TeamEpic

A21.ai Assignment

AI based text summarization web application

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AI based text summarization web application

This is an AI-based web application that summarizes the text entered by the user either manually or through a PDF file. It is built using the python web framework: Flask.

Functionality

The application provides two options for users to input text data for summarization:

A. Manual Text Entry:

Users can manually enter text in the provided text area. The AI model will then generate a concise summary based on the input text. For optimal results, it is recommended that the entered text contains between 30 to 1000 words.

B. PDF File Upload:

Alternatively, users can upload a PDF file containing textual data. The model will process the content and generate a summary. Similar to manual entry, it is advisable to have a PDF file with a word count ranging from 30 to 1000 for optimal summarization.

Additionally, the application has the following functionalities:

User Registration:

Users can register on the website by providing a unique username and password.

User Login:

After registration, users can log in using their registered username and password.

Summarization History:

The summarization history for each registered user is stored and conveniently displayed on the left side of the page, allowing users to review their interaction history.

Database to store user data

The application utilizes an SQLite database with two tables:

A. User Table:

Stores user data, including unique user IDs, usernames, and passwords.

B. Summarization History Table:

Records the interaction history of users, preserving their summarization activities.

Link to the github repository:

https://github.com/Sinjini2508/A21.ai-Assignment

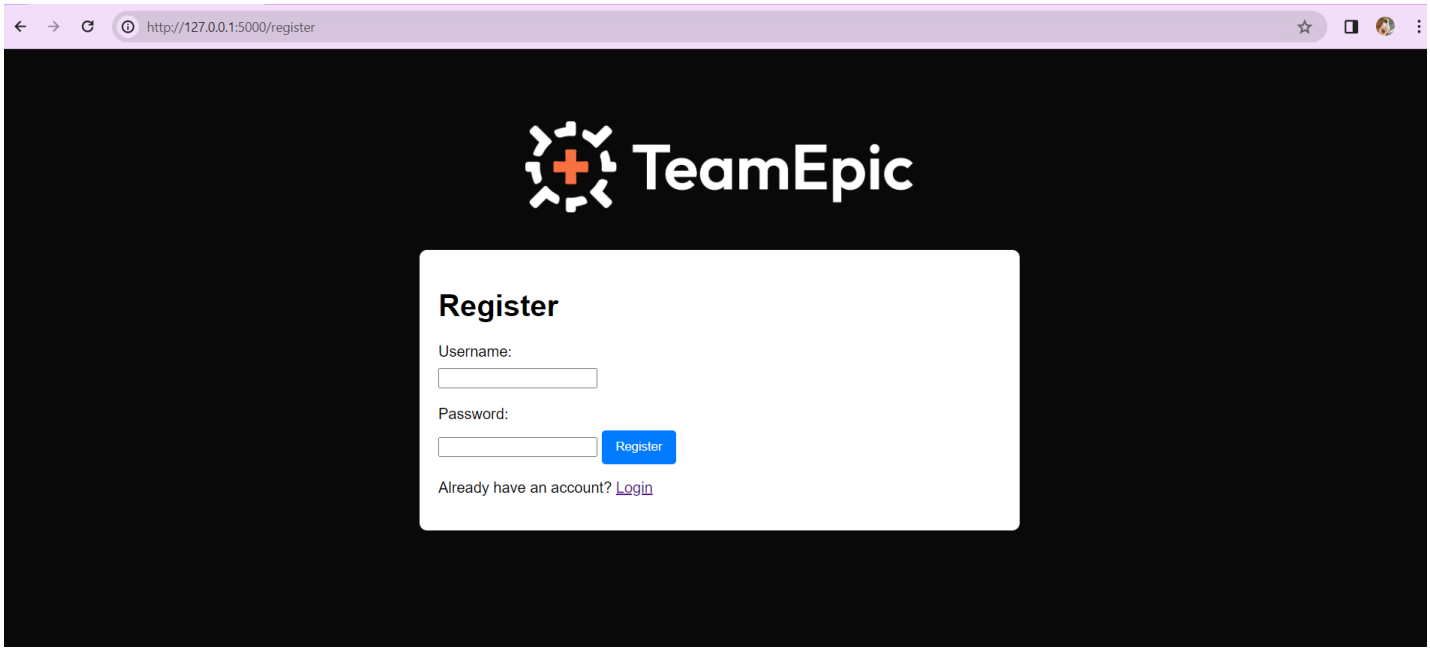
Steps to run the application locally.

