PROJECT REPORT

JAWLINE DETECTION FOR SKIN TONE IDENTIFICATION TO DETERMINE FOUNDATION RECOMMENDATION USING K-MEANS CLUSTERING.

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ABSTRACT

Many people now use makeup to cover up their facial imperfections, but much worse after wearing makeup. One of the causes is the wrong choice of foundation shade. Choosing the wrong foundation can cause your face to appear grayer. To reduce errors in choosing a foundation shade, researchers created a system by inputting a facial image which will then be processed with the help of OpenCV, K-Means, and Euclidean. The use of OpenCV is to determine the jawline because the skin color around the jawline will increase the accuracy of choosing a suitable foundation. Then K-Means find the dominant color of the skin around the jawline and make it in the form of a hex color. Euclidean finds the foundation shade that best matches the user's skin tone results by comparing the hex color of the skin tone obtained with the hex color in the dataset. The dataset used comes from Kaggle, which is around 600 hex colors from various global product foundations. The result you will get is the foundation shade that best matches the input face image.

Keywords: Foundation, OpenCV, K-Means, Euclidean