
INFORMATICS INSTITUTE OF TECHNOLOGY

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In Collaboration with

UNIVERSITY OF WESTMINSTER

# Nail Disease Identification and Treatment Recommendation System

A Project Proposal by

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# Declaration

I hereby certify that this project report and all accompanying materials are original works of mine that have never been submitted and are not being submitted now for any degree program.

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# Abstract

Nail fungus detection using image processing is a cutting-edge method for determining whether there is nail fungus present. Millions of people worldwide suffer from the widespread condition of nail fungus, which can be extremely uncomfortable and raise aesthetic issues. Visual inspection is the conventional way for identifying nail fungus, however this is frequently subjective and unreliable.

The author has used image processing methods, notably Convolutional Neural Networks (CNNs) coupled with a residual architecture, to get around this restriction. To achieve this, the author performed picture augmentations to construct a dataset. Two models were created, one with the background removed and the other not. The model with background removal achieved 98.7% accuracy, whereas the model without background removal achieved 97.14% accuracy.

Keywords: Image Processing, Nail Fungus Detection, Convolutional Neural Networks, Residual Networks, Feature Extraction

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