

THE NEW DXC TEAM

Presented by:

Ethan Yeo

Tan Xuan Le

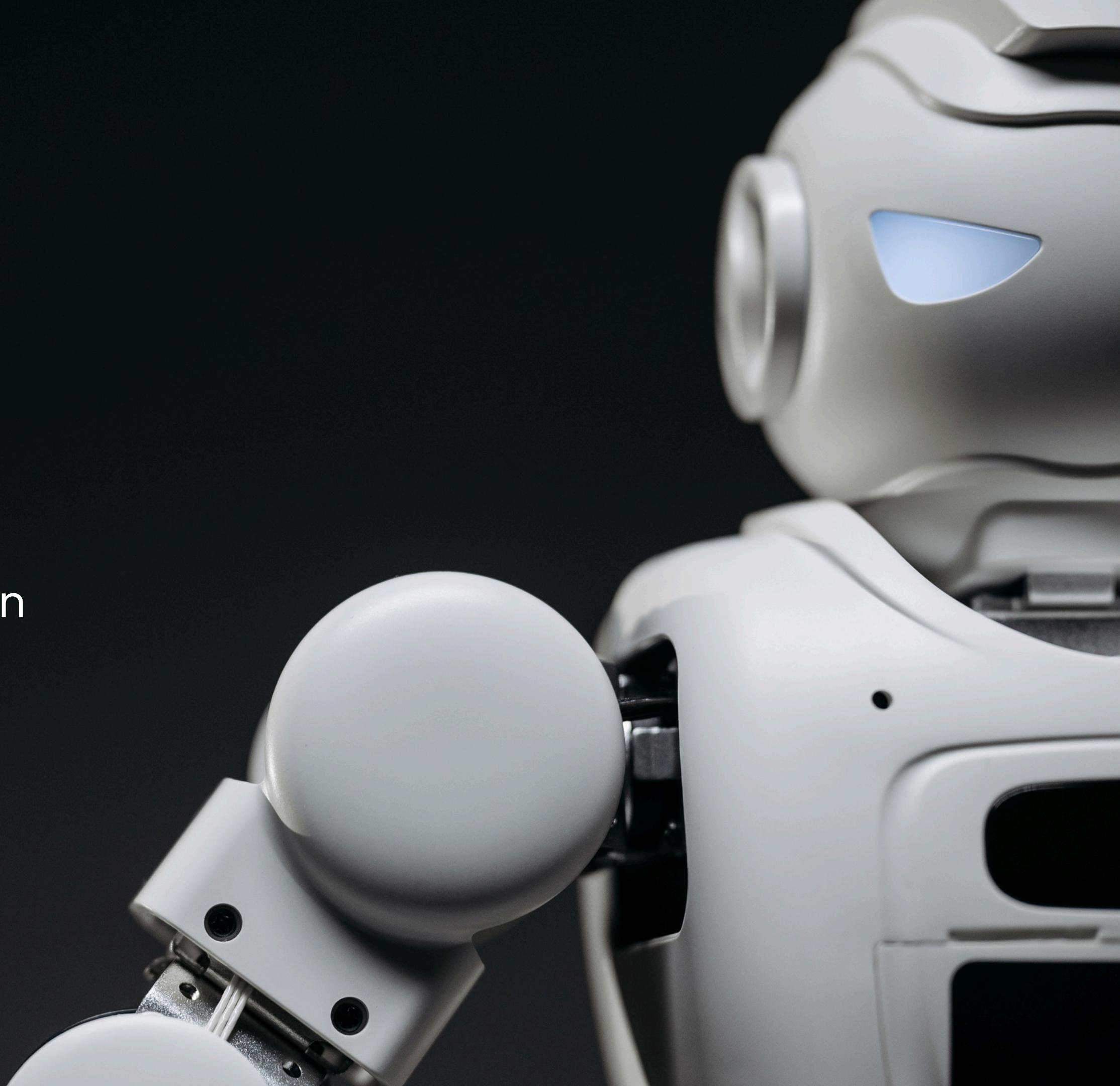
Don Seo

Eugene Low



TIMELINE

- 1) Introduction
- 2) What we have been working on
- 3) Future Plans



1. INTRODUCTION



Ethan

Xuan Le

Eugene

Don

Luke

ETHAN YEO

- Year 2 Undergraduate
- Nanyang Technological University
- Computer Engineering
- Loves to travel and a **BIG BIG FOODIE**
- Enjoys playing sports and going to the gym
- Hopes to improve programming skillset and pick up new technologies
- Contribute to the public service



