DATA ANALYSIS PROJECT -1

ANALYSIS-2

SUMMARY

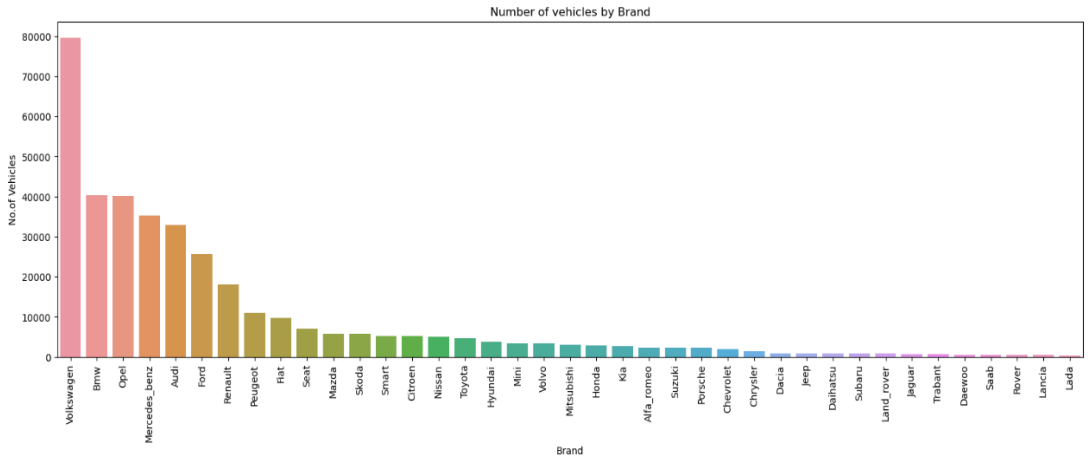
In Analysis-2

- The data, I observed the total count of vehicles for various brand available on e-bay. Volkswagen, leads the pack with the highest number of listings, followed closely by BMW and opel.
- In contrast, less common brands like Lancia and lada.
- The count of vehicles by brand data provides valuable insights into popularity and market presence of different car brands on the e-bay platform.
- More, I have observed average price of vehicles based on the vehicle Type as well as gear box on e-bay.
- Coupes and other large vehicles like “Andere” tend to have higher average prices, indicating a preference for stylish or specialized vehicles.
- In contrast, smaller average prices cars such as “Klienwagen”.
- It provides insights into pricing trends for various vehicle types, aiding both sellers and buyers in their decision processes.
- The cars with automatic gearboxes have higher average price compared to those manual transmissions.
- These pricing highlight the impact of gearbox type on the overall market value of vehicles, providing valuable insights for both sellers and buyers.
- I have observed marginal probability of private sellers, we have to divide the number of listings by private sellers by the total number of listings.
- Marginal Probability of private seller= (Number of private seller) / (Total number of sellers).
- The calculated Marginal Probability of private sellers is approximately 99.99%.

REPORT

1.

```
plt.figure(figsize=(20, 6))
sns.barplot(data=data1,x="Brand",y="brand_count")
plt.title("Number of vehicles by Brand")
plt.xlabel("Brand")
plt.ylabel("No.of Vehicles")
plt.xticks(rotation=90)
plt.show()
```



