Artificial Intelligence And Machine Learning (AIML) - Project

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Problem Statement : Skin Tone and Outfit Matching System

The Skin Tone and Outfit Matching System addresses the challenge of finding clothing that complements diverse skin tones. Many consumers face difficulties selecting outfits that enhance their natural beauty, leading to dissatisfaction in the shopping experience. This project leverages machine learning algorithms to analyze skin tones and provide personalized clothing recommendations based on user preferences and current fashion trends.

By engaging with stakeholders—including consumers, fashion experts, and retailers—the system ensures relevance and inclusivity in its offerings. Continuous feedback mechanisms allow for iterative improvements, enhancing user satisfaction. Ultimately, this innovative solution aims to empower individuals in their fashion choices while promoting a more inclusive landscape in the fashion industry.

Dataset:

1. **Title** : Google Open Images Mutual Gaze Dataset

   Source: Google Dataset

Algorithm:

- **Input Collection**: Gather user skin tone, preferences, and size.

- **Skin Tone Analysis**:

  - Preprocess image.
  - Classify skin tone (warm, cool, neutral).

- **Outfit Database**: Maintain a database with outfit details, colors, styles, and sizes.

- **Matching Logic**:

  - Use color theory for compatibility.
  - Filter outfits by user preferences and size.

- **Recommendation Generation**: Compile and rank outfits based on compatibility and user feedback.

- **Output**: Present recommended outfits with images and purchase links.

Expected Outcome :

The Skin Tone and Outfit Matching System is designed to provide personalized outfit recommendations tailored to individual skin tones, enhancing user confidence and satisfaction in their clothing choices. By promoting inclusivity, the system caters to a diverse range of skin tones and fashion preferences, encouraging higher user engagement and retention. Continuous feedback loops allow for the refinement of the recommendation algorithm, ensuring relevance and accuracy over time. .