

# **AllergyCare - Allergy Specialist Application**

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## **Abstract**

The Allergy Specialist Application offers a comprehensive platform for patients, doctors, and administrators, streamlining interactions and enhancing skin allergy management. This user-centric application features modules such as Doctors, Image Detection, Medicines, Appointments, and Clinic Locations. Patients benefit from user-friendly functionalities to register, log in, browse dermatologists, submit image-based requests, access medicine recommendations, schedule appointments, explore clinic locations, access quick remedies, and provide feedback. Doctors can log in, review patient requests, analyse images for accurate diagnosis, prescribe treatments, and manage appointments. Administrators play a pivotal role in overseeing user accounts and feedback.

In an era of digital health solutions, the application exemplifies the fusion of medical expertise with technological innovation. It underscores the potential of telemedicine and virtual consultations to enhance patient care and redefine the patient-specialist relationship.

This accelerates the diagnosis and treatment, leading to better outcomes and reduced discomfort. Additionally, it eases the burden on healthcare systems by optimizing specialist time and increasing patient engagement in self-care.

## **Users**

### **Patients :**

Patients interact with the application to manage their skin allergy concerns effectively. They can:

- Register and log in to access personalized features.
- Browse a list of specialized doctors, view profiles, and select suitable doctors for consultations.
- Submit image-based requests to doctors for precise diagnosis.
- Explore a catalogue of recommended medicines for skin allergies.
- Request appointments with preferred doctors for seamless consultations.
- Locate nearby clinics .
- Access quick remedies for minor skin allergy discomforts.
- Provide valuable feedback to enhance the user experience.

### **Doctors :**

Medical professionals utilize the application to provide expert care to patients with skin allergies. They can:

- Register and log in to access the platform.

- Review patient requests, analysing images to make accurate diagnoses.
- Generate personalized prescriptions to guide patients' treatment plans.
- Enhance patient care by leveraging the platform's features for effective communication.

### **Administrator :**

Administrators play a vital role in ensuring the smooth operation of the application. They can:

- Manage patient and doctor accounts, overseeing user registration and profiles.
- Monitor and address user feedback to improve the overall user experience.
- Chatbot configuration by updating the interactions .
- Manage the Medicine availability .

## **Modules**

### **Doctors :**

- Enables patients to explore a carefully curated list of doctors, each accompanied by a comprehensive profile showcasing their expertise and credentials.
- Empowers patients to make informed decisions by selecting doctors based on specialization and availability.

### **Image Detection :**

- Allows patients to seamlessly submit images of affected areas along with consultation requests, aiding doctors in accurate diagnosis and treatment planning.

### **Medicines :**

- Presents patients with a comprehensive catalogue of recommended medicines for addressing diverse skin allergy concerns.
- Simplifies the process of purchasing medicines by providing informative details and options.

### **Appointments :**

- Facilitates patients in submitting appointment requests to preferred doctors, streamlining the process for secure consultations.
- Enhances patient experience by providing convenient appointment scheduling.

### **Clinic Locations :**

- Empowers patients to locate nearby clinics and dermatology centres through integrated maps, ensuring accessibility to quality care.
- Facilitates informed decision-making regarding clinic visits and consultations.

### **Quick Remedies :**

- Equips patients with a repository of effective quick remedies to alleviate minor skin allergy discomforts before seeking professional advice.
- Encourages proactive self-care practices for immediate relief.

### **Diseases :**

- Offers users comprehensive information about various skin allergy-related diseases, symptoms, causes, and preventive measures.
- Enriches user knowledge about skin allergies, promoting informed decision-making and self-awareness.

### **Payment :**

- Enables secure payment processing for medicines and doctor consultation fees.
- Provides users with a seamless and convenient way to complete transactions within the application.

## **Main Project:**

### **New Functionalities:**

#### **APPOINTMENT:**

- Intelligent scheduling based on doctors available.
- Appointment rescheduling on doctor leaves.
- Patient appointment cancellation.
- Patient rescheduling appointments.
- Finding free slots as per patient needs (Filtering).

#### **REMINDERS:**

- Implement an intelligent inventory management system to ensure the availability of medicines and prevent stockouts.
- Medicine expiry reminders.
- Appointment reminder.

### **CLINIC LOCATIONS:**

- Private clinic locations.
- Predicting nearest clinic locations.

### **QUICK REMEDIES (Flutter):**

- Different remedies categories for common allergy symptoms.
- Educational contents using videos, pictures etc.

### **CHATBOT IMPLEMENTATION:**

- AI chatbot guided help for doctor and patients.

### **ONLINE QUIZ:**

- Online quiz based on your symptoms to get a better view on your actual problem.

### **TESTIMONIALS:**

- Using NLP to analyse the feedback and give a view on the doctor or clinic.

### **ALLERGY PREDICTION:**

- Implement a machine learning model that can predict the likelihood of a user developing allergies based on their medical history, symptoms, and environmental factors.

### **ONLINE CONSULTATION:**

- Patient Doctor Video conference.

### **Software Specifications :**

- **Frontend : Html**
- **Backend : Python Django**
- **Database : MySQL**

### **References :**

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