

Emergency Ambulance Network with Integrated Medical Assistance

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Abstract: *In emergency medical situations, the time it takes for an ambulance to reach a patient and transport them to the nearest healthcare facility is critical to the patient's survival. However, traditional emergency response systems often suffer from delayed response times, inefficient ambulance dispatch, and limited communication between ambulance personnel and hospital staff, leading to compromised patient care. This project aims to address these challenges by developing an Android-based application that integrates ambulance dispatch, real-time communication, and medical assistance features into a single platform. The proposed system will utilize real-time GPS tracking for dynamic routing of ambulances, ensuring the fastest possible response times. Ambulance personnel will have access to real-time patient data and communication tools, enabling them to inform hospital staff of the patient's condition before arrival. Additionally, the app will provide access to the patient's medical history, aiding first responders in delivering appropriate care during transit. The platform will also support communication between hospitals, ensuring that the nearest and the best-equipped facility is prepared to receive the patient. This integrated system is designed to improve the efficiency of emergency medical services by reducing delays, optimizing ambulance routes, and facilitating better-prepared medical care upon patient arrival. The ultimate goal of this project is to enhance the overall quality of emergency healthcare, saving lives by ensuring that critical time-sensitive decisions are made efficiently*

Keywords: Machine Learning, Wireless Communication, Real-time Systems, ICTs, GPS, Real-time Operating systems