TAN XUAN LE

- Year 3 Undergraduate
- National University of Singapore
- Data Science and Economics
- Likes to skate and play pool
- Hopes to gain a deeper understanding of machine learning and to hone programming skills



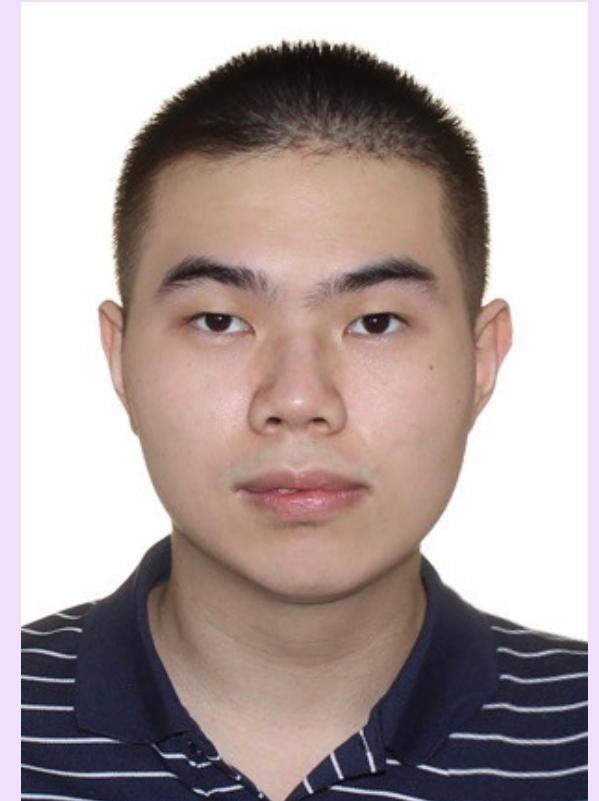
DON SEO

- Final Year Student
- Nanyang Technological University
- Computer Science
- Love traveling and trying out new activities!
- Explore working in a government agency and hope to learn more!



EUGENE LOW

- Year 3 Student
- Singapore Management University
- Information Systems (Double Major in Cloud and Cybersecurity)
- Likes to watch K-Dramas and play games
- Experience how it is like working in government and learn new skills as this will influence my full time career next year upon graduation.



2. WHAT WE HAVE BEEN WORKING ON

KEY CONCEPTS



**Image
Generation**

**Image
Analysis**

**ChatGPT
Models**

UI/UX

Translation

AI

IMAGE GENERATION

- Powered by DALL-E 3 Model from OpenAI
- Capable of generating images from text prompts
- Download images at the click of a button
- User-Friendly Interface

SIMPLE UI

DALL-E: Image Generation ?

How to use DALL-E?

Enter a description of an image you would like to generate. Click 'Ask DALL-E' and wait....

Note that DALL-E may not be able to produce the exact image you have in mind, but it will try its best to generate an image based on your description.

