



Healthcare Android Predictor

Ashwini Vatne¹, Pallavi Shrimangle², Dipali Lahane³, Prof. D. S. Jaybhay⁴

Information Technology, Dattakala Group Of Institutes, Pune, Maharashtra, India¹⁻³

Guide, Department of Information Technology, Dattakala Group Of Institute, Pune, Maharashtra, India⁴

Abstract: This project is an intelligent healthcare app for Android that makes medical services easier to use, more efficient, and more engaging for users. The app uses machine learning, location services, and AI-driven chatbots to offer smart and easy healthcare support. One of its main features is the ability to predict diseases based on the symptoms users enter. A machine learning model looks at the information provided and gives possible health issues, helping users get a better understanding of their condition before seeing a doctor. To make the app more useful and easier to use, it has an AI-powered chatbot that gives quick health advice, supports voice communication, and can interact in Hindi for better reach. The location feature lets users find nearby doctors and hospitals, using data from registered medical professionals who can add and update their service locations in the system. The app has two user types: patients and doctors. Patients can sign up, create profiles, and use features like symptom-based disease prediction, chatbot help, and finding nearby healthcare services. Doctors can log in, update their profiles, and list their available services and locations. The system focuses on keeping data safe and offers real-time help, automatic health insights, and easy access to medical resources.

Keywords: *Artificial* Intelligence Healthcare App, Machine learning Disease Prediction, Ai Chatbot, Voice and Hindi Language Support, Location Based Doctor Finder, Patient and Doctor Management System, Real-time Healthcare Assistant.

I. INTRODUCTION

Modern healthcare systems need to be easy to access work well and be simple to use. This helps patients get help when they need it. Going to the hospital can take a lot of time. People in areas also have limited access to immediate medical help. Mobile technology is growing fast. Android apps for healthcare have become a way to solve this problem. They give users help and services in real-time. The Healthcare Android Predictor System helps make healthcare more accessible. It has features like predicting diseases based on symptoms, a chatbot that uses AI and finding doctors based on location. Users can enter their symptoms. Get an idea of their health. This helps them understand their condition before seeing a doctor. The chatbot answers health questions away.

The app also uses Google Maps to help users find doctors and healthcare facilities. There is a section for departments. Users can fill out a form with details like visit date how bad their pain is, where it hurts and what their symptoms are. This information is stored in a database. This makes it easy to manage data.

The system has two types of users: patients and doctors. Patients can sign up manage their profiles and use healthcare services. Doctors can update their profiles. Manage their services. The system combines prediction, help, in time and location services. This makes healthcare easy to access and use.

II. LITERATURE SURVEY

Recent advancements in mobile healthcare apps have focused on making healthcare more accessible helping with diagnosis and keeping users engaged through smart systems. Many research studies have looked into combining machine learning, chatbot technologies and location-based services to improve healthcare delivery. Several studies have developed systems that predict diseases based on symptoms using machine learning algorithms such as decision trees, Naïve Bayes and support vector machines. These systems let users input their symptoms and get a diagnosis, which helps in early detection of diseases. However many of these systems are limited to web-based platforms. Do not allow real-time interaction on mobile devices.

In addition AI-based chatbot systems are widely used in healthcare apps to provide responses to user queries. These chatbots help users with medical advice, symptom checking and general healthcare information. Despite being useful many existing chatbot systems do not support interaction or integration with other healthcare services. Research has also



emphasized the importance of location-based healthcare services. These services use GPS and mapping technologies to help users find hospitals and doctors. Integration of services like Google Maps has significantly improved accessibility. However many systems fail to combine this feature with health prediction and user data management. Some healthcare apps incorporate data management systems using local or cloud databases. These systems store user information, medical history and reports for reference.

However there is often a lack of data collection methods, such as detailed patient forms capturing symptoms, pain levels and visit information. From the literature it is observed that most existing systems focus on features such, as prediction, chatbot interaction or location services but lack a comprehensive integrated solution.

The proposed Healthcare Android Predictor System addresses these limitations by combining disease prediction, AI chatbot assistance, location-based doctor search and structured patient data collection using SQLite database into an Android application. This provides an efficient and user-friendly healthcare solution.

III. METHODOLOGY

The proposed Healthcare Android Predictor System helps people get healthcare assistance through an Android app. This system works in a step-by-step way to give users easy-to-use services.

1. User Interaction & Data Input :

The system starts when users interact with the Android app. Users can sign up. Log in. After logging in they can use features like disease prediction talking to a chatbot finding a doctor and department services.

Users enter information like:

- Symptoms to predict disease
- Questions for the chatbot
- Location to find a doctor
- Patient details in the department (visit date, pain level, affected area and description)

2. Disease Prediction Module :

This module takes user symptoms. Analyze them. It compares symptoms with stored data. Predicts a disease. The result is shown to the user.

3. Chatbot Module :

The chatbot answers user health questions. It takes user input. Gives relevant answers. This helps users get guidance without seeing a doctor.

4. Location-Based Doctor Search :

The system uses Google Maps to find doctors, near the user.

When users search for a doctor:

- The system finds the users location
- It shows doctors and healthcare facilities on the map

5. Department Module (Patient Form) :

Users fill out a patient form with:



- Visit date
- Pain level
- area
- Description of symptoms

This information is stored in the SQLite database for use.

6. Appointment & Reminder Module :

Users can book appointments and set reminders. The system stores appointment details and reminders in the database.

