

# Mobile-Based Skin Disease Diagnosis System Using Convolutional Neural Networks (CNN)

D Nandasena<sup>1</sup>, MWP Maduranga<sup>2</sup>

*Department of Computer Science<sup>1</sup>, Department of Computer Engineering<sup>2</sup>, Faculty of Computing, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka*

**Abstract.** Skin cancer is a serious hazard to everyone throughout the world. However, it is difficult to make an accurate skin cancer diagnosis. Deep learning algorithms have recently excelled in several different tasks. They've also been used for skin disease diagnosis jobs mainly. With around 85% accuracy, the suggested technique outperforms existing methods on the HAM10000 dataset. Its resilience in detecting the impacted region considerably faster with nearly 2x fewer computations than the standard MobileNet model results in low computing efforts. A mobile application, on the other hand, is built for quick and accurate action. By looking at an image of the afflicted area at the beginning of a skin illness, it assists patients and dermatologists in determining the kind of disease present. According to these findings, the suggested approach can assist general practitioners in quickly and accurately diagnosing skin diseases, therefore avoiding future complications and mortality.

**Keywords:** *CNN, Convolutional Neural Networks, Skin Disease Diagnosis, Mobile based system, Deep learning algorithms.*