1. Clone the repository: git clone https://github.com/Sinjini2508/A21.ai-Assignment
2. Navigate to the project directory
3. Run the app.py file
4. Access the application in your web browser at http://127.0.0.1:5000
5. Register a new account on the registration page or login using the existing account:
   Username: user1
   Password: passwordfortesting

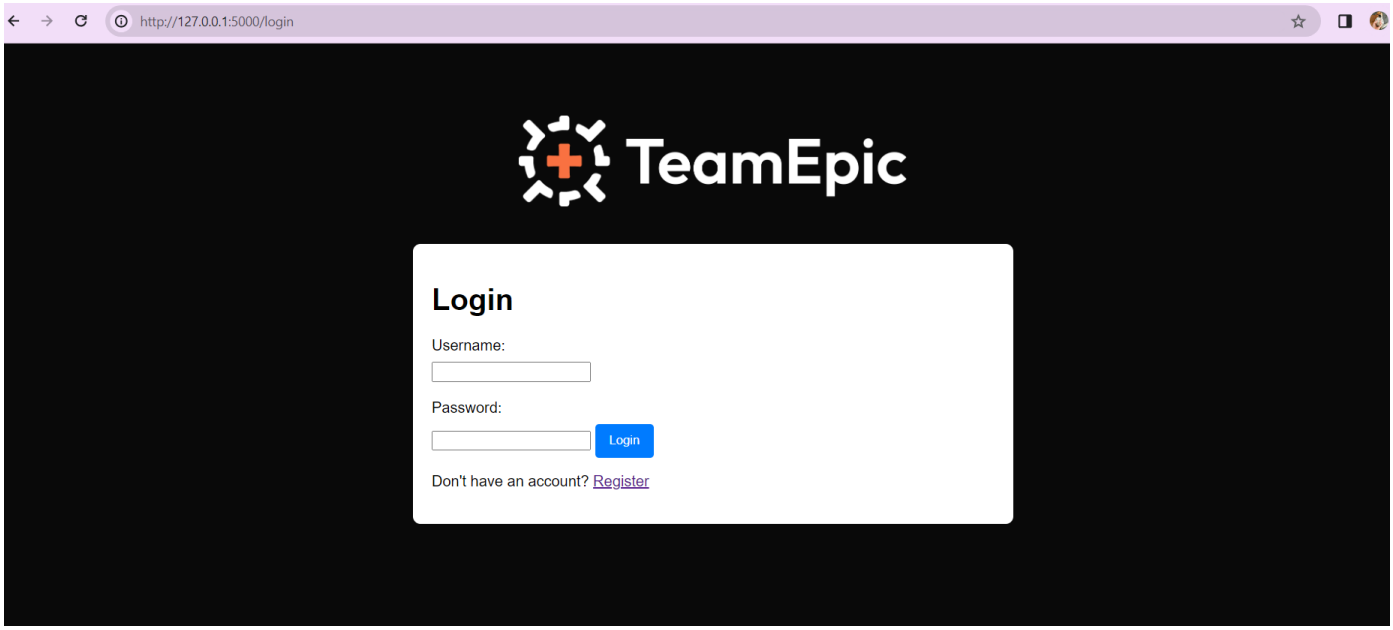
Demo Video: A demo video without a voiceover is included in the zipped folder.

