PUSL2021 - Computing Group Project

Project Proposal

Group B2

Submitted by:

Group B2

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NSBM Green University TOWN

Computing Group Project

Healthcare React Native Mobile Application Project Proposal

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Overview

Today, it can be challenging for an individual to manage their health on their own. Common challenges include failing to keep track of medicine intakes, scheduling appointments, being unfamiliar with the person's condition, and, most importantly, lacking emotional support. Our project focuses on developing a healthcare react native mobile application to assist users in maintaining their health condition effortlessly and securely using the technology aspect.

In this healthcare mobile application, among the many features included, one of its main key features is the AI-powered chatbot, one of the most popular and well-liked technologies therefore to make this chatbot we will collect data and train it using NLP (Natural Language Processing). This chatbot will provide users with emotional support and comfort when dealing with depression, sadness, or stress-related problems.

When the user shares information about their health with the software, the system will keep track of the user's details as well as their medication intakes, and the application will notify the user to remember to take their medications.

The application will also give the user the ability to book appointments with a particular hospital and its doctors within a free time period. For this process, we will reach out to the private hospital's management or IT department to express our intention to integrate our appointment booking app with their systems. And also request access to the hospital's API documentation. This documentation should outline the endpoints, methods, data formats, and authentication methods required for integration.

The user will also have access to articles, videos, or material within the app that is relevant to different health conditions, which will help the user to understand and get more knowledge of their health conditions better.

The users will also be able to find pharmacies and labs nearby them using the application which will help users when they are in need of traveling for medicines and medical tests.

Another special feature that is included in the application is the Emergency Services. There are four more features included inside this feature: Emergency call, GPS location service, health profile information, and emergency notification. In an instance where the user is in a medical emergency the user can make an emergency call with the help of the application and when the call for help is received the GPS location as well as the health profile information of the individual will be instantly shared with emergency service providers, and lastly, user can also send emergency alerts to anyone from their contacts.

Objectives

- To provide an application that can understand the user's health risks.
- To provide a safe place to share user's details with their health information.
- To book appointments with specific doctors within available times.
- To give the user emotional support through an AI-powered chatbot.
- Ensure that the user's health stays as the topmost priority.
- To provide emergency services to the user.
- To provide users with information about nearby pharmacies and lab facilities.
- To remind users of their medication intake by sending reminders.
- Help users by providing medical content such as articles, videos, and educational content.

Target Users

- Patients and Caregivers:
  - People who need to schedule medical appointments, manage medications, and access emergency services will find the application useful. This group includes individuals dealing with chronic illnesses, elderly patients, and their caregivers.

- Mental Health Seekers:
  - Users who are looking for support and resources related to mental health, particularly those dealing with depression, anxiety, and stress.

- Families:
  - Families looking for a centralized platform to manage their healthcare needs, including appointments, prescriptions, and health information.

- Pharmacy and Lab Users:
  - People who need to find nearby pharmacies for prescription pickups or labs for diagnostic tests. This includes patients and healthcare professionals.

- Elderly people:
  - Elderly individuals who may need medication reminders, e-channeling services for regular check-ups, and an easy way to access emergency services.

- Healthcare Professionals:
  - Physicians, nurses, pharmacists, and other healthcare providers who can use the app to manage appointments and access a network of labs and pharmacies.

- General Users:
  - Individuals who may not have specific healthcare needs but are interested in staying informed about health and wellness topics and want quick access to emergency services.

Application Features and Description

- User Registration and Profile Management:

  The mobile app handles user registration, and authentication, and allows users to update their profiles with personal information, medical history, and preferences.

- Appointment Booking:

  Users can browse available healthcare providers, view their schedules, and book appointments through the mobile app. The app manages appointment notifications, reminders, and cancellations.

- AI-powered chatbot for depression:

  The AI-powered chatbot can provide emotional support, resources, and information to individuals with depression or other mental health issues.

- Medication Management:

  Users can manage their medications, set reminders, and receive notifications about dosage and refills through the mobile app.

- Health Education and Resources:

  The mobile app can offer a library of articles, videos, and educational content related to healthcare, wellness, and specific medical conditions.

- Pharmacy and lab network:

  Users can find nearby facilities and access information from the application.

- Emergency Services:

  - ✦ Emergency Calls: Include a dedicated button for users to call emergency services (e.g., 911) directly from the app. Ensure this feature is easily accessible from the main screen.

  - ✦ GPS Location Services: Utilize GPS to pinpoint the user's location when they call for help, which can be critical in emergencies. Share this information with the emergency responders to aid in faster response times.

  - ✦ Health Profile Information: Allows users to input essential medical information such as allergies, chronic conditions, and emergency contacts. This information can be shared with emergency services, giving them valuable details in case the user is unable to communicate.

  - ✦ Emergency Notifications: Implement a feature where users can send automated emergency alerts to their designated contacts in case of a medical emergency.

Time Frame


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10/23
11/23
12/23
1/24
2/24
3/24
4/24
Group Project 0h 16%
Project Proposal and Planning 0h 100%
Project Kickoff 0 100%
Market Research 0 100%
Requirements Gathering 0 100%
Project Proposal 0 100%
Development 01 0h 0%
User Registration and Authentication 0 0%
Appointment Booking 0h 0%
Appointment Booking 0 0%
Technical and Functional Specificat... 0 0%
Interim 0h 0%
Interim 01 0 0%
Development 02 0h 0%
AI-powered Chatbot for Depression 0 0%
Testing and Quality Assurance 0h 0%
Testing and Bug Fixing 0 0%
User Acceptance Testing 0 0%
Development 03 0h 0%
Medication Management 0 0%
Health Education and Resources 0 0%
Final Testing and Optimization 0h 0%
Emergency Service Integration 0 0%
Final Testing and Optimization 0 0%
App Launch 0h 0%
App Launch 0 0%