

SMART DOC: AN AI DRIVEN DISEASE PREDICTION AND CONSULTANT DIRECTION SMART SYSTEM

A. Alan Steve^{1*}, M.J.A. Amani¹ and M.A.C. Akmal Jahan¹

¹*Department of Computer Science, Faculty of Applied Sciences,
South Eastern University of Sri Lanka, Sammanthurai, Sri Lanka.*

**stevealan55@gmail.com*

Numerous developing nations, including Sri Lanka, struggle with healthcare challenges stemming from insufficient personnel, a scarcity of modern medical equipment, and a lack of contemporary hospitals in rural areas, contributing to elevated mortality rates in remote regions. Addressing these issues, this paper proposes an innovative solution through the development of an Android-based system. Specifically, a mobile expert system has been designed and implemented to provide diagnoses for forty prevalent diseases in Sri Lanka. The AI-powered Disease Prediction prototype provides early illness detection during urgency. It employs symptom-based queries and can guess possible illness when a person gets sick. For instance, if a person gets cough, he should know some basic information related to the sickness and symptoms. If the cough is mild, there is no need to go to doctor and waste money and time. Here, the person needs to decide to meet a physician or not. This app enables users in this direction. The mobile system utilizes Android operating system technology, which can be widely adopted in Sri Lanka. Evaluation of the system involved user feedback, highlighting its efficacy as a decision support tool for predicting and addressing common health issues in the country. The Disease Prediction Android App, crafted using Android Studio, exemplifies the application of Machine Learning in healthcare, enhancing disease detection and prediction. This user-friendly app enables individuals to input symptoms and facilitating early disease prediction. Leveraging the Naive Bayes algorithm, the application swiftly and accurately identifies ailments based on user-provided symptoms. In essence, this project underscores the potential of technology-driven solutions to address healthcare challenges in developing nations, specifically in the context of disease prediction.

Keywords: *disease prediction, Naïve Bayes algorithm, mobile app, decision support, machine learning, smart system*