LINGUAVOX

LINGUistic **A**udio-**V**isual **O**verlap e**X**perience

DOCUART

DOCUment **ART**ification

Team II Hackathoners

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DOCUART

https://youtu.be/pyusrSciwv8

MINDEF/SAF Use Cases for DOCUART

Pain Points:

- Wordy documents are often dry and time-consuming to read
- Preparation of graphical materials can be time consuming

Capabilities: **A Document to Style-Controlled Art Generator**

- **Generate user-controlled styled graphical art (i.e. comics and more)**
- **Convey information of documents through art for greater palatability**

Use Cases:

- **Advertising and Marketing**
- **Communications**

Steps to use DOCUART

1. **Select and upload a PDF document**
2. **Select number of images to be generated**
3. **Select style of images to be generated**
4. **Click on "submit"**
5. **View or download images. Each images will take about 30 seconds to be generated**

Step 1: Select and upload PDF document

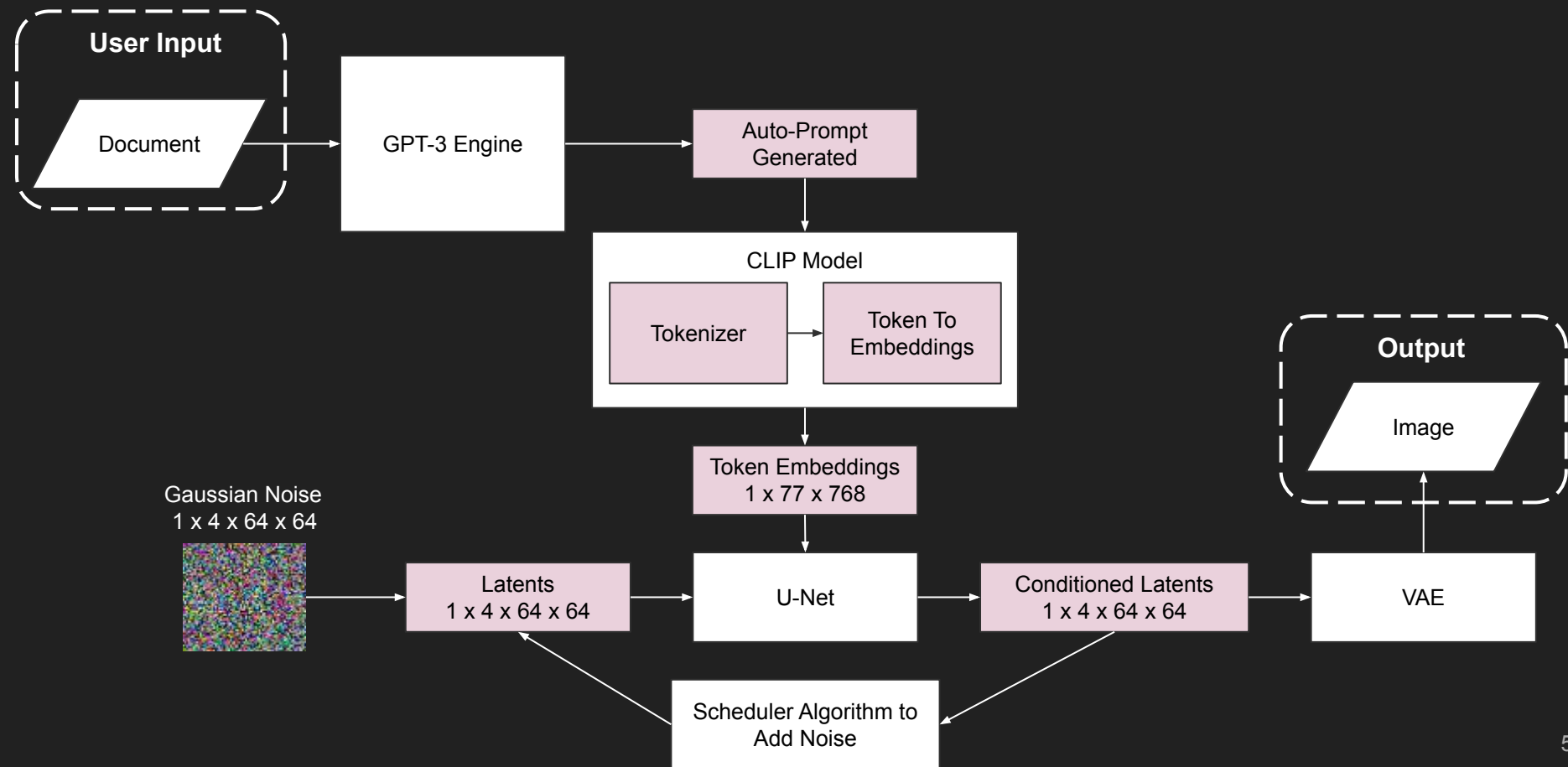Step 2: Select number of images to be generated

