Skin n Sense: A Comprehensive Health Monitoring System

TECHNICAL FIELD OF INVENTION

The invention is a digital health Android app called "Skin n Sense," focusing on skin disease prediction and mood assessment. It's like having a digital helper that uses machine learning to spot skin problems early on and assess how you're feeling.

BACKGROUND

A significant portion of the global population faces the challenges of skin disorders, alongside mental health issues such as anxiety and stress. Recognizing the widespread impact of these concerns, the invention, "Skin n Sense," offers an innovative solution by integrating skin health assessment and mood analysis. Through advanced technologies, including Machine Learning and segmentation, this invention addresses the pressing need for early detection and intervention. Furthermore, it incorporates features such as fetching a list of nearby medical practitioners through a custom-created API, enhancing accessibility to healthcare resources for users.

OBJECTIVES

The primary objective is to provide an integrated health monitoring system that combines skin disease prediction and mood assessment. This system aims to empower both individuals and healthcare professionals in managing physical and emotional well-being effectively. Through accurate skin disease prediction, the system helps users identify potential skin conditions early on, facilitating timely medical intervention. Simultaneously, by assessing the user's mood and emotional state, "Skin n Sense" contributes to a comprehensive understanding of health.

FIGURES

The flow chart and 1-level DFD provides a visual representation of how "Skin n Sense" operates. It illustrates the interconnectedness of various components within the system.

