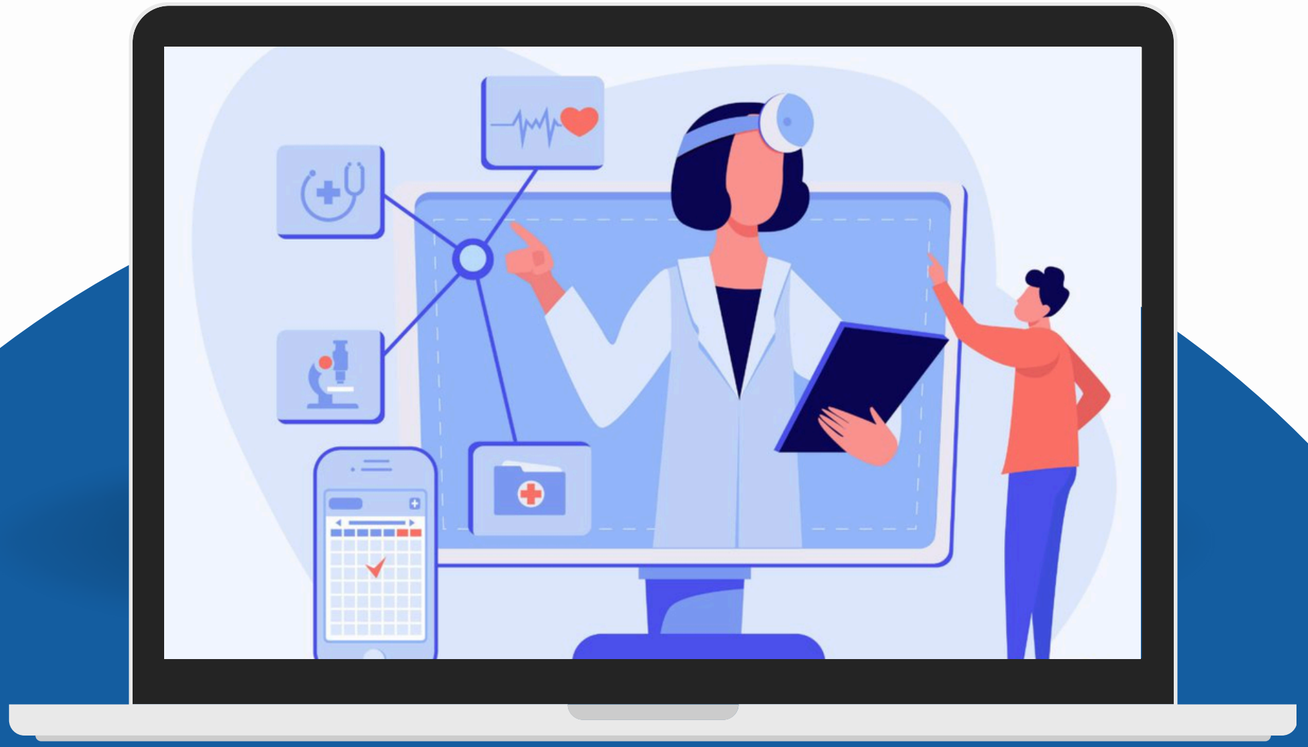
S5 Mini Project

Smart Medical Assistant: A Speech Integrated Solution for Healthcare



By
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ABSTRACT

In the rapidly advancing field of healthcare, efficient and accurate communication between doctors and patients is crucial.
To address this need, we propose the development of a "**Smart Medical Assistant**" , a web-based application integrated with a speech assistant module.

This innovative tool aims to enhance the medical consultation experience by allowing doctors to effortlessly log patient information and prescriptions using voice commands.

The application will streamline the documentation process, ensuring that each patient's medical records are accurately maintained and easily accessible.

This project not only aims to improve the efficiency of medical practices but also empowers patients by providing them with easy access to their medical records.

Aim and Objectives of speech to text application

Enhance Doctor-Patient Interaction

Facilitate efficient and accurate documentation of patient information and prescriptions.
Reduce the administrative burden on doctors, allowing them to focus more on patient care.

Leverage Speech Technology

Utilize speech recognition to convert spoken medical terms into text.
Integrate a user-friendly speech assistant module for seamless operation.

Improve Accessibility of Medical Records

Provide patients with easy access to their medical records through a secure web portal.
Ensure that patients can review their prescriptions and treatment plans at any time.

Literature Survey

- **Speech to Text Translation enabling Multilingualism ---** Shahana Bano; Pavuluri Jithendra; Gorsa Lakshmi Niharika; Yalavarthi Sikh

- **Implementation of Speech to Text Conversion Using Hidden Markov Model ---** A. Elakkiya; K. Jaya Surya; Konduru Venkatesh; S. Aakash

Methodology of Proposed Work

System Design

The goal is to create a seamless platform where doctors and patients can interact effectively. This platform will include two separate interfaces with tailored functionalities and a speech assistant module capable of understanding and processing medical terminology.

