

AI ART MODIFICATION

OUR TEAM



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OVERVIEW

This project is a web-based interactive AI art show application. It leverages Stability AI's API for generating and editing images based on text or audio inputs. The app features an intuitive user interface for creating and modifying artwork, allowing users to experiment with various image editing tasks like background removal, recoloring, and outpainting.

GitHub Repo:

https://github.com/LucasHyun/interactive_AI_415_

FEATURES

- **Real-Time Audio Input:** Generate image prompts using voice commands.
- **Image Generation:** Create images based on descriptive text prompts.
- **Dynamic User Interface:** View and modify images directly within the web application.



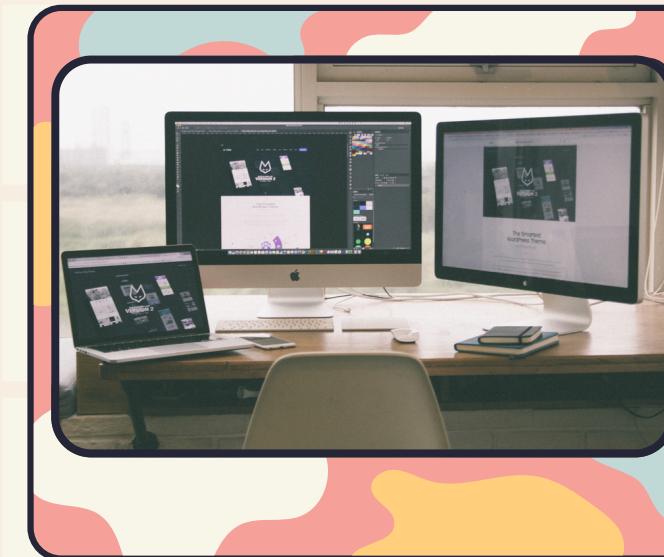
- **Image Modification:**
 1. Remove background from images.
 2. Recolor images based on a given prompt.
 3. Search and replace objects in images.
 4. Outpaint images by expanding boundaries in specific directions.



TECHNOLOGIES USED



- **Backend:**
 - Flask (Python) for handling API requests.
 - Stability AI API for image generation and editing.
 - dotenv for environment variable management.
 - requests for handling HTTP requests.
- **Frontend:**
 - HTML, CSS, and JavaScript for the user interface.
 - Web Speech API for real-time audio input and processing.
- **Environment:**
 - Python 3.9+
 - Stability AI API Key for accessing the Stable Diffusion API.



SETUP INSTRUCTIONS

1

Python 3.9 or higher.

2

Stability AI API key (obtain
from [Stability AI](#)).

3

Install required Python packages:
`pip install flask python-dotenv requests`

INSTALLATION STEPS

1. Clone the Repository:

```
git clone https://github.com/LucasHyun/interactive_AI_415_.git  
cd interactive-ai-art-show
```



2. Install Dependencies: Install all necessary Python libraries by running:

```
pip install -r requirements.txt
```



3. Set Up Environment Variables: Create a .env file in the root directory and add your Stability AI API Key:

```
STABLE_DIFFUSION_API_KEY=your_stable_diffusion_api_key
```

4. Run the Application:

```
python app.py
```



5. Access the Application: Open your browser and navigate to:

```
http://127.0.0.1:5000/
```



THANK
YOU

