

ABSTRACT

Skin diseases are disorders affecting the outer layer of the human body, characterized by various symptoms such as inflammation, lesions, and changes in skin texture and color. This study aims to develop a skin disease classification application based on Convolutional Neural Network (CNN) to assist in predicting five types of skin conditions: Granuloma Annulare, Ringworm, Erythema Annulare Centrifugum, Psoriasis, and Nummular Dermatitis. A dataset of 4,105 skin images was divided into training, validation, and testing sets with a ratio of 70:15:15. The CNN model was designed with a combination of Convolutional Layers, Pooling Layers, Dropout, and Fully Connected Layers. The data were classified using a supervised learning approach with ReLU and Softmax activation functions and optimized with the Adam algorithm. The model achieved a test accuracy of 98.23% with 620 testing set. The main contribution of this research is the development of a low-complexity yet high-performance skin disease classification application, which has the potential to be applied in AI-based automatic predicting systems in the field of dermatology.

Keywords: Skin Diseases, Convolutional Neural Network (CNN), Deep Learning, Image Classification, Accuracy.