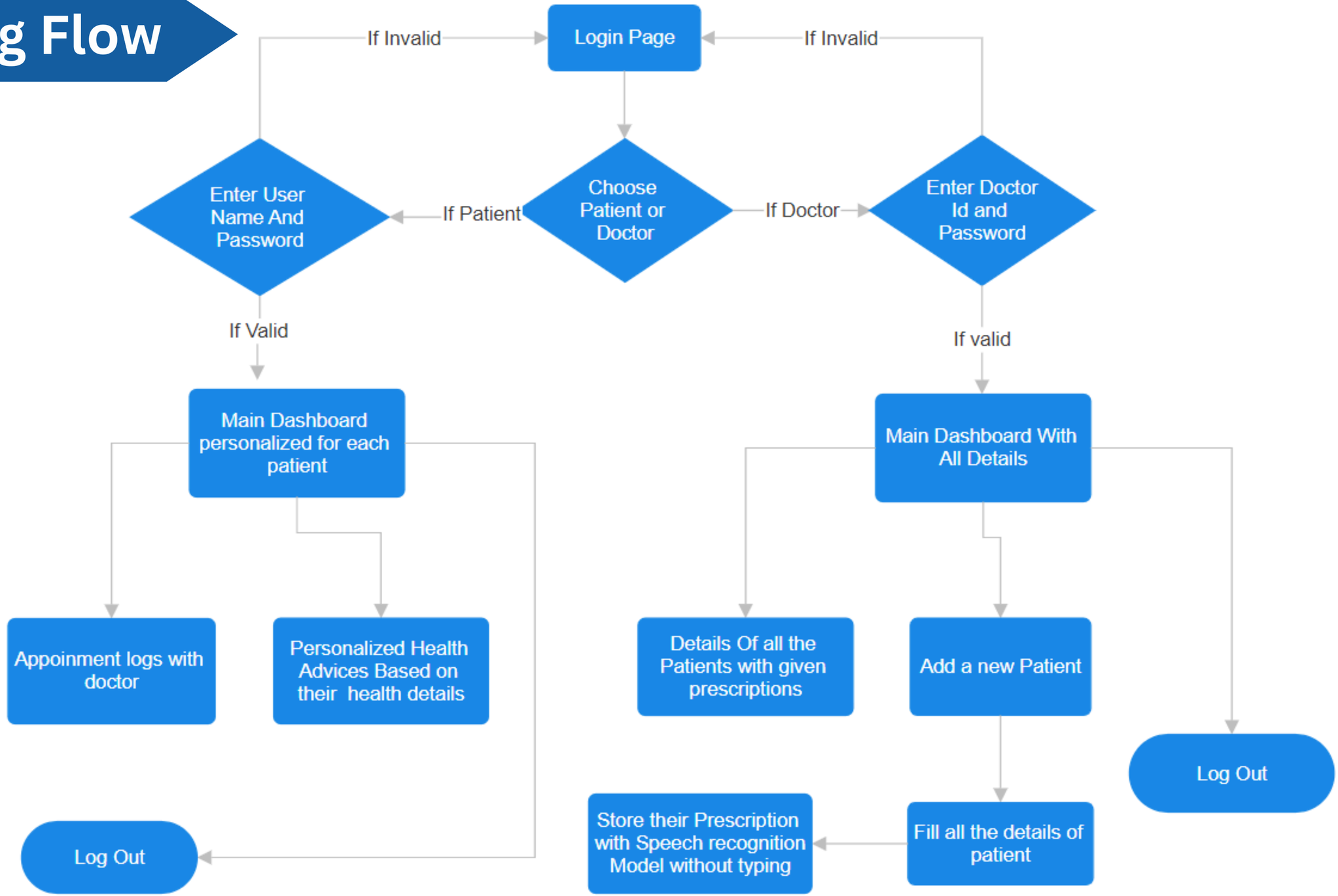
Speech Recognition Module

Utilize advanced speech recognition technology Neural Language Models: to accurately transcribe medical terms.
Implement machine learning algorithms to improve accuracy over time.

Patient Management System

Allow doctors to create and manage patient profiles.
Enable doctors to log prescriptions via voice commands,
automatically converting speech to text.

Working Flow



Individual contribution of the student in a batch

1. **Gautham S --- Backend developer**

2. **PRAGALYA K --- React.js (Frontend developer)**

Frontend	BackEnd	DataBase
React Js (Javascript)	Python with Django Framework	My Sql (Structured Data)

THANK YOU!