SymptomDoc – Symptom checker to help bridge the gap between lack of public health services and the public

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Abstract

Public health services are considered the lifeblood of a country's general wellbeing. Sri Lanka as a developing country has been performing well on a regional stage, but it had always been having challenges thrown at it. Sri Lanka has had a rich history of serving the public with proper care, but as the times passed, the healthcare services in the country hit a deteriorating note. A count of issues such as, lack of funding for public health services, lack of resources and inefficiency in making timely decisions were the key reasons for the major drawbacks.

The project focuses on how people who are dependent on the public healthcare services sector of the country could benefit themselves saving time and having a better understanding on conditions patients could probably be diagnosed with. This way the application helps the patient gain more knowledge on possible conditions and guide themselves to reach the appropriate medical consultations as well. The symptom checker, the key functionality of the application was focused to be developed in a way it suits the local population than the existing solutions available in foreign countries. The key findings for implementing the prototype is, the range of suitable diseases to be utilised for predictions, the medicinal aspect that was required to be covered and how feasible it is to implement an application to solve the above problem. After validation of the idea considering different aspects it indicated it is a timely solution to work on, hence, designing the solution as a mobile application to maximise on the usability and functionality of 'Symptomdoc'.

The solution was evaluated by domain experts and few non-experts to identify the validity and practicality of the effort in order to bring the most to the users of the application to help stand as a bridge connecting the gaps in public healthcare services

Keywords: Public healthcare services, symptom checker, Machine Learning, Android, Multi-Layer Perceptron, Human resources, Physical resources