User Query:

Enter your query here:

Ask DALL-E

Download All Images

Reset

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User Query:

Singapore

Ask DALL-E

Download All Images

Reset

GENERATED IMAGES



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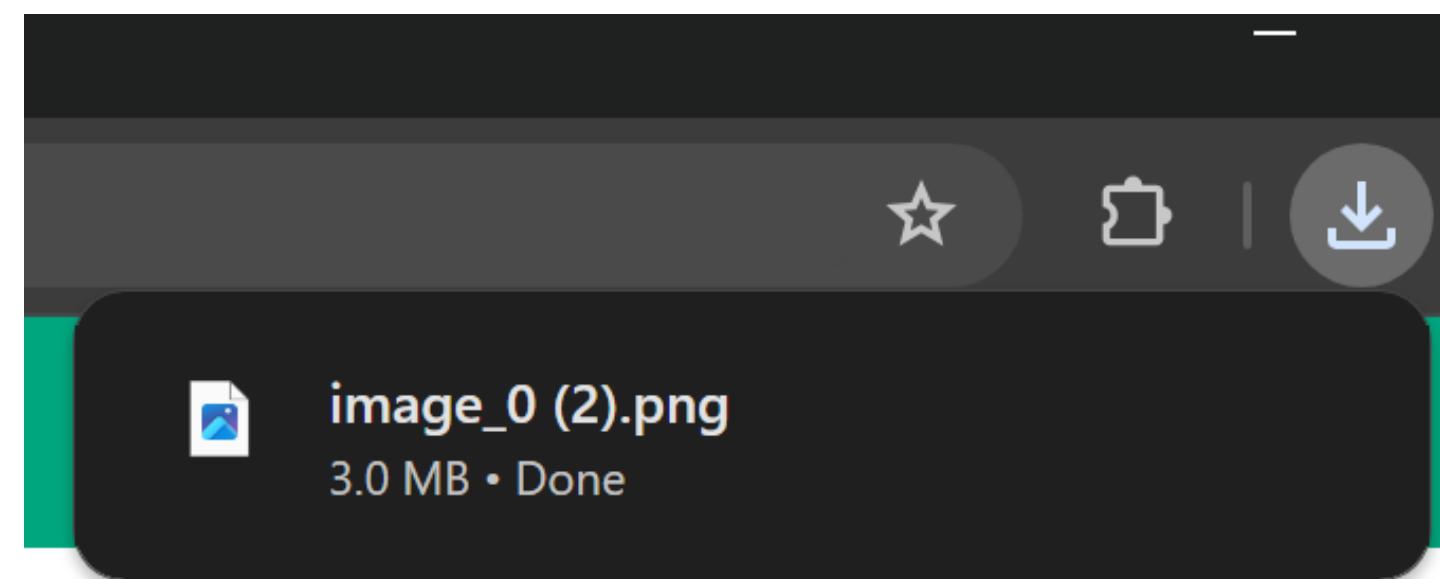
User Query:

Singapore

Ask DALL-E

Download All Images

Reset



**DOWNLOAD
IMAGES**

IMAGE BATCH PROCESSING

- Incorporates GPT-4 Vision model
- Builds on the previous implementation for single file query
- Processes the images in batch and provides downloaded responses
- Refined UI for better UX

GPT-VISION: Image (Batch) Query ?

Upload an image (JPG/JPEG/PNG) into the file input then enter your question into the text input. Click 'Ask GPT-Vision' and wait for a few moments while GPT-Vision generates a response for you.

[Single File Query](#)[Batch Files Query](#)

Upload Your Images:

Drag 'n' drop some images here, or click to select images
(Only .jpeg, .jpg, .png files are supported)