Screenshots from the application

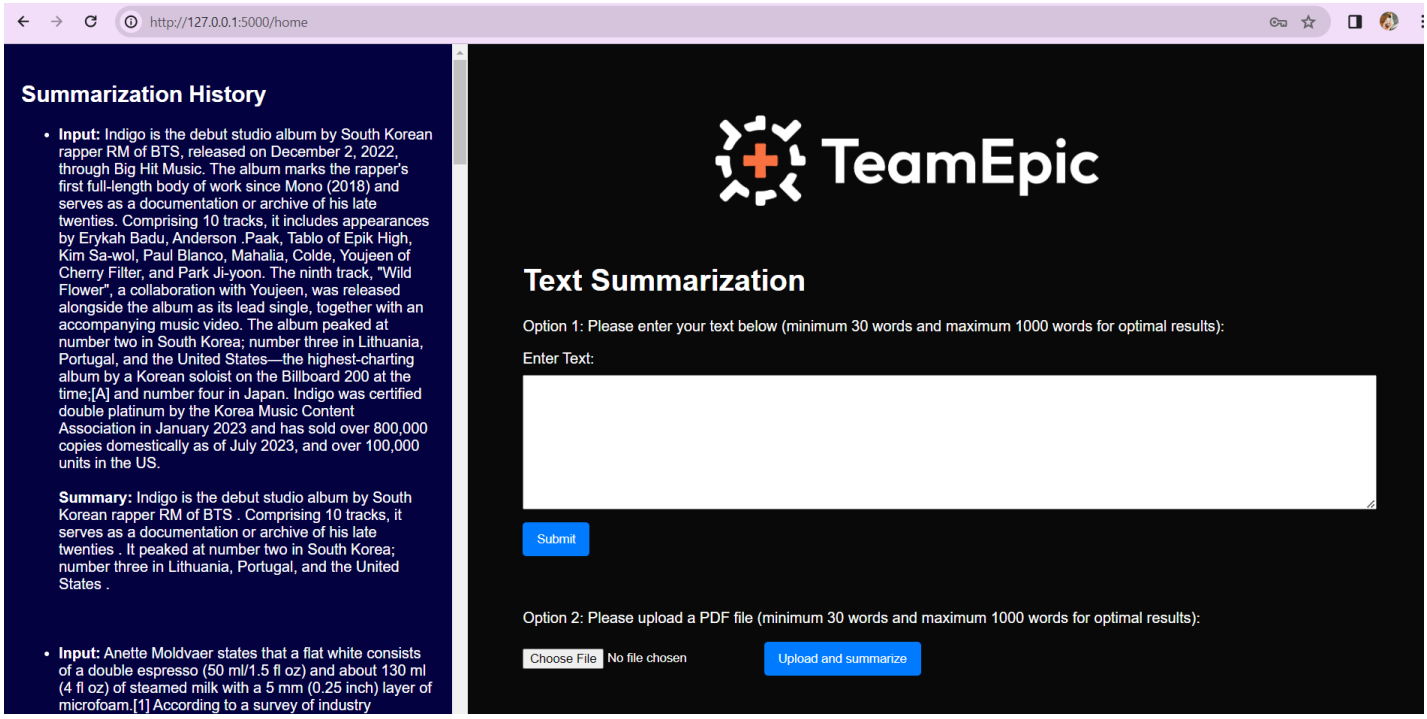
Registration page



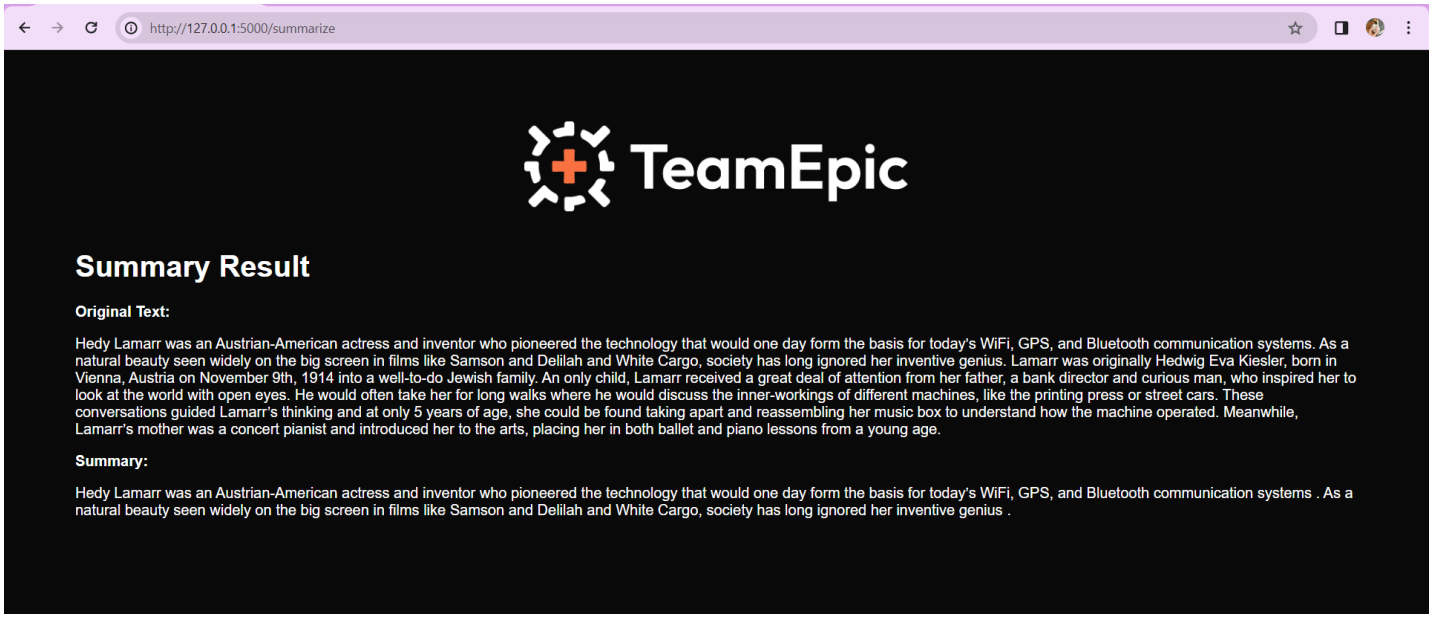
Login Page



User Input Page (Left panel for interaction history, right panel for entering text)



The summary result page



Tech Stack

Programming language: Python

Scripting language: HTML and CSS

Python Web Framework: Flask

LLM: Falconsai/text_summarization

LLM Framework: Langchain

Vector Database: FAISS

SQL Database: SQLite

Workflow Diagram