This visual aid showcases the seamless integration of skin symptom analysis, mood assessment, and data analysis.
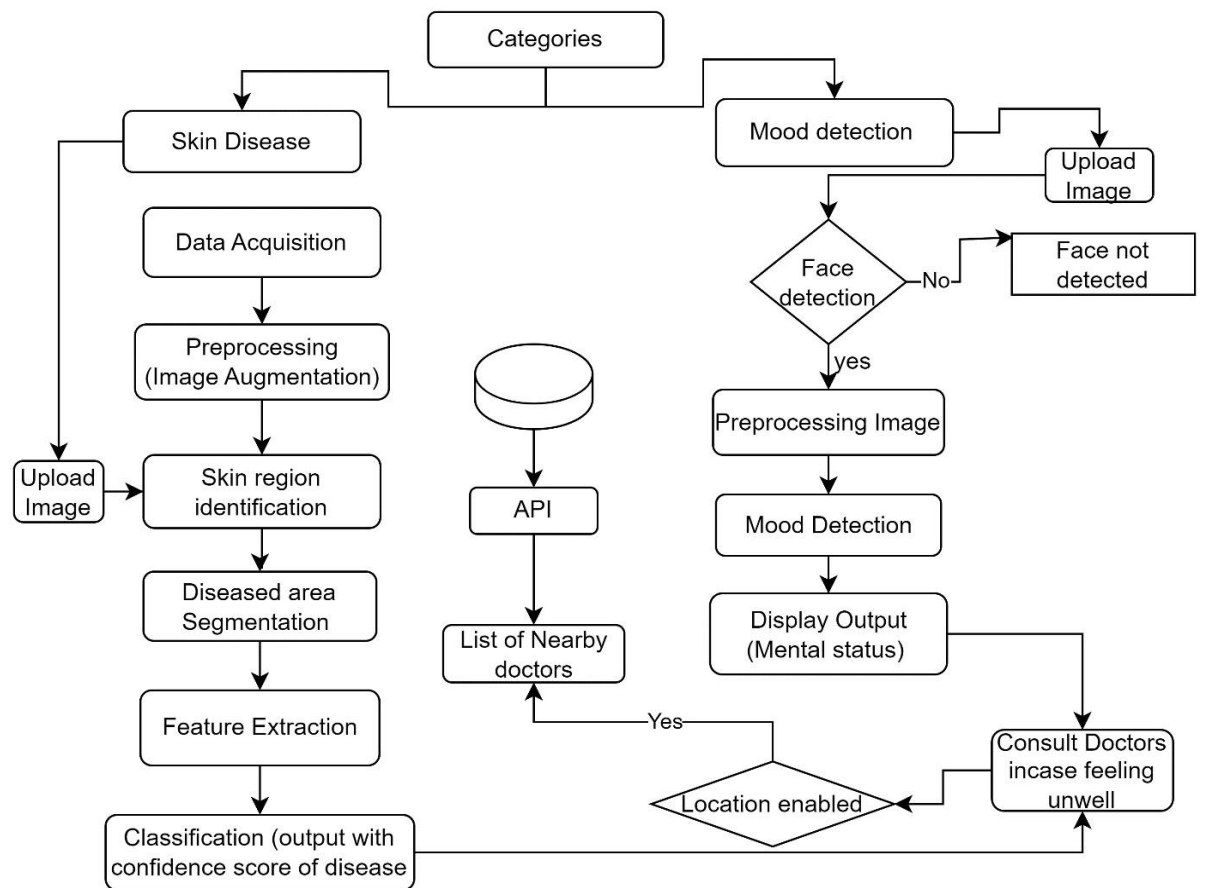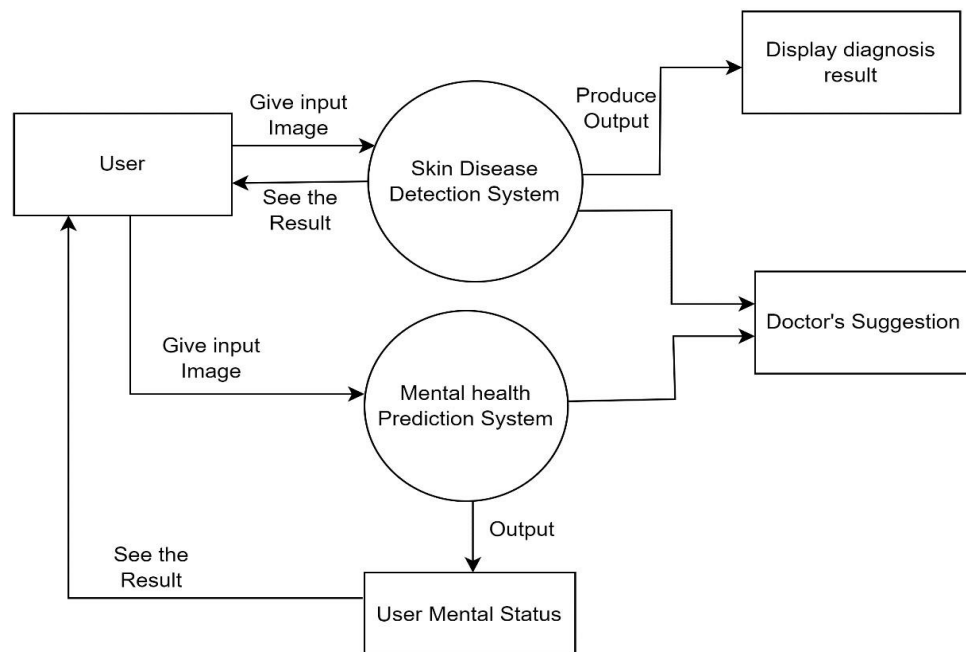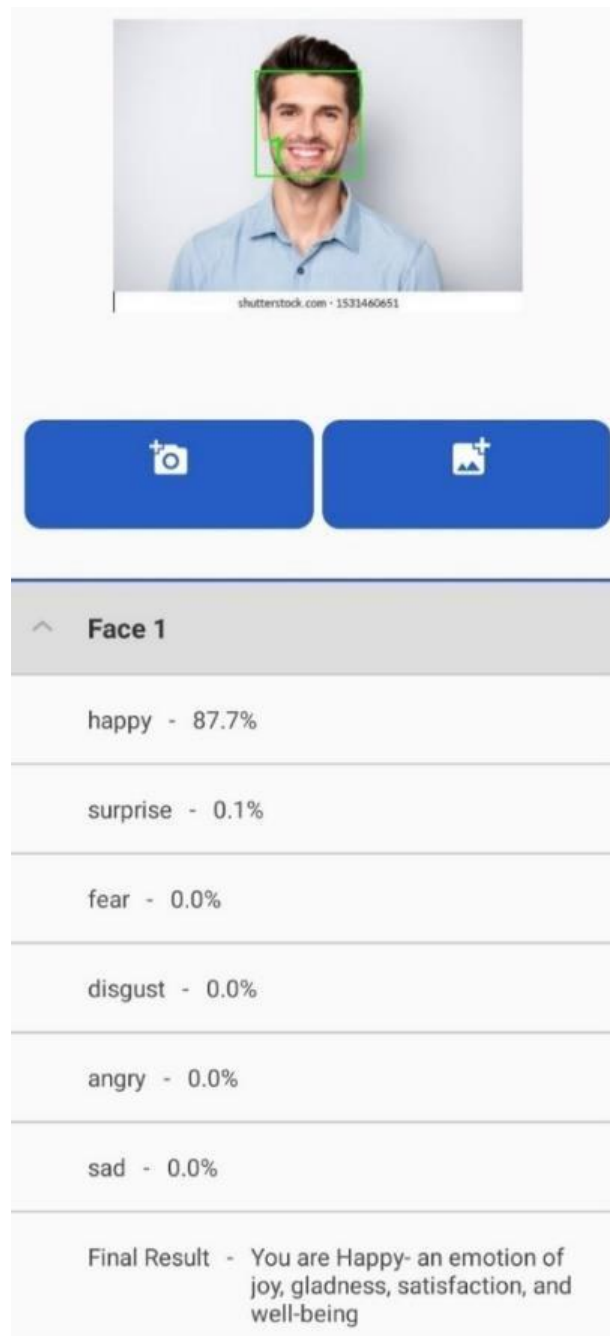
Figure-1 Flow Chart

