A Major Project Synopsis on

**ChatMed**

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Towards the partial fulfillment for the Award of the Degree of

**MASTER OF COMPUTER APPLICATIONS**

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by

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**I Introduction**

Medical chatbots represent a novel approach to healthcare delivery, leveraging the capabilities of AI to simulate human-like interactions and provide tailored responses to user inquiries. These chatbots are designed to assist individuals in various aspects of healthcare, ranging from symptom assessment and triage to medication management and post-treatment support. By harnessing the power of natural language processing (NLP) and machine learning algorithms, medical chatbots can analyze user input, understand context, and generate relevant and accurate responses in real-time.

Generative AI serves as the backbone of medical chatbots, enabling them to generate human-like responses based on the input provided by users. Unlike rule-based chatbots, which rely on pre-defined decision trees and scripted responses, generative AI chatbots have the ability to understand the nuances of language and generate contextually appropriate responses autonomously. Medical chatbots represent a novel approach to healthcare delivery, leveraging the capabilities of AI to simulate human-like interactions and provide tailored responses to user inquiries. These chatbots are designed to assist individuals in various aspects of healthcare, ranging from symptom assessment and triage to medication management and post-treatment support. By harnessing the power of natural language processing (NLP) and machine learning algorithms, medical chatbots can analyze user input, understand context, and generate relevant and accurate responses in real-time.

Why you should choose us?

1. A medical chatbot capable of handling diverse medical inquiries including symptom analysis, medication queries, treatment recommendations, and general health information.

2. Implemented multilingual support to cater to users from different language backgrounds.

3. Target users from diverse demographics, including patients, caregivers, and healthcare professionals.

II Motivation

1. Improving Healthcare Accessibility

2. Enhancing Patient Engagement & Education

3.Handling Emergency Triage & Symptom Checking

4. Scalability & Efficiency

III Problem Statement

1. Firstly, accessibility to healthcare services remains a pressing issue, particularly in underserved regions and communities. Long wait times for appointments, geographical barriers, and inadequate healthcare infrastructure contribute to disparities in healthcare access. Consequently, individuals in
2. these areas often face delays in receiving timely medical attention, leading to worsened health outcomes and increased healthcare burdens.
3. Secondly, the lack of personalized medical advice poses a considerable obstacle to effective healthcare delivery. Patients' medical needs and conditions vary widely, yet traditional healthcare systems often employ generalized approaches to diagnosis and treatment. As a result, individuals
4. may receive recommendations and interventions that are not tailored to their specific health concerns, leading to suboptimal outcomes and dissatisfaction with care.
5. Moreover, inefficiencies in patient-doctor interactions further exacerbate the challenges faced by traditional healthcare systems. Limited consultation time, communication barriers, and the complexity of medical jargon hinder effective communication between healthcare providers and patients. This can lead to misunderstandings, misdiagnoses, and substandard care, ultimately
6. impacting patient trust and satisfaction with healthcare services.

**IV Methodology/ Planning of work:**

* Study about the project and gather all information required to solve the problem
* Data Collection
* Data Extraction
* Indexing
* User Query Processing
* Prompt Generation
* Model Response
* Continuous Interaction
* Creating Flask API

**V Requirements for proposed work:**

* + - 1. Software Requirement:
* Windows 7/8/10/11
* Linux /Ubuntu
* Jupyter Notebook(Python)
  + - 1. Hardware Requirement:
* Processor i5 at least
* RAM =8GB (IN case of Hadoop)
* Disk Space=100GB space(SSD/HDD)

**VI Bibliography/References**

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