



Report - Task - 03

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Loan Support Chatbot for Smart Bank

Introduction

The Loan Support Chatbot for Smart Bank is designed to assist customers with inquiries about loan eligibility, provide information about loan products, guide users through the application process, answer frequently asked questions, and offer personalized recommendations. The chatbot utilises Large Language Models (LLMs) and integrates with Smart Bank's loan schemes to deliver accurate and helpful responses to user queries.

Approach to Training Data

Data Sources

The training data for the chatbot includes loan descriptions provided by Smart Bank for each loan scheme offered. These descriptions contain detailed information about loan eligibility, features, interest rates, repayment terms, and application processes.

Data Preprocessing

The provided loan descriptions were preprocessed to extract key information such as eligibility criteria, loan amounts, repayment periods, and application requirements. This data was then structured and formatted to be compatible with the chatbot's knowledge base using langchain. Chromadb is used to store the vector map obtained by processing the data.

Training Strategy

The chatbot was trained using the preprocessed loan descriptions to understand user queries and provide relevant responses. OpenAI's GPT-3 model was fine-tuned on this data to improve its ability to comprehend loan-related inquiries and generate accurate answers.

Maintenance of Chat History

The chatbot maintains a history of conversations to ensure a smooth flow of dialogue and provide continuity in user interactions. This feature allows users to reference previous discussions, track their progress in the loan application process, and resume conversations seamlessly.

Evaluation of Cost-Effectiveness

The cost-effectiveness of the chatbot was evaluated based on its ability to efficiently handle customer inquiries, reduce the workload on human support agents, and streamline the loan application process. By automating routine tasks and providing timely assistance to users, the chatbot helps optimize resource allocation and improve operational efficiency for Smart Bank.

Additional Features

Personalized Recommendations

The chatbot offers personalized loan recommendations based on the user's financial situation and preferences. By analyzing factors such as credit score, income level, and loan purpose, the chatbot suggests suitable loan products tailored to each user's needs.

FAQs and Troubleshooting

In addition to providing information about loan products, the chatbot answers frequently asked questions and offers troubleshooting tips for common issues. This feature enhances user experience and helps address customer concerns effectively.

Conclusion

The Loan Support Chatbot developed for Smart Bank leverages advanced language models and integrates with the bank's loan schemes to provide comprehensive assistance to customers. By offering personalized recommendations, guiding users through the application process, and addressing common inquiries, the chatbot enhances customer satisfaction and streamlines loan services for Smart Bank.

Future Enhancements

Multilingual Support

Introduce multilingual support to cater to a diverse customer base and enhance accessibility.

Integration with Customer Accounts

Integrate the chatbot with Smart Bank's customer accounts to provide personalized loan offers and streamline application processes further.

Enhanced Security Measures

Implement additional security measures to safeguard sensitive user information and ensure compliance with data protection regulations.

This report outlines the development and functionality of the Loan Support Chatbot for Smart Bank, highlighting its effectiveness in assisting customers with loan inquiries and enhancing the overall user experience.