

DSAI HACKATHON

BEGINNER LEVEL - Build BhilaiGPT

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Problem Statement:

To develop BhilaiGPT, a user-friendly system that efficiently addresses non-confidential queries related to IIT Bhilai. The system should ensure high accuracy and reliability, providing satisfactory responses to users' inquiries without the limitations encountered with general-purpose chatbots.

Solution Overview:

BhilaiGPT is a specialized system designed to cater specifically to queries related to IIT Bhilai. It leverages a combination of natural language processing (NLP) techniques, domain-specific knowledge, and a user-friendly interface to deliver accurate and efficient responses.

Approach:

1. Data Collection and Processing:

- Gather a comprehensive dataset of FAQs, information, and resources related to IIT Bhilai, including academic programs, faculty details, campus facilities, admission procedures, and more.
- Preprocess and clean the data to ensure consistency and accuracy.

2. NLP Model Development:

- Train a custom NLP model tailored to understand and respond to queries specific to IIT Bhilai.
- Fine-tune the model using the collected dataset to enhance its accuracy and relevance to the domain.

3. User Interface Design:

- Develop an intuitive and user-friendly interface for BhilaiGPT, accessible through web or mobile platforms.

- Incorporate features such as voice input, autocomplete suggestions, and interactive elements to enhance user experience.

4. Query Handling and Response Generation:

- Implement a robust query handling mechanism to interpret user queries and extract relevant information.

- Utilize the trained NLP model to generate accurate responses based on the extracted information and contextual understanding.

- Include error handling mechanisms to address queries outside the system's scope or queries with insufficient information.

5. Integration and Deployment:

- Integrate BhilaiGPT with backend systems and databases to access real-time information whenever necessary.

- Deploy the system on scalable and reliable infrastructure to ensure uninterrupted service availability.

- Monitor system performance and user feedback for continuous improvement and updates.

By following this approach, BhilaiGPT aims to provide users with a seamless and efficient platform for obtaining information and assistance related to IIT Bhilai, thereby enhancing user satisfaction and engagement within the institution's community.

Tech Stack :

BhilaiGPT can be built with Python (using NLTK, spaCy, or Transformers), HTML/CSS/JavaScript, Flask, MongoDB, firebase