DERMA CARE - SKIN DISEASE DIAGNOSIS WEB APPLICATION

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Abstract

Skin diseases are known to be a common disease in Sri Lanka and worldwide, which seriously affects patient's life and well-being. However, patients who are suffering from these skin diseases can be cured if diagnosed and treated in early stages. Due to various factors like delay in seeking medical assistance, issues in clinical attendance patterns, busy schedules of healthcare institutions and unavailability of experienced medical resources leads diagnostic issues in both sides of patients as well as Dermatologists.

Dermatologists often face doubts when diagnosing skin diseases. Such problems may emerge when comparable or rare skin infections are experienced. In such circumstances, a subsequent sentiment is highly invited.

Improvements in AI has helped specialists in tackle the issue of diagnosing skin diseases. This will help specialists and medical care laborers with recognizing skin diseases when required. However, the available systems can be further improved to a greater extent with the intension of optimizing the efficiency and accuracy. The aim of this research is to design, develop and evaluate a tool that can diagnose skin diseases as early as possible. This project presents an intelligent system to diagnose more than five skin diseases which are common in Sri Lanka, using image processing and Deep Learning with high accuracy to serve the healthcare sector in Sri Lanka.

Derma Care is a solution to bridge the gap between the public and health care services with the use of a skin disease diagnosis system, which addresses the common diagnostic issues faced by both Patients and Dermatologists in Sri Lanka. The methodology focuses on training a classification model using Convolutional Neural Network. The solution provided by Derma Care skin disease diagnosis web application was evaluated by the healthcare domain experts, technical domain experts as well as non-experts who are considered as the users of the application to identify the practicality and validity of the project.

Keywords: Skin disease diagnosis system, Image Processing, Deep Learning, Web application, Healthcare sector