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**Dog Skin Disease Detection Using
Image Processing and NLP**

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Abstract

This project presents an AI-powered chatbot solution that has the potential to aid dog skin disease diagnosis for dog owners using the combination of image recognition and NLP. This system utilizes an image classification by convolutional neural network (CNN) and so it can recognize various dog skin diseases from the images uploaded. It also has a chatbot model based on HuggingFace's Mistral-7B to provide longer answers to the user's queries about symptoms, treatment, prevention, and cause of dog skin diseases from the appropriate PDF files. It is built with Flask to create the backend API to enable easy interaction with the image classification model as well as the NLP-based chatbot. A React Native mobile app serves as the frontend, providing a friendly interface to upload images and interact with the chatbot.

Key Words: AI-powered chatbot, dog skin diseases, image recognition, natural language processing, machine learning, diagnostic accuracy, pet health, behavioral changes, neural network.