Step 3: Select style of images to be generated

Step 4: Click on "Submit"

Step 5: View or download images

DOCUART

Please do not upload classified or sensitive information. Users are responsible for the use of outputs

Upload your PDF file here

Number_of_Images   2

Artistic_Style

Cartoon

Clear   Submit

output 0

Use Cartoon style. Generate an image of a Singaporean soldier in a modern military setting.

output 1

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DOCUART: Multi-Modal State-of-the-Art AI Architecture

Comparison of Prompts Generated by Different Methods

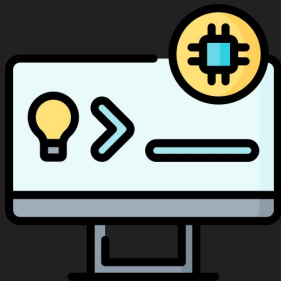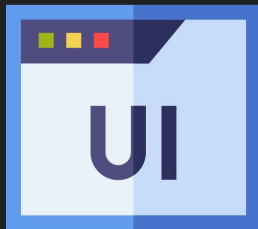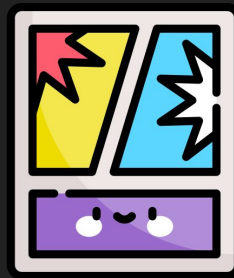| Ranking	Methods	Generated Prompts
1	Extractive Summary (TFIDF + Cosine Similarity)	["SINGAPORE - MILITARY This article describes Singapore's military and the military relationships it has formed with other nations.", 'Military Capability The Singapore Armed Forces (SAF) is the military component of the Ministry of Defence (MINDEF) of the Republic of Singapore.',
2	GPT-3 (davinci)	'Generate an image of a Singapore Armed Forces (SAF) soldier in uniform.', 'Generate an image of a Singaporean defence minister.',
3	Abstractive Summary (PEGASUS)	'Create exactly 5 prompts for an image generation AI based on the following text listed in 5 bullet points Do not say anything else at all SINGAPORE MILITARY This article describes Singapore s military and the military relationships it has formed with other nations Military Capability The Singapore Armed Forces SAF is the military component of the Ministry of Defence MINDEF of the Republic of Singapore
4	Dolly	To locate the source of a fire, first check the following: 1. Building codes and rules: make sure that the structure has an electrical 2. Weather: check for lightning and unseasonably warm or cold weather.
5	GPT-2	"Singapore is one of the world's most densely populated countries, with a population of more than four million people.", 'The Singapore Armed Forces (SAF) is the military component of the Ministry of Defence (MIN) of the Republic of Singapore.'

DOCUART Demo

View the demo here: https://youtu.be/pyusrSciwv8

Future Works for DOCUART

Improve prompt generation to feed into Stable Diffusion model

Improve the UI for the web application

Explore synchronising look and feel for multiple image generation for chaining into comic strips