

Fashion Recommendations using Image Features: Case Study

A fashion recommendation system using image feature extraction is a technology that analyzes the visual content of fashion items (such as clothing, accessories) to recommend similar or complementary products to users.

The provided dataset consists of images of women's fashion items, including a wide variety of clothing and accessories. Each image represents a unique item, categorized by type (e.g., dresses, tops, skirts), style (e.g., casual, formal, sporty), and other attributes like color and pattern. The images are collected in a uniform format to facilitate the process of feature extraction and analysis.

The primary objective is to develop a fashion recommendation system that can analyze an input fashion item image and recommend similar items from the dataset based on visual similarity. The system should:

1. **Extract Features:** Utilize a pre-trained CNN model (e.g., VGG16, ResNet) to extract comprehensive features from each image in the dataset, capturing aspects such as texture, color, and shape.
2. **Measure Similarity:** Implement a similarity measure (e.g., cosine similarity) to quantitatively compare the extracted features of the input image against those of the images in the dataset.
3. **Recommend Items:** Based on the similarity scores, identify and recommend the top N items that are visually similar to the input item.