

Explain Like I'm Five

Technical Documentation

Project Overview

"Explain Like I'm Five" is a web-based learning platform that simplifies complex topics for easy understanding. It provides explanations, facts, summaries, and quizzes on a wide array of topics.

Tech Stack

- **Frontend:** HTML, CSS, JavaScript, Bootstrap Framework
- **Backend:** Flask, Python, Gemini LLM

Project Setup

Prerequisites

- Python 3.8 or higher
- pip (Python package installer)
- A clone of the project repository

Steps

1. Clone the repository:

```
git clone https://github.com/kosuri-indu/ExplainLikelam5.git
```

2. Navigate to the project directory:

```
cd ExplainLikelam5
```

3. Install the necessary dependencies:

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

4. Run the application:

```
flask run
```

The application will start running at <http://localhost:5000> (or the port specified in your .env file).

Project Structure

The project is divided into two main directories: frontend and backend.

- **frontend:** Contains all the static files (CSS, JavaScript, images) and HTML templates.
- **backend:** Contains the Python Flask application and the content generation script.

Key Files

- `backend/app.py`: This is the main Flask application file. It defines the routes and the logic for rendering templates.
- `backend/content/explanation.py`: This script generates the explanation content for a given topic.
- `backend/content/quizmaker.py`: This script generates quizzes for a given topic.
- `frontend/templates/index.html`: This is the main landing page of the application.
- `frontend/templates/explain.html`: This page displays the explanation content for a given topic.
- `frontend/templates/quiz.html`: This page displays the quiz for a given topic.
- `frontend/templates/error.html`: This page is displayed when an error occurs.

Usage

The application is straightforward to use. On the landing page, enter a topic in the search bar and click the submit button. The application will generate an explanation, facts, a summary, and a quiz for the entered topic.

Error Handling

The application has a built-in error handling mechanism. If an error occurs during content generation, the application will redirect the user to an error page.

Future Plans

- **Multilingual Support:** Offer content in multiple languages to reach a global audience.
- **Advanced Quizzes:** Implement adaptive quizzes that adjust to the user's skill level.
- **Community Features:** Add forums and discussion boards for users to share knowledge.
- **Mobile App Development:** Launch a mobile app for learning on the go.
- **Enhanced User Engagement:** Introduce gamification elements to make learning more engaging.