

# Multiclass Derma Detection Using Deep Transfer Learning

Akhila Ramchandran<sup>1</sup> and Harikrishnan S R<sup>2</sup>

Student, Final Year MCA<sup>1</sup>

Associate Professor, Department of MCA<sup>2</sup>

CHMM College for Advanced Studies, Trivandrum, India

**Abstract:** *The Multiclass Derma Detection Using Deep Transfer Learning project is aimed at developing a deep learning model that can detect derma on the human body. Acne, Allergy, Tinea Facial is a common skin condition that affects people of all ages and can lead to low self-esteem and depression if left untreated. Early detection and treatment can help prevent scarring and other serious complications. The proposed solution involves using transfer learning, a technique that involves leveraging pre-trained models for a related task to train a new model for a specific task. The pre-trained model will be fine-tuned on a dataset of labelled images to detect acne, allergy, tinea facial on the human body. The model will be trained to classify the severity of acne into three classes: mild, moderate, and severe. The dataset used in this project will be obtained from various sources, including online repositories and dermatology clinics. The dataset will be pre-processed to remove noise and inconsistencies, and the images will be resized to a standardized size. Data augmentation techniques will be used to increase the dataset's size and improve the model's generalization ability.*

**Keywords:** Machine learning, Deep learning, Neural Network, Convolutional Neural Network, VGG 19, RESNET 50

## REFERENCES

- [1] <https://www.tutorialspoint.com/python/index.htm>
- [2] [https://www.tutorialspoint.com/uml/uml\\_use\\_case\\_diagram.htm](https://www.tutorialspoint.com/uml/uml_use_case_diagram.htm)
- [3] <https://www.javatpoint.com/uml-sequence-diagram>
- [4] <https://ieeexplore.ieee.org/document/9256314>
- [5] Vijaya Mishra, Akash Kumar, V Monika Arora, "Deep convolution neural network based automatic multi-class classification of skin cancer from dermoscopic images"2021
- [6] R.K.M.S.K Karunanayake, W.G Malaka Dananjaya, M.S.Y Peiris, B.R.I.S. Gunatileka, Shashika Lokuliyana, Anuththara Kuruppu, "CURETO: Skin Diseases Detection Using Image Processing And CNN"2020