

# INFORMATICS INSTITUTE OF TECHNOLOGY In Collaboration with UNIVERSITY OF WESTMINSTER

# Skin Xpert

## Skin Disease Diagnosis using Image Analysis

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#### **ABSTRACT**

Skin disease diagnosis is a critical task in dermatology, early diagnosing skin diseases is a key factor in getting the right treatment and preventing complications. Skin Xpert is an easy-to-use system that uses advanced technology, like deep learning, to accurately identify specific skin conditions, including skin cancer by analyzing pictures of the skin,

Skin Xpert uses the ViT (Vision Transformer) technique, which is good for predicting skin diseases because it breaks down images into smaller pieces called patches. This allows the system to better recognize small details in the skin images. Another technique used by Skin Xpert is MobileNetV2, which is efficient and effective for analyzing skin conditions. Finally, Skin Xpert combines both ViT and MobileNetV2 using an ensemble approach, which helps improve the accuracy of the predictions.

**Keywords:** Skin disease diagnosis, Vision Transformer, Mobile Net, Dermatology, Image classification, Data augmentation, User-friendly interface, Accuracy, Healthcare technology, Early detection, Deep learning, Skin conditions.

#### **Subject Descriptors:**

- Computing methodologies → Artificial intelligence → Machine learning → Deep learning
- Computing methodologies → Artificial intelligence → Computer vision → Image recognition