

6COSC023W – Final Project Report

Dr.TelePro -A clinical scheduling platform enabling digital patient engagement with an AI-powered symptom checker

Student: Vinuri Ranatunga (2017234)

Supervisor: Mr. Nishan Harankahawa

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Abstract

The Coronavirus pandemic in 2019 has caused healthcare workers to work with physical distance, resulting in a renewed focus on Telehealth. Despite the fact that telehealth is an integral part of healthcare in most advanced countries, Sri Lanka has yet to fully achieve its goal. The terminology "telehealth" is extensively used in the public and scholarly publications during COVID-19 control across the world as a technique of delivering healthcare at a distance. Also, The COVID-19 pandemic has driven Sri Lankans into social distancing. Therefore, healthcare services delivered from a distance have become critical in avoiding public transmission of COVID-19 through healthcare delivery organizations, along with preventing healthcare workers from being contaminated. Furthermore, individuals with viral diseases must be thoroughly followed up with telehealth steps to prevent spread of viruses.

Telehealth is an intriguing technique for increasing access to specialized treatment, particularly in remote communities. Unlike other new health approaches, comprehensive assessments will be taken in telehealth to make sure that limited resources are used effectively. In the appropriate conditions, telehealth can be a more cost-effective substitute for conventional health service delivery techniques. The digital health network is comprised of a number of interrelated systems with the common objective of improving healthcare delivery. Therefore, one of the most important elements of the system in the current condition is Telehealth. Furthermore, Dr.TelePro has been implemented and developed to fill the gaps and break down barriers where traditional healthcare has failed in the past.

The main project aim is to explore and analyse the problems that patients experience when they access to healthcare and due to barriers to healthcare services, I planned to implement an information technology solution for patients and doctors in order to overcome barriers to healthcare service while improving competitiveness in the market for better engagement with users. A complete study in the telehealth domain was undertaken using a literature review, questionnaires, and interviews to identify the requirements that will efficiently aid doctors and patients with the supervision, prediction, and evaluation of telehealth. A Machine Learning model has been developed to forecast diseases using the system and to recommend a doctor for the health condition. Also, this function act as the application's key distinguishing feature. This solution has been reviewed by healthcare professionals, experts in the IT field, and patients to ensure its quality and usefulness as a powerful tool for doctor-patient communication.

Key Words: Telehealth, Doctors, Patients, Healthcare Services, Sri Lanka, Rural Areas, Machine Learning, Cloud Computing, COVID-19, Barriers to Healthcare Services, Symptom Checker, Certified Pharmacies