

PROPOSE A MOBILE APPLICATION WHICH CAN ANALYZE MEASURED HEALTH PARAMETERS

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Background: Modern healthcare systems are faced with great difficulty when managing chronic conditions as they require continuous monitoring and scheduled conducting of treatment for optimized care of the patients. Irregular medical check-ups obstruct the effective management of diseases, early intervention to avoid severe complications and increase the costs of healthcare along with congestion in hospitals. Remote patient monitoring (RPM) can help manage chronic diseases. However, many challenges exist to set back the integration of it into healthcare systems.

Methodology: This study explored various target platforms for mobile applications, researched various data analysis algorithms relevant to health parameters and identified the application architecture for efficient data reception, analysis, and storage via a comprehensive literature review using academic databases focusing on keywords such as 'medical device integration,' 'mobile health applications,' 'wireless communication in healthcare,' 'data transfer protocols,' and 'health monitoring devices.'

Deliverables: A mobile application which ensures real-time interpretation of electrocardiogram (ECG) waveforms of patients and allows healthcare professionals to provide personalized feedback to those patients was proposed. A prototype of the user interface of the said application was designed and introduced.

Conclusions: The proposed mobile application for ECG monitoring and analysis provides a clear vision and a huge possibility to improve the health care system in Sri Lanka. The application manages to subdue the three major problems that characterize modern health care delivery; time, cost, and privacy. This application is set to be a competent, economical solution to a large number of heart patients in Sri Lanka, enabled by the confidence in the privacy and ease of use.

Keywords: Remote health monitoring, mobile application, ECG, user interface