Fashion Brands and Customer Behaviour Patterns

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AIDA - Project 1

Aim and Approach

- **Aim** - To club the the given brands based on data provided
- **Approach** - Clustering based on euclidean distance calculated amongst the brands based on the scores given according to following parameters - luxurious, traditional, intellectual, brilliant, calm, youthful, friendly, simple, energetic.
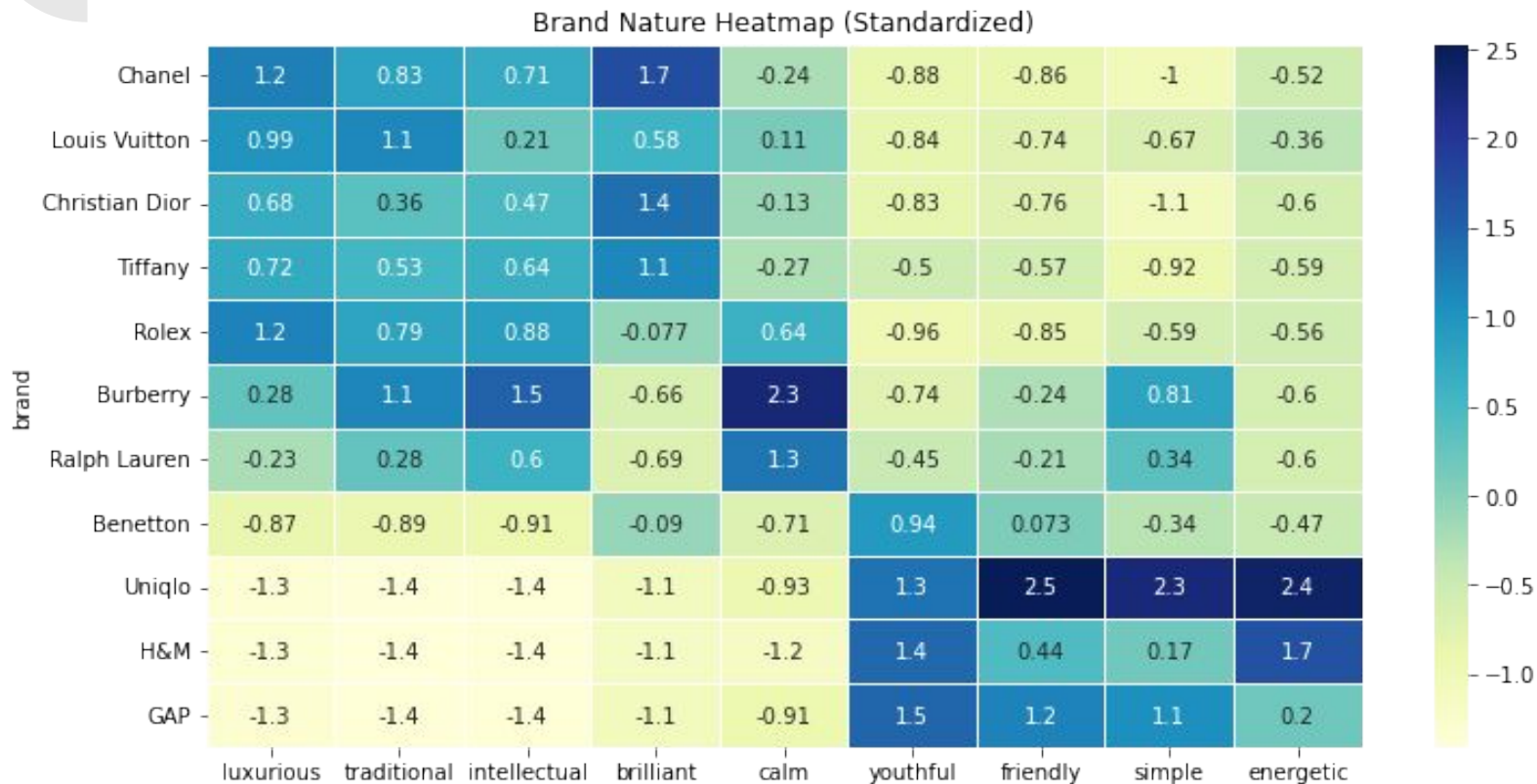
Data and Preprocessing

- Loaded the data as a Pandas DataFrame.
- Standardized the values using the StandardScaler() function from the sklearn.preprocessing library.

