

**A Group Project Submitted for Undergraduate Major Project**

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**By**

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**ABSTRACT**

Skin cancer is one of the most prevalent cancers globally, with early detection playing a crucial role in improving treatment outcomes and saving lives. **CanScan** is a mobile application that empowers individuals to monitor their skin health effectively. Designed as a regulated medical service, the app enables users to self-examine their skin easily, providing accurate and timely assessments for potential skin cancer. Integrating personalized advice and health path recommendations, CanScan helps users understand when, why, and how to act regarding their skin health. The app's purpose is to raise awareness, enhance early detection capabilities, and encourage proactive healthcare habits.

The application employs self-trained machine-learning models to analyze images of skin lesions or moles captured through smartphone cameras. These images are matched against a robust database of skin conditions to detect potential signs of melanoma or other skin cancers. Following the ABCD (asymmetry, border irregularity, color variation, and diameter) criteria, CanScan evaluates key lesion characteristics and tracks change over time. The app provides a detailed risk assessment score categorizing conditions as low, moderate, or high risk. Users receive tailored recommendations, including when to consult a dermatologist and how to maintain healthy skin practices. Additional features like historical image tracking, user-friendly design, and strict adherence to data privacy protocols ensure both functionality and security. The highlight of CanScan lies in its ability to empower users with an easy-to-use, technologically advanced tool for self-examination and early detection. This proactive approach not only facilitates timely medical intervention but also promotes healthier outcomes for users at risk.