Accepted files

llama.png - 333712 bytes

northernlights.png - 321521 bytes

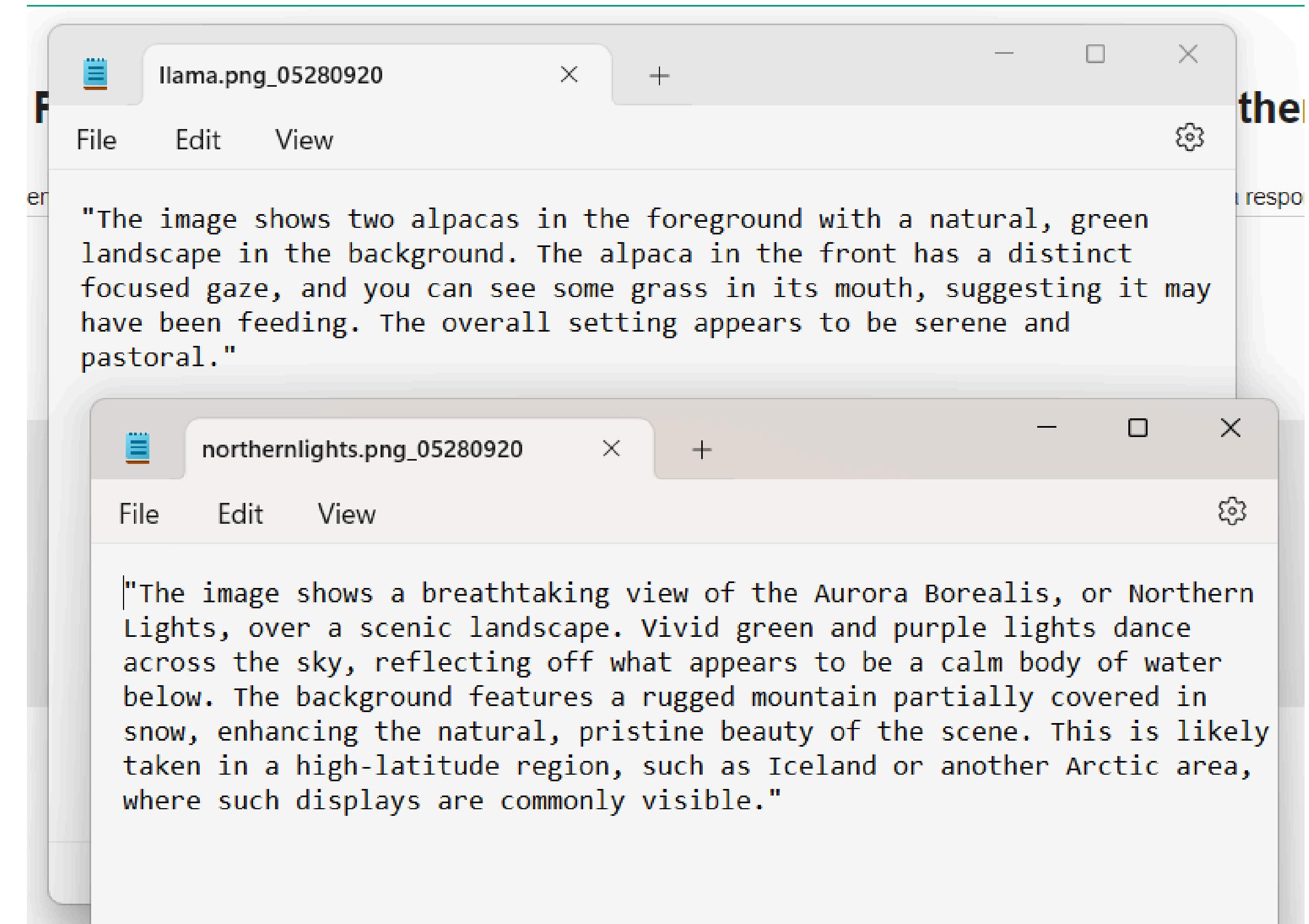
[Remove All](#)

User Query:

what do the images show?

[Ask GPT-Vision](#)

DOWNLOADED RESPONSES



TRANSLATION UI

- Incorporate Chatgpt to detect language automatically once text is entered in the input field.
- Chatgpt to translate given text.
- Able to input custom language to be translated to and from. (Dialects etc.)
- Replicated Google Translate UI to provide users with a sense of familiarity.

Translation UI

The screenshot shows a Translation UI interface with several key components and their associated annotations:

- Real-time language detection**: Points to the "Detect language" button and the language selection dropdown.
- Text Translation**: Points to the main translation input field.
- Swap to and from language**: Points to the language selection dropdown.
- Customisable input for languages (Available for both to and from language)**: Points to the "Input custom language" dropdown.
- Input text to be translated**: Points to the main text input field.
- Translated text easily copied to clipboard**: Points to the copy icon in the bottom right corner of the translation result area.
- Dropdown bar with common languages (Available for both to and from language)**: Points to the "Input custom language" dropdown itself.

