



Scienxt Journal of Computer Science & Information Technology
Volume-2 || Issue-2 || May-Aug || Year-2024 || pp. 1-11

Skin disease detection system

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Abstract:

Skin diseases are quite prevalent and can be caused by various factors such as fungal infections, bacteria, allergies, or viruses. While advances in laser and Photonics-based medical technologies have improved the speed and accuracy of skin disease diagnosis, the associated costs consequently, image processing remain high. Emerged as a valuable tool for creating automated dermatology screening systems at Feature extraction is a critical an early stage. Component in classifying skin diseases effectively, and computer vision techniques are integral to this process.

This research contributes to the field of skin disease detection by proposing an image processing-based - approach. This method begins with a color image of affected skin area and utilizes image analysis to detect the specific type of disease present. What sets our proposed approach apart is its simplicity, speed, and minimal equipment requirements - only a camera and a computer are necessary.

The process starts with a color image input, followed by resizing to extract features using a pre- trained convolutional neural network. These features are then classified using a Multiclass Support Vector Machine (SVM). The results, including the disease type, extent, and severity, are presented to the user. Impressively, our system is capable of accurately detecting three distinct types of skin diseases, achieving a 100% accuracy rate

Keywords:

Skin Diseases, Image Processing, Machine Learning.