Heat Mapping

-   Done using the seaborn library

Brand Nature Heatmap (Standardized)

brand	luxurious	traditional	intellectual	brilliant	calm	youthful	friendly	simple	energetic
Chanel	1.2	0.83	0.71	1.7	-0.24	-0.88	-0.86	-1	-0.52
Louis Vuitton	0.99	1.1	0.21	0.58	0.11	-0.84	-0.74	-0.67	-0.36
Christian Dior	0.68	0.36	0.47	1.4	-0.13	-0.83	-0.76	-1.1	-0.6
Tiffany	0.72	0.53	0.64	1.1	-0.27	-0.5	-0.57	-0.92	-0.59
Rolex	1.2	0.79	0.88	-0.077	0.64	-0.96	-0.85	-0.59	-0.56
Burberry	0.28	1.1	1.5	-0.66	2.3	-0.74	-0.24	0.81	-0.6
Ralph Lauren	-0.23	0.28	0.6	-0.69	1.3	-0.45	-0.21	0.34	-0.6
Benetton	-0.87	-0.89	-0.91	-0.09	-0.71	0.94	0.073	-0.34	-0.47
Uniqlo	-1.3	-1.4	-1.4	-1.1	-0.93	1.3	2.5	2.3	2.4
H&M	-1.3	-1.4	-1.4	-1.1	-1.2	1.4	0.44	0.17	1.7
GAP	-1.3	-1.4	-1.4	-1.1	-0.91	1.5	1.2	1.1	0.2

Found the Top Brand\Customer Nature Associated with each Brand

- **Chanel:** brilliant, luxurious, traditional
- **Louis Vuitton**: traditional, luxurious, brilliant
- **Christian Dior**: brilliant, luxurious, intellectual
- **Tiffany**: brilliant, luxurious, intellectual
- **Rolex:** luxurious, intellectual, traditional
- **Burberry**: calm, intellectual, traditional
- **Ralph Lauren**: calm, intellectual, simple
- **Benetton**: youthful, friendly, brilliant
- **Uniqlo**: friendly, energetic, simple
- **H&M**: energetic, youthful, friendly
- **GAP**: youthful, friendly, simple

Multidimensional Scaling

- Firstly, found the euclidean distance matrix amongst the brands using the scipy.spatial.distance library
- Carried out MDS to represent the data in 2 dimensions using the manifold from sklearn library.

