Lucra

Mid-Level Python Full-Stack Developer

Objective:

Develop a simple AI-powered web application using Python, Flask, and MySQL that allows users to interact with a basic AI model. The application should have a user-friendly interface to input data and display the AI model's responses. Your code should be well-structured, commented, and pushed to a GitHub repository for submission.

Requirements:

1. Application Setup:
   - Initialize a Flask web application.
   - Set up a MySQL database to store user queries and AI responses.

2. AI Integration:
   - Integrate a simple AI model (e.g., a text classification model or a chatbot) into the application. You can use pre-trained models from libraries like `transformers` or any other suitable library.
   - The AI model should process user inputs and return responses that are displayed on the web interface.

3. User Interface:
   - Create a simple and intuitive web interface where users can:
     - Input data to interact with the AI model.
     - View the AI model's responses.
   - Include basic navigation and user feedback mechanisms.

4. Database Interaction:
   - Store user inputs and AI responses in the MySQL database.
   - Implement functionality to retrieve past interactions from the database and display them on the website.

5. Error Handling and Validation:
   - Implement error handling to manage and respond to potential failures or invalid inputs.
   - Validate user inputs to ensure they meet expected formats or criteria before processing.

6. Documentation and Code Quality:
   - Comment your code adequately to explain critical sections and logic.
   - Include a README file in your GitHub repository with:
     - Instructions on how to set up and run the application.
     - A brief description of the application's functionality.
     - Any necessary information about the AI model used.

7. GitHub Repository:
   - Push your code to a GitHub repository.
   - Ensure the repository is public and contains all necessary files to run the application, excluding sensitive information like database credentials.

Submission:

- Provide a link to the GitHub repository containing your project.
- Ensure the repository includes a clear README with setup and run instructions.

Evaluation Criteria:

- **Functionality:** The application works as expected without errors.
- **Code Quality:** Code is well-organized, commented, and follows best practices.
- **AI Integration:** Effective use of an AI model to enhance the application.
- **User Interface:** The web interface is user-friendly and intuitive.
- **Database Usage:** Efficient and correct use of the MySQL database to store and retrieve data.
- **Documentation:** Clear and concise documentation, including in-code comments and a README.