

## J.A.R.V.I.S Project

### Overview

This project utilizes various Python libraries and frameworks to create a generative AI application. It includes Kivy for building the GUI, Hugging Face's Transformers for natural language processing, and Flask for web integration.

### Technologies Used

- Python: Programming language used for development.
- Kivy: A library for developing multitouch applications. It provides a rich user interface.
- Transformers: A library by Hugging Face that provides pre-trained models for various NLP tasks.
- Flask: A lightweight WSGI web application framework in Python.
- BeautifulSoup: A library for web scraping purposes to pull the data out of HTML and XML files.
- Pandas: A data manipulation and analysis library.
- Matplotlib: A plotting library for creating static, animated, and interactive visualizations in Python.
- OpenAI API: For accessing OpenAI's models for various tasks.

### Setting Up the Environment

#### 1. Create a Virtual Environment:

```
bash
python -m venv myenv
```

#### 2. Activate the Environment:

- On Windows:

```
bash
myenv\Scripts\activate
```

- On macOS/Linux:

```
bash
source myenv/bin/activate
```

#### 3. Install Required Packages:

```
bash
pip install kivy pandas beautifulsoup4 matplotlib flask openai
transformers tf-keras
```

### Running the Application

- To run the main application, use:

```
bash
python main3.py
```

#### Troubleshooting

- If you encounter issues with package versions, make sure to check for compatibility, especially with Keras and TensorFlow.
- For any library that isn't installed, you can add it using pip, e.g.:

```
bash
pip install package-name
```

#### Additional Notes

- Consider enabling Windows Developer Mode for better compatibility with symlinks used in caching (for Hugging Face).
- If any models require TensorFlow or PyTorch, make sure to install the required version:

```
bash
pip install tensorflow
or
pip install torch
```

#### Acknowledgements

- Special thanks to the A2SV community for their support in Data Structures and Algorithms.
- Appreciation for resources from Hugging Face and Kivy documentation.