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AI-Powered Skin Analysis System

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Abstract

This project creates a simple AI system that examines skin images taken under a microscope. It checks for issues such as acne, pores, and redness, and displays the analysis to the user. It is designed to make the work of beauty salons easier.



Methodology

- Skin images were collected using a microscope.
- Images were preprocessed (resizing and normalization) to improve quality.
- A YOLO-based deep learning model was used to detect acne, pores, oily skin, and dry skin.
- The dataset was split into training, validation, and test sets.
- The system was developed using Python and C++, with OpenCV for image processing.
- Results are displayed through a user interface.
- Data is stored in a database for future analysis.

Result

- AI will be able to analyze skin photos.
- It will identify problems such as acne, redness, and pores.
- The system will provide fast and reliable results.
- It will be easy to use in beauty salons.
- Employees will be able to quickly identify skin problems in customers.

References

- Sharma, B., Singh, K., Gupta, R., & Kumar, A. (2020). Skin condition diagnosis using image processing techniques. *Journal of Dermatological Science*, 98(3), 145–152.



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