Akshat Parakh

MIS 381N User Generated Content Analysis

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Assignment 1(Edmunds)

1.Which forum you chose? (provide URL)

Ans. I have used the Edmunds forum which is an American online resource of automotive information. The URL is as follows:
http://forums.edmunds.com/discussion/2864/general/x/entry-level-luxury-performance-sedans/p .

2.Which 10 brands you chose and why?

Ans. The following table depicts the brands I have selected:

BRAND	FREQUENCY
BMW	1796
Audi	506
Lexus	505
Honda	378
Nissan	316
Subaru	229
Toyota	255
Volkswagen	201
Ford	160
Porsche	111

3.Show all lift ratio calculations in a table?

Ans. Lift ratio for brands:

Brand Pairs	Lift Values
bmw_audi	1.607920984
bmw_lexus	2.089197116
bmw_honda	1.181196309
bmw_nissan	1.182691494
bmw_subaru	1.198733722
bmw_toyota	1.335909865
bmw_volkswagen	1.431539408
bmw_ford	1.302268931
bmw_porsche	1.757960633
audi_lexus	2.185105467
audi_honda	1.273291925
audi_nissan	1.300220143

audi_subaru	1.794190241
audi_toyota	1.104859335
audi_volkswagen	4.497079818
audi_ford	1.83423913
audi_porsche	2.432432432
lexus_honda	1.306930693
lexus_nissan	1.228349417
lexus_subaru	1.284102209
lexus_toyota	2.767617938
lexus_volkswagen	1.580020689
lexus_ford	1.396782178
lexus_porsche	2.225314423
honda_nissan	4.773960217
honda_subaru	1.50966937
honda_toyota	5.546218487
honda_volkswagen	2.423596304
honda_ford	2.553571429
honda_porsche	2.265122265
nissan_subaru	1.477530264
nissan_toyota	4.865227103
nissan_volkswagen	2.992631778
nissan_ford	1.527294304
nissan_porsche	0.846732809
subaru_toyota	1.83097868
subaru_volkswagen	2.193834322
subaru_ford	2.593886463
subaru_porsche	1.869467721
toyota_volkswagen	2.433713784
toyota_ford	3.202941176
toyota_porsche	1.888712242
volkswagen_ford	2.401119403
volkswagen_porsche	1.863654699
ford_porsche	2.675675676

Lift ratio of brands with attributes:

Association Pairs	Lift Values
audi_economical	2.905063291
audi_luxury	2.561264822
audi_performance	2.352475248
audi_reliable	2.151517462
audi_safe	2.048503727
bmw_economical	2
bmw_luxury	1.903737195
bmw_performance	1.893287435
bmw_reliable	1.883360086
bmw_safe	1.816174672
honda_economical	1.764262377
honda_luxury	1.725846408
honda_performance	1.590514748
honda_reliable	1.587365214
honda_safe	1.560820713
lexus_economical	1.54885507
lexus_luxury	1.52118241
lexus_performance	1.485070718
lexus_reliable	1.481835478
lexus_safe	1.412126824
nissan_economical	1.369855993
nissan_luxury	1.299067066
nissan_performance	1.232739421
nissan_reliable	1.055961038
nissan_safe	0.850292258

4.Show the MDS map (put screenshots in your report).
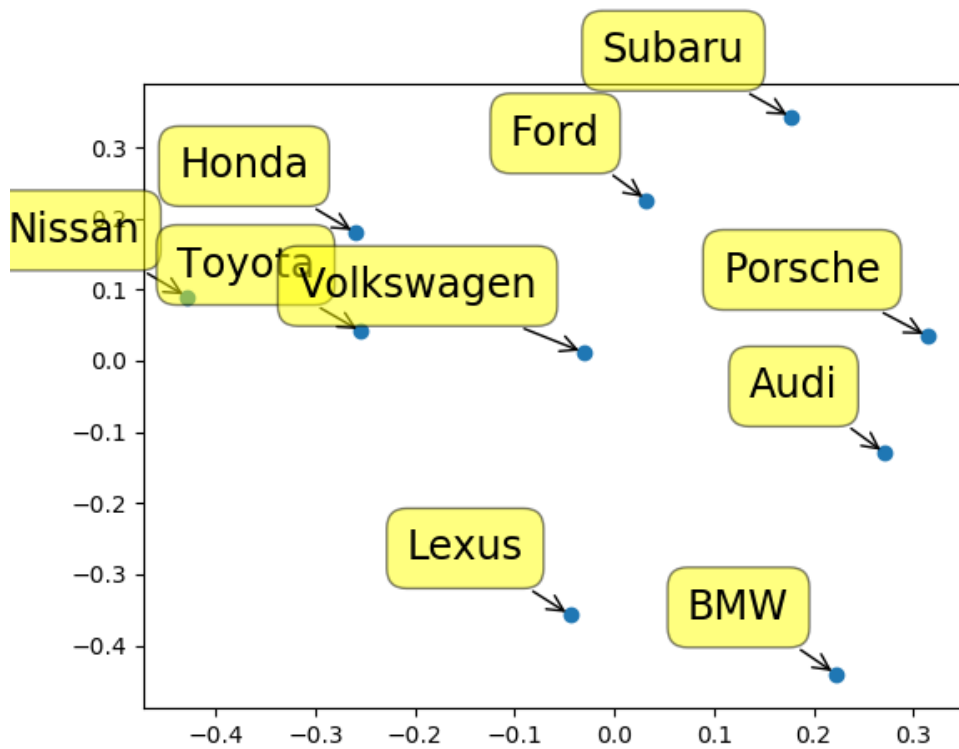
5.State the attributes and the basis of their selection (again, a summary table with frequencies is good here).

