

Medical Records and Service Aggregator

SATHYA T¹, KISHOREVARSHAN S², KALEESWARI C³, AADHI SANKARAN M⁴,
BARATHKUMAR RM⁵

^{1, 2, 3, 4, 5} Department of Information Technology, Sri Shakthi Institute of Engineering & Technology,
Coimbatore.

Abstract— The proposed invention aims to provide a unified and simplified solution for managing all key medical records. It offers a single platform to aggregate healthcare-related services and service providers, including insurance. The project maps doctors, hospitals, labs, and pharmacies with patient needs, making it easier to search for these services all in one place. It also keeps track of patient medical records and helps find preferred insurance in case of emergencies, all in one convenient location. Currently, hospitals, clinics, pharmacies, laboratories, and insurance providers do not offer a single place for all medical records, nor do they allow for emergency ambulance booking through GPS. Patients also do not have digital records of all healthcare-related activities. While there are aggregators for insurance, such as Policy Bazaar, there is no end-to-end healthcare aggregator that can map doctors, hospitals, labs, and pharmacies with patient needs. Our proposed idea is to address these issues and provide a comprehensive solution for all healthcare services.

I. FIELD OF THE INVENTION

The proposed idea aligns with the field of healthcare technology and digital health innovation. Specifically, it falls within the realm of health information technology (Health IT) and healthcare service aggregation platforms.

This field focuses on leveraging technology to improve the accessibility, efficiency, and quality of healthcare services and medical record management. The invention integrates various aspects of healthcare services, including medical records management, service provider mapping, emergency assistance, and insurance integration, into a unified digital platform. This field encompasses technologies and platforms that aim to streamline and enhance the delivery of healthcare services, improve patient access to medical records and healthcare providers, and facilitate better coordination and communication within the healthcare ecosystem.

The invention addresses the need for a comprehensive solution that centralizes medical records, service directories, emergency assistance, and insurance information to provide patients with a more seamless and integrated healthcare experience.

II. BACKGROUND OF THE INVENTION

The background of the proposed invention stems from the current challenges and inefficiencies prevalent in the healthcare industry regarding the management of medical records and access to healthcare services. In many healthcare systems worldwide, medical records are often fragmented across various healthcare providers, including hospitals, clinics, laboratories, and pharmacies.

Patients may have to deal with multiple medical records stored in different formats and locations, making it challenging to access and manage their health information effectively. Existing healthcare systems typically lack centralized platforms that integrate medical records, service directories, and insurance information into a single, user-friendly interface.

Patients often struggle to navigate through the complexities of the healthcare system to find relevant services and providers. During medical emergencies, accessing timely assistance, such as ambulance services, can be difficult due to the lack of real-time information and coordination between patients, emergency responders, and healthcare facilities.

This delay in response time can have serious consequences for patient outcomes. While digitalization efforts in healthcare have made progress in recent years, many patients still rely on paper-based records or outdated systems that do not fully leverage

the potential of digital technologies to manage health information efficiently.

Insurance information and coverage details are often scattered across various platforms and documents, making it cumbersome for patients to understand their insurance benefits and coverage options, especially during emergencies or when seeking healthcare services from different providers.

Against this backdrop, the proposed invention aims to address these challenges by offering a unified and simplified solution for managing all key medical records and accessing healthcare services. By creating a centralized platform that aggregates healthcare-related services and providers, including insurance, the invention seeks to streamline the patient experience and improve access to quality healthcare services.

The background of the invention underscores the growing need for innovative solutions that leverage technology to enhance the efficiency, accessibility, and quality of healthcare delivery while empowering patients to take control of their health information and decision-making process.

III. DETAILED DESCRIPTION OF THE INVENTION

The proposed idea revolves around the development of a comprehensive web-based application designed to serve as a one-stop platform for all medical services. Here's an elaboration on the key features and functionalities outlined:

- **AI-Based Authentication:** The application utilizes AI-powered authentication during registration to detect and prevent fake registrations for healthcare professionals such as doctors, hospitals, ambulance drivers, and insurers. This ensures the authenticity and credibility of the users within the platform.
- **AI-Powered Search Technology and Scheduled Doctor Appointments:** The application employs AI-driven search technology to identify and recommend the best healthcare options tailored to the users' specific needs. Additionally, users can conveniently schedule doctor appointments through the platform, benefiting both patients and

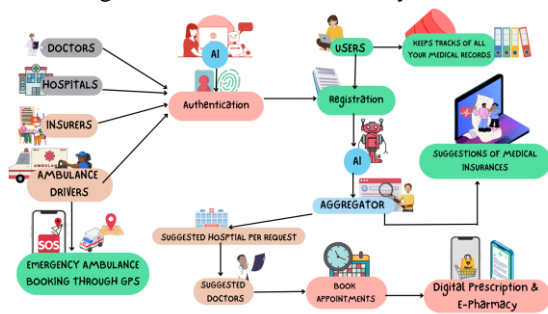
healthcare providers by optimizing the appointment scheduling process.

