

Problem Statement

Title: Development of an Intelligent Banking Application with Personalized Financial Insights

Overview:

In the modern digital age, managing personal finances efficiently is crucial. Traditional banking applications offer functionalities like account creation, money deposits, and transaction history viewing. However, they often lack personalized insights that can help users make informed financial decisions. The goal of this project is to develop an intelligent banking application that not only facilitates standard banking operations but also provides personalized financial insights using advanced machine learning models.

Objectives:

1. User Registration and Account Management:

- Enable secure user registration and account creation.
- Implement authentication mechanisms to ensure user data security.

2. Transaction Management:

- Allow users to deposit money and view their transaction history.
- Store transaction details in a secure and efficient manner using PostgreSQL.

3. Personalized Financial Insights:

- Develop a chatbot integrated with an open-source large language model (LLM) to analyze users' transaction data.
- Provide personalized financial insights and suggestions based on users' transaction patterns.

4. User Interface:

- Create an intuitive and user-friendly interface using Streamlit.
- Ensure seamless interaction between the user and the application.

Scope:

- **Functional Requirements:**

- User registration and login functionality.
- Account creation and management.
- Money deposit functionality.
- Viewing transaction history in a tabular format.
- Integration of a chatbot for analyzing transaction data and providing insights.

- **Non-Functional Requirements:**

- Security: Ensure all user data is securely stored and transmitted.
- Usability: Design a user-friendly interface that is easy to navigate.
- Scalability: Ensure the application can handle a growing number of users and transactions.

Expected Outcomes:

- An End-user banking application that allows users to manage their accounts, deposit money, and view transaction history.
- A chatbot that provides personalized financial insights based on users' transaction data.
- A user-friendly interface that facilitates easy interaction with the application.