AI-Powered Scheme Navigator for Tamil Nadu Government Schemes

Abstract

Government schemes encompass diverse areas such as education, healthcare, agriculture, social welfare, and infrastructure. However, a lack of awareness and difficulty in accessing accurate information often prevents individuals from availing of these benefits. To address these challenges, this project proposes the development of a Natural Language Processing (NLP)-based chatbot designed to provide seamless access to information about Tamil Nadu government schemes. The chatbot leverages advanced NLP frameworks, such as spaCy and Hugging Face Transformers, to process and interpret user queries, delivering precise and relevant responses. Comprehensive data on government schemes is collected, preprocessed, and used to train the model. Integrated into a user-friendly interface, the chatbot ensures effortless interaction, allowing users to inquire about various initiatives and obtain real-time information. The system incorporates testing and monitoring mechanisms to ensure accuracy and adaptability to a wide array of user inputs. Regular updates are planned to reflect policy changes and maintain the chatbot's relevance. Additional features include user authentication for personalized assistance and provisions for human support to handle complex queries. By offering an intelligent conversational interface, this project aims to enhance accessibility and engagement, empowering citizens to make informed decisions and utilize available government resources effectively.

Algorithms

- NLP

Software Specification

- **Language** : Python 3.7.4(64-bit) or (32-bit)
- **Packages** : TensorFlow, Pandas, SiKit Learn, NLP Packages