MEDIBOT PROJECT REPORT

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Introduction

The MediBot project aims to bridge the information gap in Kenya's evolving healthcare system, specifically the transition from the National Health Insurance Fund (NHIF) to the Social Health Authority (SHA). Many citizens face confusion regarding SHA regulations, leading to misinformation, low enrollment, and inefficiencies in accessing healthcare services. MediBot is an AI-powered chatbot designed to provide accurate, timely, and clear information about SHA.

Problem Statement

The implementation of SHA has caused widespread confusion due to a lack of clear, accessible information. Misinformation has led to low enrollment rates and delays in healthcare access, overwhelming customer service centers. The project aims to develop a chatbot to provide users with real-time, reliable information on SHA processes, including eligibility, benefits, contributions, claims, and registration.

Objectives

Main Objective: Develop an AI chatbot that enhances the understanding and adoption of SHA in Kenya by providing accurate and accessible information.

Specific Objectives:

- Implement and deploy a web-based chatbot to facilitate user interaction.
- Develop a chatbot model that ensures accurate, real-time responses to SHA-related queries.
- Improve public awareness and engagement with SHA policies.

Methodology

1. Data Collection & Processing: Data was gathered from sources like Twitter using a developer account and analyzed for sentiment trends.
2. Data Visualization: Sentiment analysis, tweet volume tracking, and word clouds were used to analyze public perception.
3. Model Selection: XGBoost, BERT, and RASA were evaluated; RASA was chosen for its high accuracy and fast response time.
4. Deployment: The chatbot was deployed using Flask, a Python-based web framework, ensuring scalability and easy integration.

Results & Findings

Sentiment analysis showed that ~70% of tweets expressed dissatisfaction, highlighting the need for clear information. RASA outperformed other models and was successfully deployed to provide real-time responses.

Conclusion

The SHA chatbot project successfully integrates RASAs AI capabilities to enhance healthcare information accessibility in Kenya. With its high accuracy and fast response times, MediBot provides a reliable solution for addressing misinformation and supporting a smooth transition from NHIF to SHA.

Recommendations

- Continuously update the chatbots training data to improve accuracy.
- Implement real-time monitoring and feedback mechanisms.
- Expand deployment to additional channels, such as SMS and WhatsApp.

Next Steps

1. Conduct user testing to refine chatbot performance.
2. Automate dataset updates to incorporate new SHA policies and user concerns.