Graphical Representation

- Used matplotlib.pyplot to display the data in a 2 dimensional graph.
- Roughly - 3 clusters are visible
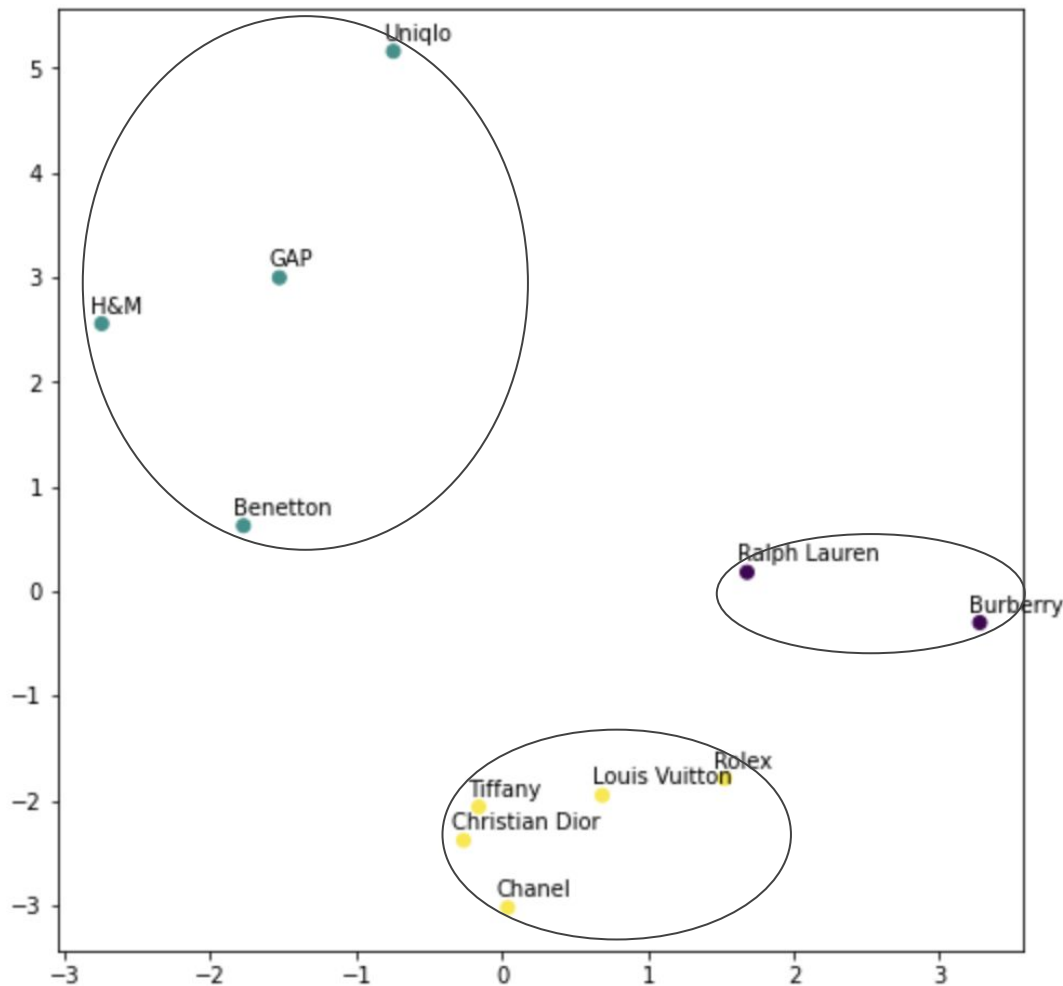
Interpreting the Clusters

Based on the top nature associated with the brand and general information about the brand

Cluster - 1: Youthful Trendsetter Brands

This cluster is characterized by youthful, friendly, and simple natures. Energetic and brilliant qualities are also present in some brands within the cluster. These brands target a younger, more casual audience and offer affordable, trendy clothing options. The focus is on providing a diverse range of products that cater to various styles, while still maintaining a budget-friendly price point.

GAP

UNIQLO

H&M

UNITED COLORS OF BENETTON.

Cluster - 2: Timeless Sophisticated Brands

BURBERRY

RALPH LAUREN

These brands are characterized by their calm, intellectual, and traditional nature. This cluster represents brands that cater to a more mature and sophisticated customer base. They focus on offering classic, timeless pieces that convey a sense of elegance and refinement.

Cluster - 3: Luxury Icon Brands

The brands in this cluster are predominantly characterized by their luxurious, brilliant, and traditional natures. Intellectual qualities are also present in some of the brands. This cluster represents high-end, luxury brands that focus on craftsmanship, quality, and exclusivity. Customers who choose these brands are often seeking status and prestige through their fashion choices.

CHANEL

LOUIS VUITTON

Dior

ROLEX

TIFFANY & Co.

Thank You