Here bar plot tells about

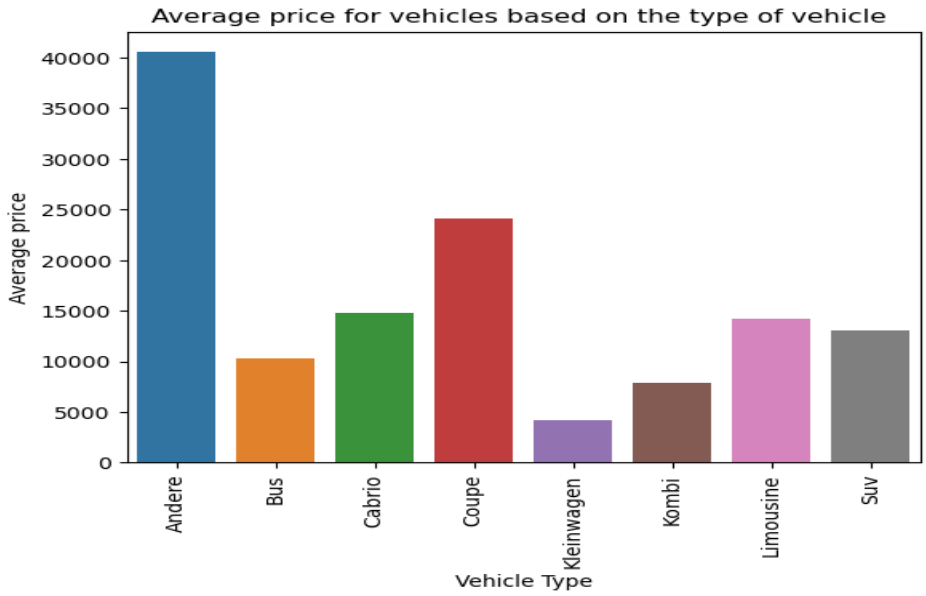
- The data, I observed the total count of vehicles for various brand available on e-bay. Volkswagen, leads the pack with the highest number of listings, followed closely by BMW and opel.In contrast, less common brands like Lancia and lada. The count of vehicles by brand data provides valuable insights into popularity and market presence of different car brands on the e-bay platform. Understanding these brand-wise listing counts can be beneficial for market analysis , targeted marketing strategies, and assessing the platform's overall diversity in the automotive segment.

2.

```
vehicle
```

	vehicleType	price
0	Andere	40483.537217
1	Bus	10302.154602
2	Cabrio	14818.152195
3	Coupe	24073.071794
4	Kleinwagen	4188.791819
5	Kombi	7882.399545
6	Limousine	14210.157136
7	Suv	12995.190972

```
sns.barplot(data=vehicle,x="vehicleType",y="price")
plt.title('Average price for vehicles based on the type of vehicle ')
plt.xlabel('Vehicle Type')
plt.ylabel('Average price')
plt.xticks(rotation=90)
plt.show()
```



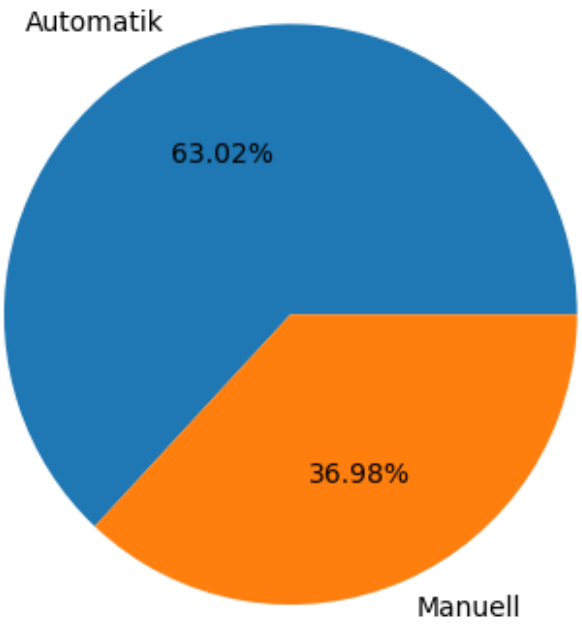
- Here, I have observed in the bar plot is the average price of vehicles based on the vehicle Type as well as gear box on e-bay. Coupes and other large vehicles like “Andere” tend to have higher average prices, indicating a preference for stylish or specialized vehicles and less average prices such as “Klienwagen”. It provides insights into pricing trends, aiding both seller and buyers in their decisions.

3.

```
gearbox
```

	gearbox	price
0	Automatik	16027.504194
1	Manuell	9403.267766

```
plt.pie(gearbox.price, labels=gearbox.gearbox,autopct='%1.2f%%')
plt.show()
```



- The pie chart data illustrates the average prices of vehicles based on their gearbox types listed on e-bay. The cars with automatic gearboxes have higher average price compared to those manual transmissions. This suggests that automatic vehicles are generally perceived as more desirable or luxurious, leading to a higher market values. These pricing highlight the impact of gearbox type on the overall market value of vehicles, providing valuable insights for both sellers and buyers.