7. Database Management :

The system uses SQLite database to store:

- Patient information
- Doctor details
- Appointment records
- Health reports
- Patient form data

The system handles database operations securely.

8. System Output :

The system gives outputs like:

- Predicted disease results
- Chatbot responses
- doctor locations
- Appointment confirmations
- Stored patient records

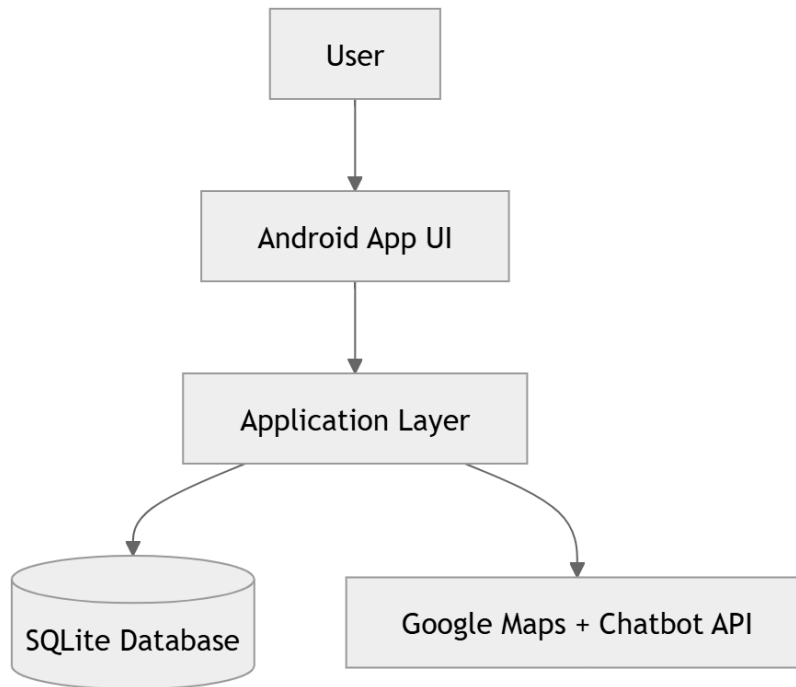


Fig. 1 System Architecture

IV. EXPERIMENTAL RESULTS AND ANALYSIS

The proposed system was tested on different modules such as disease prediction, chatbot interaction, doctor search, and patient form. The performance was evaluated based on response time, accuracy, and usability.

Table 1: Module-wise Performance Analysis

Sr. No	Module	Input Type	Output Result	Response Time	Accuracy
1	Disease Prediction	Symptoms	Predicted Disease	1–2 sec	~85%
2	Chatbot	User Query	Health Response	<1 sec	~90%
3	Doctor Search (Map)	Location (GPS)	Nearby Doctors List	2–3 sec	~95%
4	Patient Form (Department)	Health Details Input	Data Stored in Database	<1 sec	100%
5	Appointment Module	Booking Details	Confirmation	1 sec	100%

Table 2: Comparative Analysis of Machine Learning Models for Disease Prediction

Algorithm	Accuracy (%)	Precision (%)	Recall (%)	F1-Score (%)
Naïve Bayes	82.4	80.6	81.2	80.9
Decision Tree	88.1	87.3	86.5	86.9
Support Vector Machine	90.6	89.7	89.4	89.5
Random Forest	94.3	93.8	93.1	93.4

The table above compares machine learning algorithms used for disease prediction. Random forest gives the results in terms of accuracy and performance. It is used in system but, for our system. We need it to be fast and work well on mobile phones. So we use a prediction method. This helps our system to be fast and work on devices.



V. CONCLUSION

The Healthcare Android Predictor System is a tool that helps people with basic healthcare needs using a mobile phone. It has useful features like figuring out what disease you might have based on your symptoms, a chatbot that uses artificial intelligence to talk to you and a way to find doctor near you. This means people can get the healthcare help they need quickly and easily. The system also has a part called the Department module where you can fill out a form with information about your health like when you visited the doctor how much pain you are in which part of your body hurts and what symptoms you have. All of this information is kept safe in a database called SQLite so you can look at it again later if you need to. You can even use the system to book appointments with doctors. Get reminders, which makes it really easy to use. When we tested the system it worked well and gave us answers fast. It is really good at predicting what is wrong with you helping you right away and finding places near you. This makes it easier for people to get healthcare and makes them more likely to use the system. Overall the Healthcare Android Predictor System is an affordable way to get healthcare help every day. It is a solution that can be used now and can also be made even better in the future. The Healthcare Android Predictor System is an option, for people who want a easy way to take care of their health.

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**BIOGRAPHY**

Ashwini vatne is a final-year undergraduate student in the Department of Information Technology and Engineering at Dattakala College of Engineering, Swami Chincholi. Her research interests include Android application development, healthcare technologies, machine learning–based prediction systems, and intelligent software solutions

Pallavi Shrimangle is a final-year undergraduate student in the Department of Information Technology and Engineering at Dattakala College of Engineering, Swami Chincholi. Her research interests include Android application development, healthcare technologies, machine learning–based prediction systems, and intelligent software solutions.

Dipali Lahane is a final-year undergraduate student in the Department of Information Technology and Engineering at Dattakala College of Engineering, Swami Chincholi. Her research interests include Android application development, healthcare technologies, machine learning–based prediction systems, and intelligent software solutions