

ABSTRACT

Skin health problems are a common health issue and can have a significant impact on a person's life. Skin problems not only affect physical health, but can also cause psychological problems, especially if they occur on the face. Apart from having an impact on physical health, this condition can also reduce self-confidence. Therefore, rapid and accurate diagnosis is essential for effective treatment. This research aims to develop an automation system that is able to classify skin diseases through images using Convolutional Neural Network (CNN). CNN was chosen because it has the ability to recognize patterns and visual features in images, which makes it very suitable for image classification. CNN is a type of artificial neural network specifically designed for image data processing, making it suitable for this research. The dataset used in this research includes various types of facial skin diseases, such as acne boils, acne pustules, and acne papules, with a total of 300 images. Model performance is evaluated using metrics such as accuracy, precision, recall, and F1-score. Experimental results show that the developed CNN model can classify types of skin diseases with high accuracy, demonstrating the great potential of this technology in supporting fast and accurate diagnosis of skin diseases. This research shows performance with accuracy, precision, recall, and F1-score of 81%, 80%, 81%, and 80% respectively using 75 epochs with a training and testing data ratio of 80:20. Further development may involve improving the dataset and optimizing the model architecture.

Keywrds: *Convolutional Neural Network, Acne, Classification, Skin Health., Skin Diseases.*