ATTRIBUTE	FREQUENCY
Performance	741
Luxury	534
Reliable	173
Safe	166
Economical	110

TASK A

After calculating the lift values for 10 brands that have the highest frequencies, I plotted a MDS map using mds_map.py.
From the map, we can arrive at a few conclusions for the brands involved. The advice I would give to brand managers are following:

- There is high association between Lexus and luxury cars like BMW, Audi. This implies that when people are talking about luxury cars, they are including Lexus in that comment. Managers at Lexus can use this information and promote Lexus as luxury car.
- Toyota has high association with Honda. This can be interpreted as Toyota and Honda being competitors and there are high chances of people shifting from Toyota to Honda or vice versa.
- Nissan, Toyota, Honda, Volkswagen, Ford and Subaru can be grouped together as economical cars.
- Volkswagen can be seen at boundary of economical group, so switching behavior can be observed.
- Using data from task B, Lexus should be promoted as a luxury brand. Lexus's image should be improved by keeping safety as a factor.
- BMW needs to work hard in promoting their cars as luxurious. Audi should do the same thing.

TASK B

The brands having highest association with attributes are:
- Performance - Honda (1.5905)
- Luxury - Lexus (2.0485)
- Reliability – Lexus (1.9037)
- Safe – Nissan (2.1515)
- Economical – Nissan (2.90506)

Advice to Product Managers:

- BMW- Product managers can work on enhancing of the luxurious features. Introducing an economical version will be beneficial as people who cannot afford the high-end versions can still enjoy the brand.

- Audi- Performance association of Audi is lowest. Enhancing performance can increase sales. Luxurious features of the brand should be promoted and advertised in a more efficient manner. Safety features of the vehicles can be improved upon.

- Lexus- Association with safety is lowest, hence safety features can be improved.

- Honda- Reliability of Honda manufactured cars should be improved to promote a better brand image.

- Nissan- Performance of Nissan cars should be improved. Nissan has the lowest association with reliability, so that is an area for improvement.

TASK C

Which is the most aspirational brand among the top 5? How did you find the answer? Show all steps.

Ans. Lexus is the most aspirational brand.

	Performance	Luxury	Reliability	Safe	Economical
BMW	1.481835	1.41212	1.81617	1.485	1.2327
Audi	1.29906	1.5608	1.7642	1.055	2.56126
Lexus	1.5873	2.0485	1.90373	0.8502	2.3524
Honda	1.5905	1.8833	1.7258	1.8932	2
Nissan	1.3698	1.5488	1.5211	2.1515	2.90506

Using the lift association values that were calculated for task B, I was able to construct the table above.
- Lexus has the highest association with luxury and reliability. Nissan has the highest association with safe and economical.
- Lexus has more frequency than Nissan, higher association with performance which is the attribute with highest frequency.
- The above 2 points makes Lexus more aspirational than Nissan.
- Even though BMW and Audi have more frequency than Lexus, their association with most attributes is less than that of Lexus.

- Honda has the highest association with performance, among all the brands. Lexus has highest association with Luxury and Reliability. Lexus is more economical but less safe than Honda. Honda has higher association with performance than Lexus by less than 0.01. Since Lexus has 32.2% more mentions than Honda, the difference in association with performance can be overlooked.
- Thus, proving that Lexus is the most aspirational brand.