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Hair and Beard style Recommendation System based on the Face Shape

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ABSTRACT

This project aims to develop a hair style recommendation system that utilizes Convolutional Neural Networks (CNNs) to classify different face shapes. The system is built using open-source libraries such as TensorFlow and Keras, and it leverages state-of-the-art machine learning techniques to provide personalized beauty recommendations.

The CNN model is trained on a dataset of images containing various face shapes, and once trained, it is used to predict the face shape of a user based on their image. The predicted face shape is then used to recommend hairstyles that would complement the user's face shape. The hairstyle recommendations are provided to the user in a user-friendly interface that includes interactive options such as selecting hair length, color, and style.

The system's performance is evaluated using metrics such as accuracy, precision, and recall. The results demonstrate the potential of using machine learning techniques for personalized beauty recommendations. The system's accuracy and precision are crucial for the reliability of the recommendations provided.

This study presents a novel approach to hair style recommendation that can be further investigated by incorporating additional features such as hair texture and color for more precise recommendations. This system has the potential to improve the customer experience at hair salons, helping clients choose hairstyles that complement their features and preferences. Additionally, it could be incorporated into beauty and wellness apps, providing users with an enhanced, personalized beauty experience.

Overall, the project showcases the utility of machine learning techniques in the beauty industry and offers new possibilities for personalized recommendations. It demonstrates the potential of combining image classification and recommendation systems to create a more personalized beauty experience. Future research could focus on expanding the system's capabilities to incorporate additional features and creating a more robust dataset for training the model.