College Enquiry Chatbot

GROUP - 8

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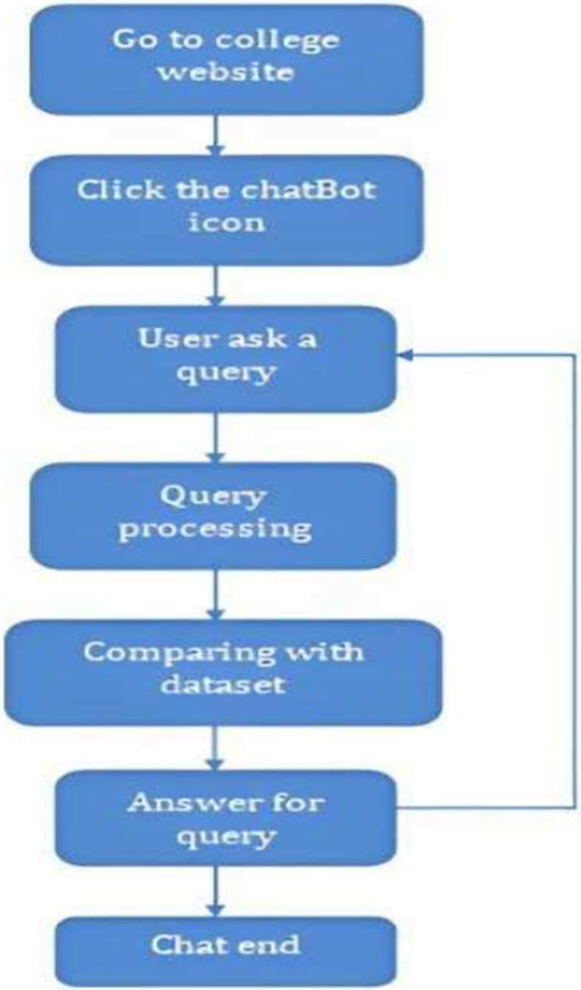
Existing system

The widespread use of smartphones reflects the continuous evolution of technology. Artificial intelligence (AI) has become indispensable in various industries, from manufacturing to human resources and customer service. This project introduces an AI-powered chatbot focused on higher education, designed to address college-related queries. Utilizing a natural language processing (NLP) system, the chatbot interprets and responds to user questions courteously and accurately. With the ability to operate 24/7, the chatbot offers prompt and error-minimized support, simultaneously assisting thousands of users.



Limitations of the Model

- Limited Accessibility:
  The original model is restricted to the college website, limiting accessibility for users who prefer more widely used communication platforms.

- Non-Real-Time Interaction:
  The web-based system lacks real-time responsiveness, potentially causing delays in obtaining information or assistance.

- Inflexibility:
  Once deployed, the traditional chatbot operates autonomously without intervention, making it challenging for administrators to provide immediate manual assistance or updates.

- Limited Availability of Information:
  The model only gives answers from the provided database and nothing beyond that.

Proposed System

1. WhatsApp Integration: Leveraging the popularity of WhatsApp ensures widespread accessibility, allowing parents and staff to seamlessly interact with the chatbot on a platform they are familiar with.
2. 24x7 Real-Time Support: The migration to WhatsApp facilitates instant communication, addressing the non-real-time interaction limitation and ensuring that users receive timely and relevant information at any hour.
3. Human Intervention: Administrators are empowered with the ability to stop the chatbot, provide personalized responses, or make immediate updates when required, adding a dynamic element to the system.
4. Advanced Language Processing: Integration of advanced NLP and language chain technologies augments the chatbot's intelligence, improving its ability to understand and respond contextually to user queries with heightened accuracy.
5. PDF and Website Data Integration: The project goes beyond by incorporating data extraction from college PDFs and websites, enhancing the chatbot's accuracy and ensuring responses are informed by the latest information.
6. Improved User Experience: The combination of WhatsApp integration, real-time support, advanced language processing, and data integration culminates in a more powerful and user-friendly chatbot. Users can effortlessly seek information about the college, receiving accurate and context-aware responses.

Conclusion:

This project aims to improve the conventional model of a college enquiry chatbot by migrating it from a web-based interface to WhatsApp using Node.js. This solution addresses the limitations of the old model, such as accessibility constraints, non-real-time responsiveness, and autonomous operation, by providing widespread accessibility through WhatsApp, real-time support, and administrative flexibility with manual intervention. Additionally, advanced language processing and data integration from college PDFs and websites enhance the chatbot's accuracy and user experience. Unlike traditional menu-based bots, this solution allows users to message the chatbot and receive instant replies, enabling them to ask any questions about the college at any time. Overall, this project delivers a more powerful, intelligent, and user-centric chatbot solution.