Figure-2 1-level DFD

Figure-3 Skin Disease Classification Results

Figure-4 Mood Detection Diagnosis Results

CLAIMS

The claims section outlines the specific features and functionalities of "Skin n Sense" that are considered novel and deserving of patent protection.

Claim 1: "Skin n Sense" presents an integrated health monitoring system comprising a skin disease prediction module, tailored to examine user-provided skin symptoms and deliver precise forecasts of potential skin conditions.

Claim 2: Within "Skin n Sense," the mood assessment module serves as a comprehensive tool for gauging users' emotional states and offering valuable insights into their mental well-being.

Claim 3: "Skin n Sense" goes a step further by providing users with access to nearby healthcare professionals when mental health concerns arise. This feature enhances the system's overall utility by ensuring prompt and appropriate care.

TECHNOLOGY USED

1. Machine Learning
2. Front-end:
   - XML
   - HTML
   - CSS
3. Backend:
   - Kotlin
   - Java
   - Google App Script

ABSTRACT

This is a digital health and wellness application that amalgamates technology and healthcare, offering a comprehensive system for health assessment. The innovative system primarily focuses on skin health analysis and mood assessment, recognizing the intricate relationship between physical health, particularly skin conditions, and mental health challenges. This aims to empower users and healthcare professionals alike by providing early detection of potential skin diseases, allowing for timely medical intervention. Simultaneously, the system assesses the user's mood and emotional state, contributing to a deeper understanding of well-being. The invention offers an integrated solution that seamlessly incorporates Machine Learning for skin disease prediction and segmentation, ultimately enhancing the quality of life.

END USERS

It identifies the primary beneficiaries of "Skin n Sense." These include individuals who are interested in monitoring their health, making better treatment decisions, and healthcare

organizations etc. It's designed for individuals who value comprehensive health management and seek an easy-to-use digital solution on their Android devices.

ADVANTAGES

- **Accurate Skin Disease Prediction:** The system excels in precisely predicting skin diseases, enabling prompt treatment.

- **Mood Assessment for Mental Health:** It assesses mood, contributing to mental health insights and well-being assessment.

- **Consult Nearby Healthcare:** Users are encouraged to consult nearby healthcare professionals for further guidance.

- **Holistic Health and Wellness:** "Skin n Sense" promotes comprehensive health by addressing physical and emotional well-being, enhancing overall quality of life.

SUMMARY

Skin conditions and mental health issues, like stress and anxiety, impact a considerable global population. Recognizing the importance of early detection and timely intervention, an integrated health monitoring system has been developed. This innovative solution includes a skin disease prediction module that identifies skin conditions based on user-input symptoms, enabling prompt medical attention. Additionally, the mood assessment module offers insights into users' emotional well-being. To ensure comprehensive care, the system facilitates connections with nearby healthcare professionals when mental health concerns arise. This integrated approach enhances overall health management, promoting early intervention and effective care.

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