Project Proposal: Skincare Product Recommendation System

Dataset link

Problem Identification:

The problem I want to solve is helping consumers make informed decisions about skincare products. Influencers and celebrities often endorse skincare products, which may not necessarily be suitable for everyone. I aim to provide individuals with affordable and tailored skincare recommendations based on their specific skincare objectives through collaborative and content based filtering.

Context:

The context of this project is the skincare industry, which has seen rapid growth and has been heavily influenced by influencers and celebrities. It's important to note that not all products work the same for every skin type, and ingredients play a significant role in skin care outcomes.

Criteria for Success:

To measure the success of this project, could consider factors such as the accuracy of skincare product recommendations and user satisfaction with the recommendations, cost-effectiveness compared to popular products.

Scope of Solution Space:

The solution involves analyzing a dataset of skincare product reviews and information to make tailored recommendations. The scope also includes defining criteria for identifying skincare products within the dataset.

Constraints:

Some potential constraints might include data quality issues(such as bias) and limited computational resources.

Stakeholders:

The stakeholders in this project could be skincare enthusiasts, consumers looking for affordable skincare options, and potentially skincare product manufacturers and retailers who want to understand consumer preferences.

Data Sources:

This dataset comes from web scraping the Sephora website. It includes multiple tables, primarily review tables and a product information table ('product_info.csv'). The data sources are essential for building the recommendation system.

Approach:

Based on the information provided, the approach involves:
1. Analyzing the 'product_info.csv' table as well as the various review tables to identify skincare products and user reviews.
2. Extracting relevant features and information from the dataset.
Merging these tables together
3. Creating a recommendation system that considers user preferences, skin type, and skincare objectives.
4. Evaluating the performance of the recommendation system.

Deliverables:

The deliverables include code for the recommendation system, a report explaining the methodology and findings, and possibly(if time allows) a user-friendly interface for individuals to input their skincare objectives and receive personalized product recommendations.