower: Conservative Responses
- Higher: Creative Responses
- CHATGPT Defaults: 1

## PRESENCE PENALTY

- Penalises the model for generating certain words or phrases **too frequently**
- Prevent the model from **repeating** the **same words or phrases** too often (Make it more human)
- Ranges from -2 to 2
- Defaults to 0



## FREQUENCY PENALTY

- Penalises the model for generating “**rare words**”
- Generate more “natural” words
- Ranges from -2 to 2
- Defaults to 0

A series of white, thin, overlapping geometric lines on a black background, forming a complex, abstract shape on the left side of the slide.

# EXTENSION: LANGCHAIN

A series of white, overlapping geometric lines and polygons on a black background, located on the left side of the slide.

# THANKS