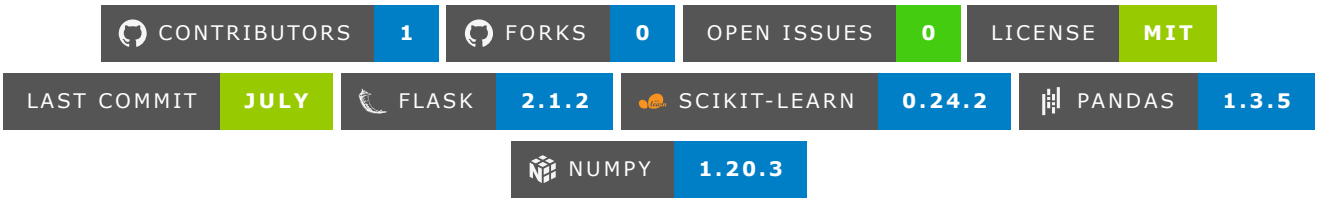
Course Recommendation System



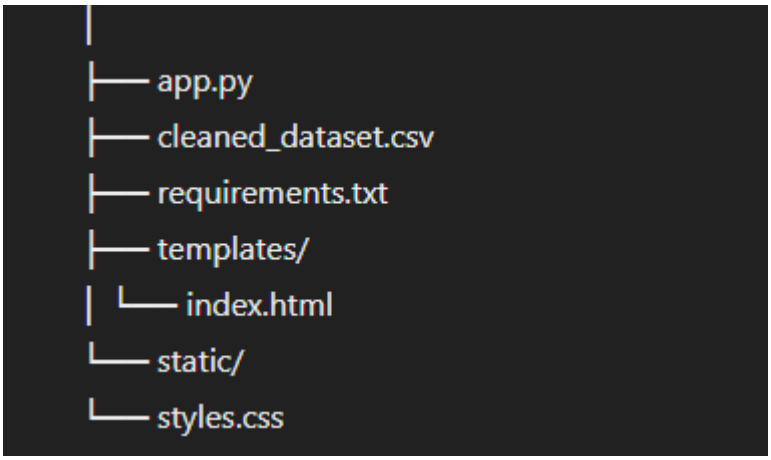
This Python Flask application is designed to provide personalized course recommendations based on course descriptions. The application leverages a content-based filtering approach using TF-IDF Vectorization and Cosine Similarity to identify and recommend courses similar to a keyword entered by the user.

Prerequisites

Before running the application, ensure you have the following installed:

- Python 3.x
- pip (Python package installer)

Project Structure



Setup Instructions

1. **Clone the repository or download the project files**.

```
git clone https://github.com/saboye/Course-Recommendation-System.git
cd Course-Recommendation-System
```

2. **Create and activate a virtual environment** (optional but recommended):

```
python -m venv venv
venv\Scripts\activate  # On Windows
# source venv/bin/activate  # On macOS/Linux
```

3. **Install the required dependencies**:

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

4. **Ensure the dataset (`cleaned_dataset.csv`) is in the project directory**.

Running the Application

1. **Run the Flask application**:

```
python app.py
```

2. **Access the application**: Open your web browser and go to `http://127.0.0.1:5000/`.

Application Usage

- **Homepage**: The homepage will display an input field where you can enter a keyword related to the course you are looking for.
- **Recommendations**: After entering a keyword and submitting the form, the application will display a list of recommended courses that match the keyword.

Example

1. **Start the Flask server**:

```
python app.py
```

2. **Open your web browser** and navigate to `http://127.0.0.1:5000/`.

3. **Enter a keyword** (e.g., "Python") in the input field and click the "Get Recommendations" button.

4. **View the recommended courses**: The application will display a list of courses that match the entered keyword, including details such as course title, URL, description, university, rating, and skills.

Additional Information

- **TF-IDF Vectorization**: This technique is used to convert course descriptions into numerical vectors, highlighting the importance of words in each description.
- **Cosine Similarity**: This metric measures the similarity between course descriptions to provide relevant recommendations.
- **Flask Framework**: The application is built using Flask, a lightweight web framework for Python.