Annotations are represented by purple arrows pointing from the text labels to the corresponding UI elements.

Input custom language dropdown content:

Arabic	Hindi	Tagalog
Bengali	Indonesian	Tamil
Chinese	Japanese	Thai
English	Korean	Vietnamese
Hebrew	Malay	Urdu

Translation UI

Text Translation

Korean Chinese Malay Tamil ▾

유시진 대위는 병원 응급실에서 강모연 박사를 처음 만나 첫눈에 사랑에 빠진다. 그들은 데이트를 시작하지만 직업과 삶에 대한 다른 관점으로 인해 관계가 잘 진행되지 않습니다.

군인인 시진은 생명을 지키기 위해 사람을 죽여야 할 수도 있고, 의사인 모연은 생명을 구하는 인물이다. 시진은 전쟁으로 폐허가 된 나라 우르크에서 평화유지 임무를 수행하기 위해 모연을 떠난다. 8개월 후, 모연은 우르크에서 의료팀을 이끌도록 배정받고 그곳에서 다시 만나게 되는데

↔ English ▾

Lieutenant Yoo Si-jin falls in love at first sight with Dr. Kang Mo-yeon when he first meets her in the hospital emergency room. They start dating, but their relationship does not go well due to different perspectives on their professions and lives.

As a soldier, Si-jin may have to kill to protect lives, while Mo-yeon is someone who saves lives as a doctor. Si-jin leaves Mo-yeon to perform peacekeeping missions in the war-torn country of Urk. Eight months later, Mo-yeon is assigned to lead a medical team in Urk and they meet again.

Clear



Translate

3. FUTURE PLANS

JARVIS

Chatbot

Multimodal Situation Awareness

Real Time Alerts

Multi-lingual Support



USE OF LLMS ON A LOCAL MACHINE

- Utilizing technologies such as LMStudio, React
- Create a web application to utilize LLMS offline
- Tackles the issue of data-security
- Necessary for security agencies

