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(57) Abstract :

ABSTRACT [0012] Skin diseases affect a significant portion of the global population and are often difficult to diagnose accurately without professional consultation. With the rise in dermatological disorders, early diagnosis has become crucial for effective treatment and prevention. The traditional diagnostic methods, which rely on visual inspection and clinical expertise, can sometimes be subjective, time consuming, and inaccessible in rural or underserved areas. This project presents a deep learning-based approach using the VGG16 convolutional neural network (CNN) model to classify skin diseases. The dataset used for this project is DERMNET, which contains thousands of skin disease images. Five common types of skin conditions were selected for classification. Images were preprocessed using contrast enhancement and resized to a uniform shape. [0013] To improve generalization and prevent overfitting, data augmentation techniques were applied. The model training was conducted in two phases initial training of the classifier layers and fine tuning of the convolutional base. The final model achieved approximately 90% validation accuracy. Furthermore, the trained model was deployed using Streamlit to provide an interactive and accessible web-based interface for real-time skin disease detection. This work demonstrates the feasibility of AI-powered tools to assist in preliminary dermatological diagnosis and enhance healthcare accessibility.

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