

Sephora Skincare Product Analysis & Recommender

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Background



- ★ Multinational retailer for skincare, makeup, fragrance, and hair care products
- ★ Operates online & through physical stores worldwide
- ★ 340 brands & over 45,000 products
- ★ Reinforces its dedication to "We Belong to Something Beautiful" by continually striving to provide exceptional customer service, innovative shopping experiences, and staying at the forefront of the ever-evolving beauty industry

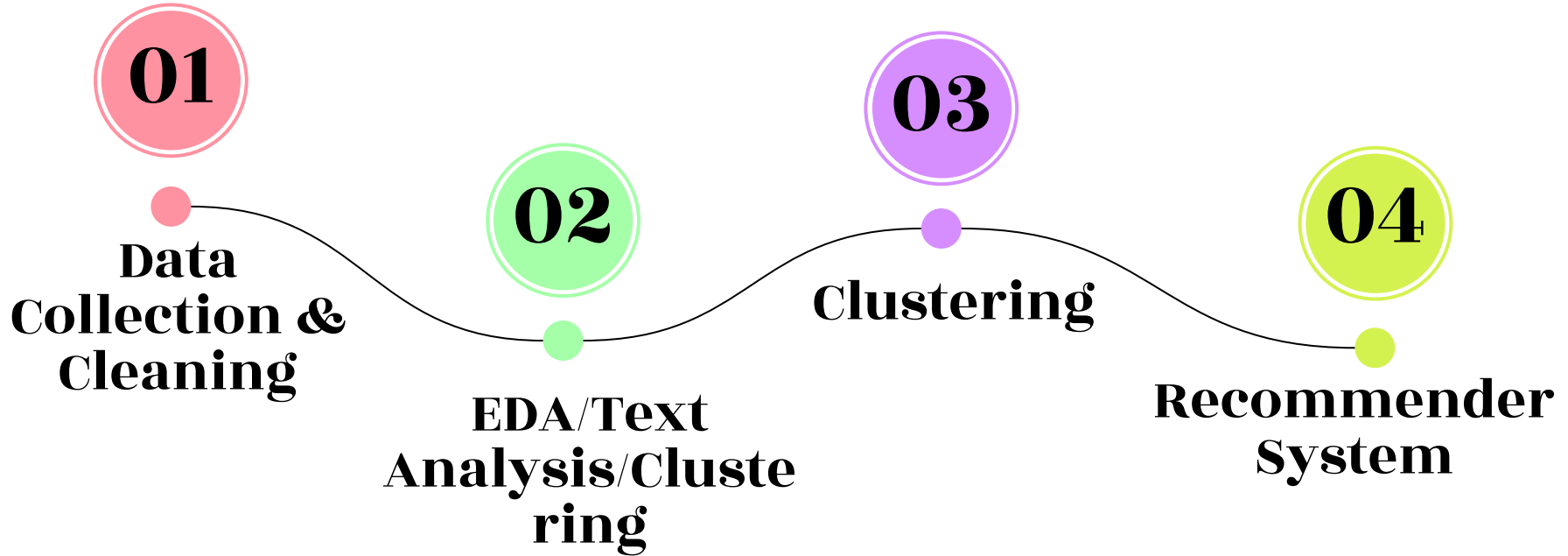


Objective

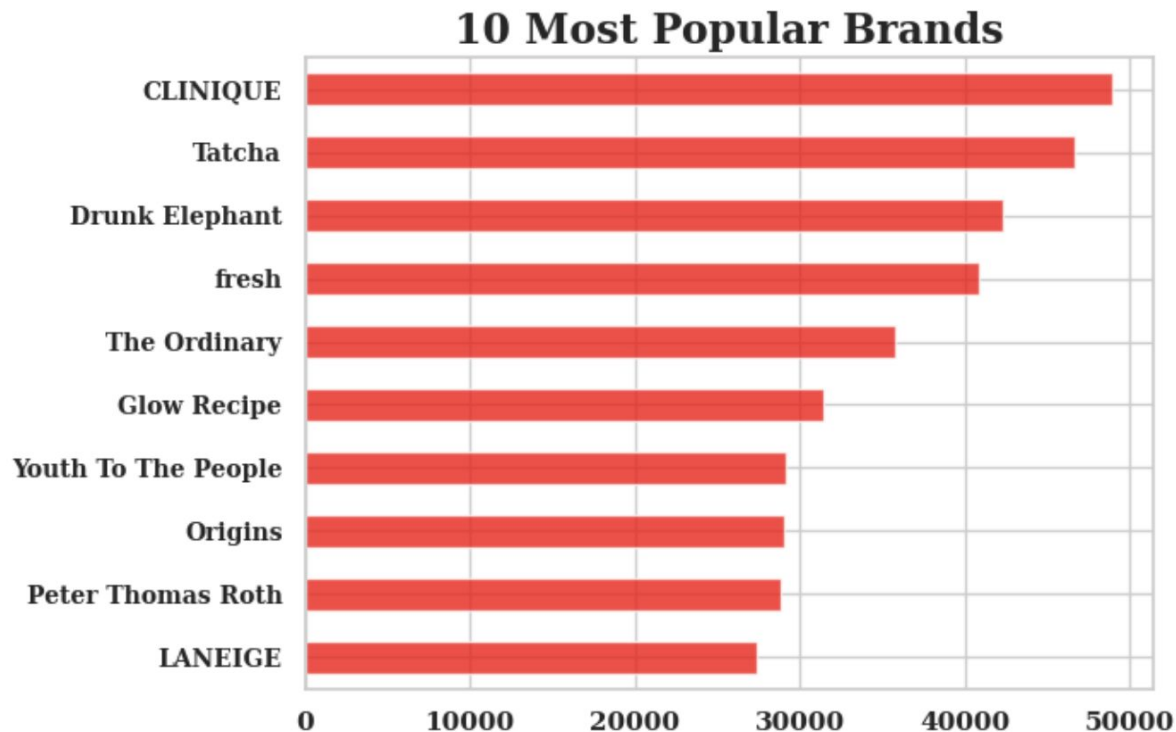
In the extensive selection of skincare brands offered at Sephora, promoting user exploration and engagement with diverse products and brands is key!

- ★ Utilize K-means clustering and text analysis on product reviews
- ★ Develop a recommendation system for Sephora's skincare products

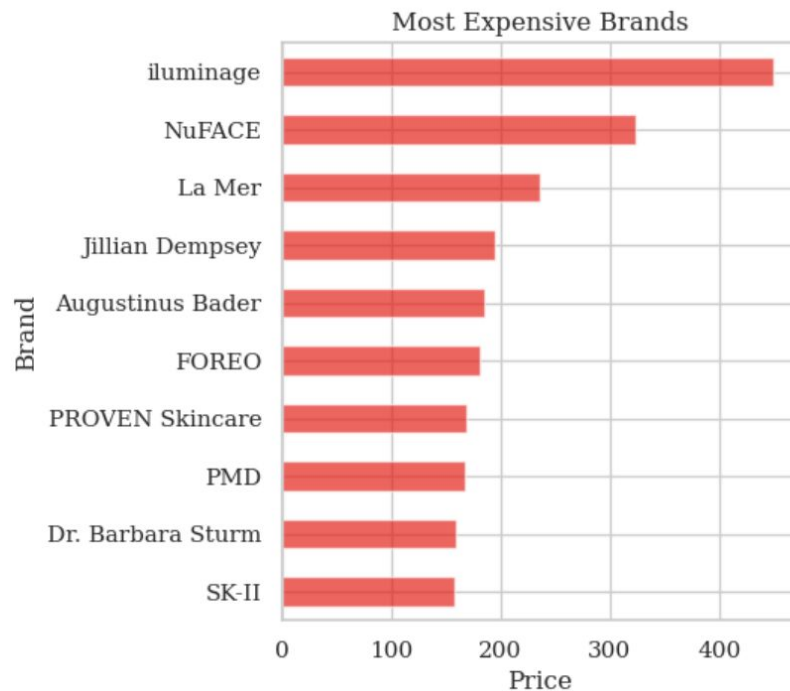
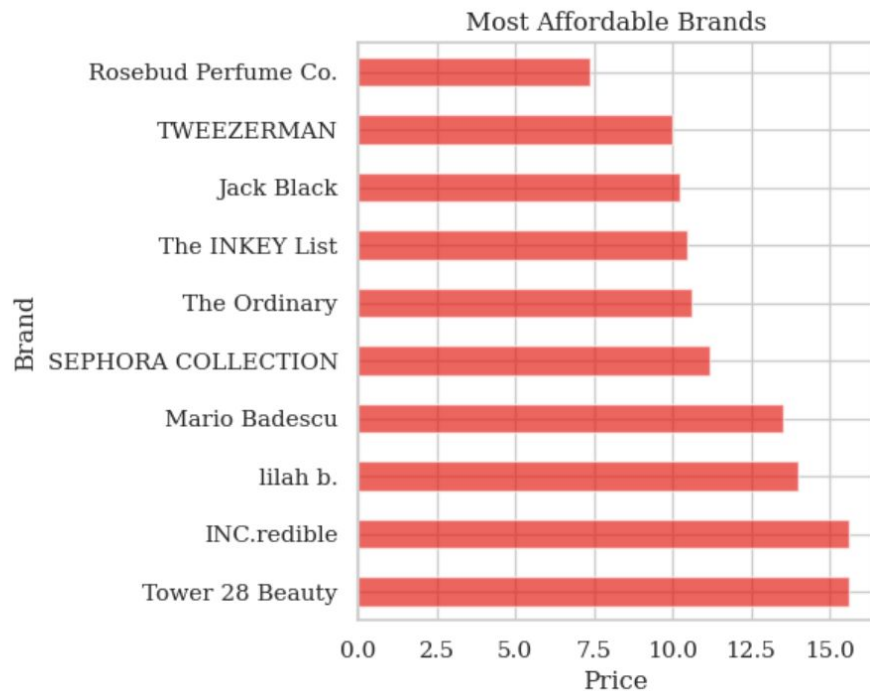
Process