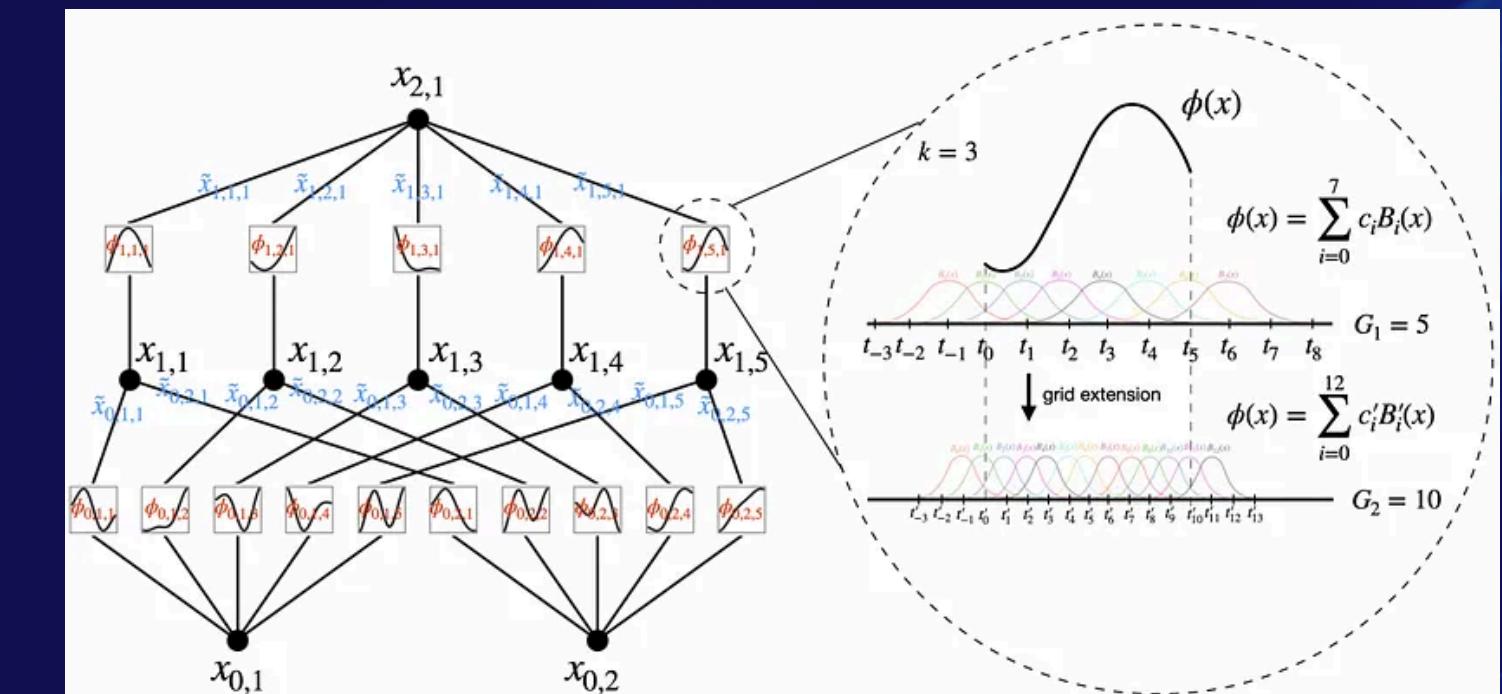


POTENTIAL APPLICATION (LMSTUDIO)

- Secure Document Analysis and Summarization
- Classified Information Retrieval
- Confidential Report Generation
- Internal Communication and Collaboration (Chatbots)
- Threat Intelligence and Analysis

KOLMOGOROV-ARNOLD NETWORK (KAN)

- A new type of neural network that offers a few key advantages over traditional deep learning models used in Large Language Models (LLMs)
- Inspired by the Kolmogorov-Arnold representation theorem
- Key difference:
 - Replaces linear weights with spline-based functions
 - Learnable activation functions on the edges connecting the nodes