- **Insurance Assistance:** The platform assists users in finding the right insurance options and helps them understand their coverage requirements, enhancing transparency and accessibility in the insurance selection process.
- **Digital Prescriptions and E-Pharmacy:** Leveraging AI technology, the platform digitizes prescriptions, making them easily accessible to both patients and healthcare providers. Users can also purchase medicines through the E-Pharmacy feature, with the added convenience of home delivery.
- **Emergency Ambulance Service:** The application offers an emergency ambulance service that allows users to share their live location with ambulance drivers. Furthermore, the platform notifies nearby hospitals, ensuring swift response and timely medical assistance during emergencies.
- **Secure Digital Health Profile System:** Patients and authorized providers can securely store and access medical records, test results, prescriptions, and treatment history through the platform's digital health profile system, enhancing continuity of care and facilitating informed decision-making.
- **Healthcare Provider Discovery and Reviews:** Users can discover healthcare providers, read reviews, and explore nearby healthcare services with detailed information, empowering them to make informed choices about their healthcare options.
- **SOS Button for Emergency Assistance:** The platform features an SOS Button that swiftly books the nearest available ambulance and provides real-time arrival updates to the incident location, ensuring prompt emergency assistance when needed.
- **Payment Authentication for Doctor Appointments:** The Doctor Appointment feature includes payment authentication, ensuring secure transactions. However, refunds are not permitted once appointments are booked.
- **E-Pharmacy Restrictions and Medication Scanning:** Unauthorized prescriptions cannot be used to purchase medications through the E-Pharmacy feature. However, users can scan prescriptions to view medications, with the

platform notifying users and nearby stations in case of any detected bad medications.

- Insurance Details Upon Request: Insurance details and application steps are provided only upon user request, guiding users through the application process for insurance coverage.
- Two-Factor Authentication and User Dashboard: Healthcare professionals and patients can securely register and log in using two-factor authentication. A user dashboard is available for accessing account information, services, appointments, medical records, and account settings, ensuring a personalized and secure user experience.
- Notification Alerts: Users receive notification alerts for appointments, test results, updates, and upcoming medical camps in their area, as well as requests for emergency blood donations, enhancing communication and engagement within the healthcare community.

In summary, the proposed web-based application offers a holistic approach to healthcare management, leveraging advanced technologies and user-centric features to streamline healthcare access, enhance patient-provider communication, and promote overall well-being within the healthcare ecosystem.



Medical Records and Service Aggregator

IV. ABSTRACT

The proposed invention provides a unified and easy solution to manage all key medical records. It also provides a single platform to aggregate all healthcare-related services and service providers, such as insurances. It maps doctors, hospitals, labs, and pharmacies with patients' needs, and it can book appointments and emergency ambulances through GPS.

The project simplifies the process of searching for doctors, clinics, pharmacies, labs, etc., all in one place. It keeps track of patients' medical records and helps to find preferred insurances in case of emergencies, all in one place. Additionally, it helps to purchase medication online using the doctor's prescription.

V. CLAIMS

Claim 1: A computer-implemented method for managing medical records and healthcare services, comprising:

- Aggregating healthcare-related services and service providers, including doctors, hospitals, labs, pharmacies, and insurance providers, into a unified platform.
- Mapping healthcare providers with patient needs to facilitate the efficient search and selection of healthcare services.
- Providing a centralized repository for storing and accessing patient medical records, including test results, prescriptions, and treatment history.

Claim 2: A system for facilitating appointment booking and emergency assistance in healthcare, comprising:

- Utilizing GPS technology to enable users to book appointments with healthcare providers and access emergency ambulance services in real-time.
- Integrating AI-powered search technology to identify and recommend suitable healthcare options based on user preferences and requirements.

Claim 3: A secure digital platform for online medication purchase and insurance assistance, comprising:

- Digitizing prescriptions and facilitating online medication purchases with authentication and verification processes to ensure compliance with regulatory standards.
- Assisting users in finding and selecting appropriate insurance options, including preferred insurers and coverage requirements during emergencies.

Claim 4: An intelligent notification system for healthcare-related updates and alerts, comprising:

- Providing users with notifications for upcoming appointments, test results, medical camps, and requests for emergency blood donations.

- Delivering real-time updates on ambulance arrival times and incident locations during emergency situations.

Claim 5: A user-friendly interface for patients and healthcare professionals to securely register, log in, and access account information, services, appointments, medical records, and account settings, comprising:

- Implementing two-factor authentication to enhance security measures and protect user privacy.
- Offering a customizable dashboard for users to manage their healthcare preferences and settings efficiently.

Claim 6: A method for preventing unauthorized access to prescription medication purchases and ensuring medication safety, comprising:

- Restricting purchases of medications to authorized prescriptions only, with scanning capabilities to detect and notify users of potentially harmful medications.
- Collaborating with nearby stations to facilitate the prompt removal of identified harmful medications from circulation.