Exploratory Data Analysis



Exploratory Data Analysis



K-Means Clustering

Cluster 0: High-rated, recommended, affordable products with high review counts.

Cluster 1: Low-rated, not recommended, expensive products with low review counts.

Cluster 2: Highest-rated, highly recommended, higher-priced products with low review counts.

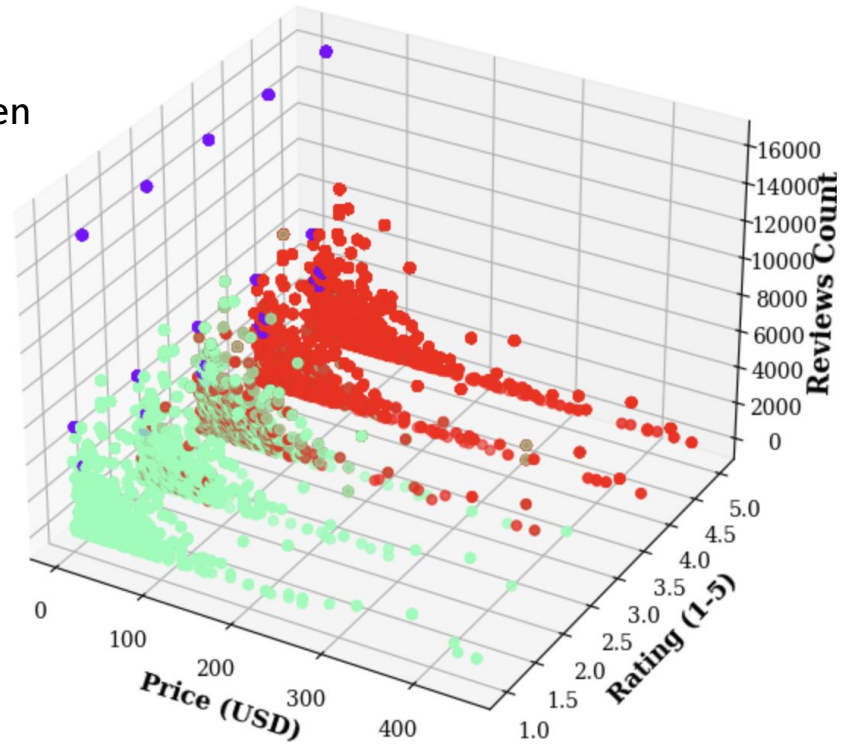


Product Clusters

Cluster 0 = purple

Cluster 1 = light green

Cluster 2= red



Text Analysis



Recommended

little goes
fine lines
acne prone
leaves feeling
honest review
first time
little bit
dark spots
exchange honest
dark circles



Not Recommended

acne prone
excited try
waste money
see difference
worth price
dark circles
notice difference
got sample
high hopes
first time

Recommender System

- ★ The primary goal of this recommender system is to offer users product recommendations based on their search queries.
 - For example, if a user is seeking a new sunscreen, the system will present 2-5 appropriate options for them to explore, similar to a weekly discovery feature but focused on their exact product of interest.



Recommender Demo



Conclusion

Recommendations:

Yes to implementing the insights gained from the analysis and recommendation model!

- Beneficial for Sephora, enhancing the customer experience and driving sales

Further Steps:

- Optimize Model
 - Look into different recommender algorithms
 - Different features are helpful to further personalized recommendations
- Data Enrichment
 - Update the dataset with new products that have been recently launched and remove products that no longer are sold at Sephora
 - Include makeup, fragrance and hair care products

Thank you !



Any
Questions ?