BENEFITS & POTENTIAL

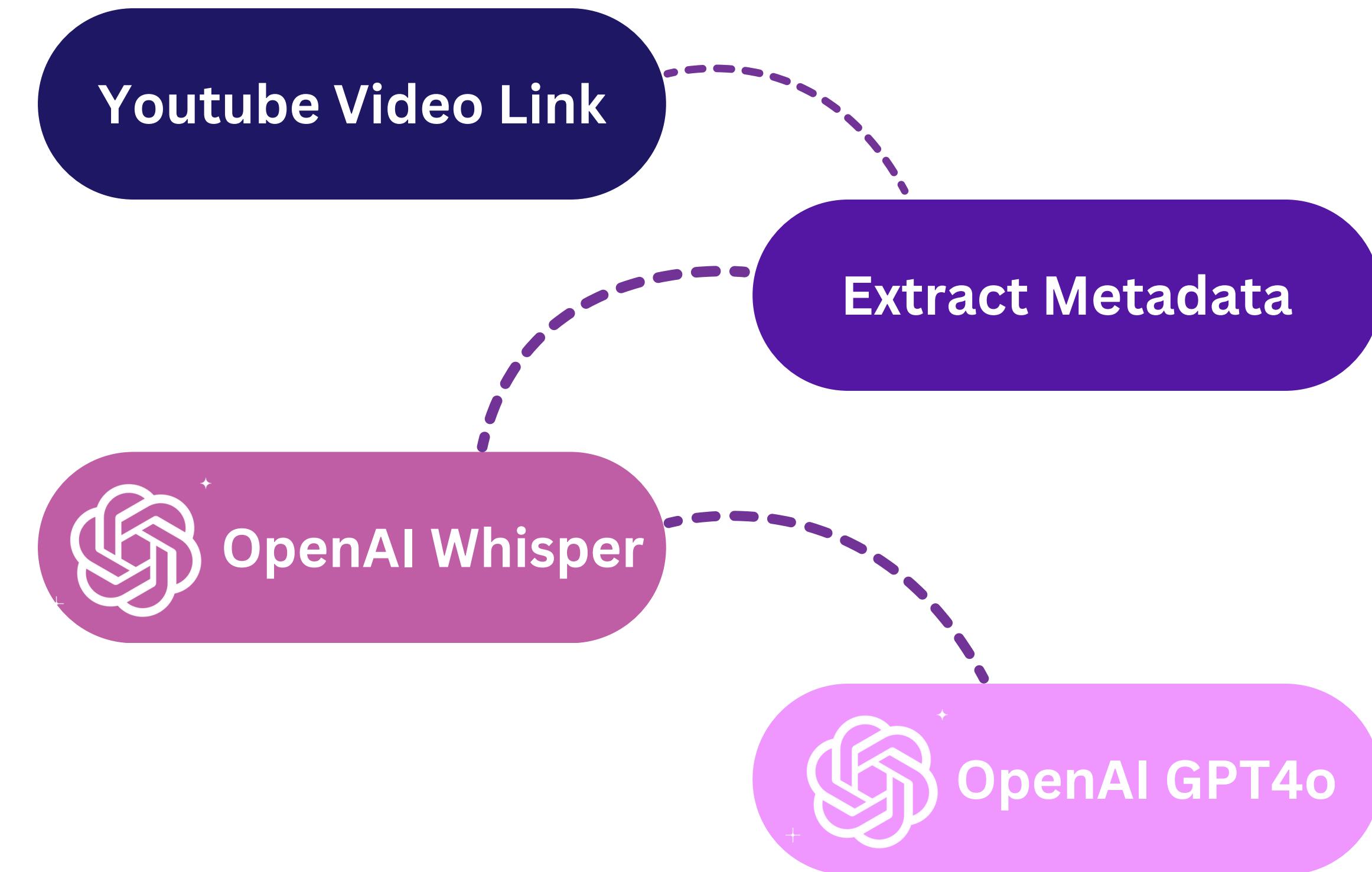
- Advantages of KAN:
 - Faster Learners
 - Open Book Learning
 - Higher Efficiency & Accuracy
- Enhances accuracy and interpretability of networks with smaller network sizes across various tasks (data fitting, solving partial differential equations)
- Provides new direction for GenAI and LLM development, could possibly revolutionize the way LLMs learn and interact

SOCIAL MEDIA SENTIMENT ANALYSIS

- Utilizing ChatGPT Whisper for transcribing speech from YouTube videos into text for sentiment analysis purposes.
- Extraction of video metadata for analysis.
- Exploring the capabilities of ChatGPT 4o for potential video analysis.



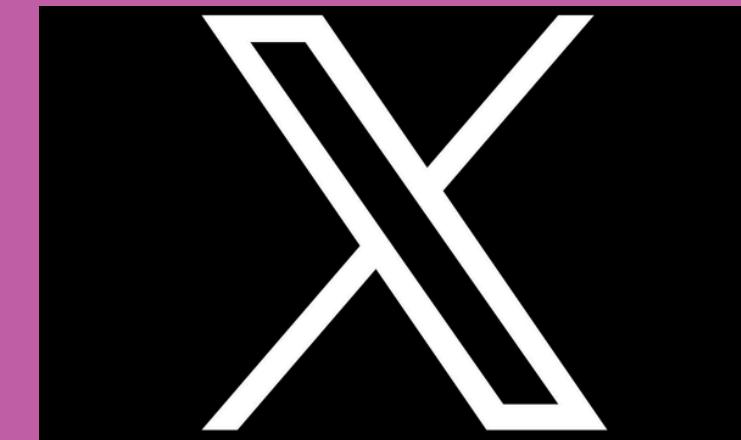
POTENTIAL USER FLOWW



POTENTIAL SOCIAL NETWORK SITES



Youtube



X



Instagram



Reddit



Facebook



Darkweb

THANK YOU

