IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 12, April 2025
Impact Factor: 7.67

Image Classification based Skin Disease Prediction using ML

Dr. Anup Bhange[1], Sajid Sheikh[2], Arpit Ninawe[3]
Guide & HOD of MCA[1]
Student of Master of Computer Applications[2, 3]
KDK College of Engineering, Nagpur, India
anupbhange@gmail.com, sajidsheikh.mca23@kdkce.edu.in, arpitninawe.mca23@kdkce.edu.in

Abstract: *Skin diseases are among the most prevalent health concerns worldwide, affecting millions across diverse populations. Early and accurate diagnosis is critical for effective treatment; however, access to expert dermatologists can often be limited. This project presents an intelligent, automated skin disease classification system utilizing ML.NET, Microsoft's machine learning framework. Leveraging the deep learning power of ResNet50—a convolutional neural network (CNN) known for its residual learning architecture—the system analyse skin lesion images and classifies them into various disease categories with high accuracy. The structured workflow encompasses data collection, preprocessing, feature extraction, model training, evaluation, and deployment within a secure, web-based application. Users can upload images from their device or webcam for real-time predictions, supported by authentication features like registration, login, and password recovery to ensure data privacy. An admin panel facilitates efficient user management, making the system suitable for both healthcare professionals and individuals seeking early diagnosis. By integrating ML.NET's deep learning capabilities with a robust and scalable design, this project demonstrates the transformative potential of machine learning in healthcare, offering a user-friendly solution that enhances diagnostic precision and improves patient outcomes.*

Keywords: Skin Disease Prediction, Machine Learning (ML), ML.NET, Image Classification, ResNet50, Medical Image Processing, Computer Vision

DOI: 10.48175/IJARSCT-25918