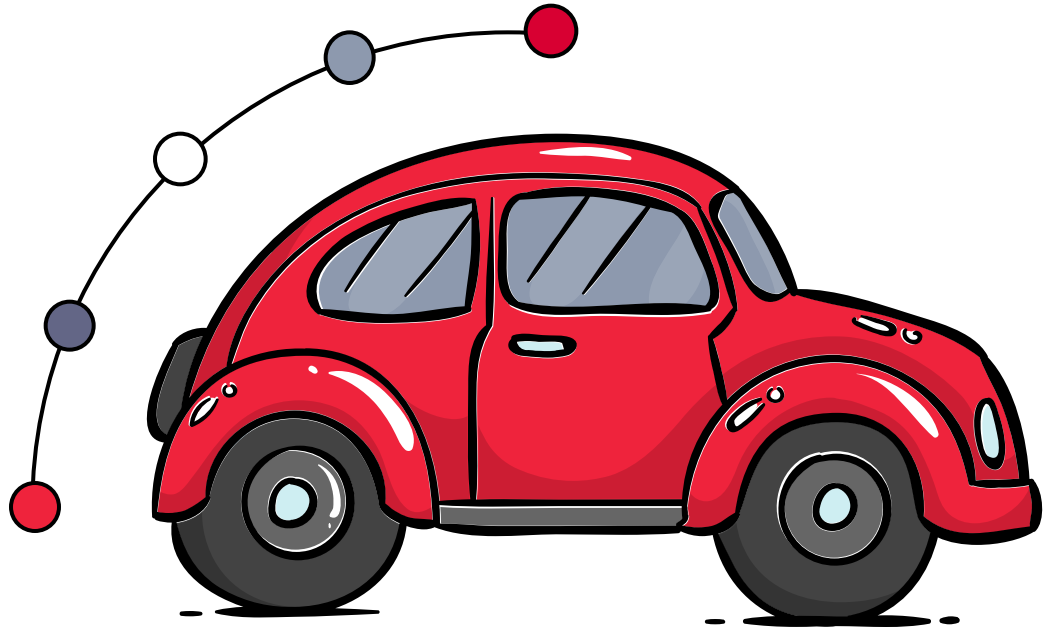


The prediction of a car price

Razan Aljuhani



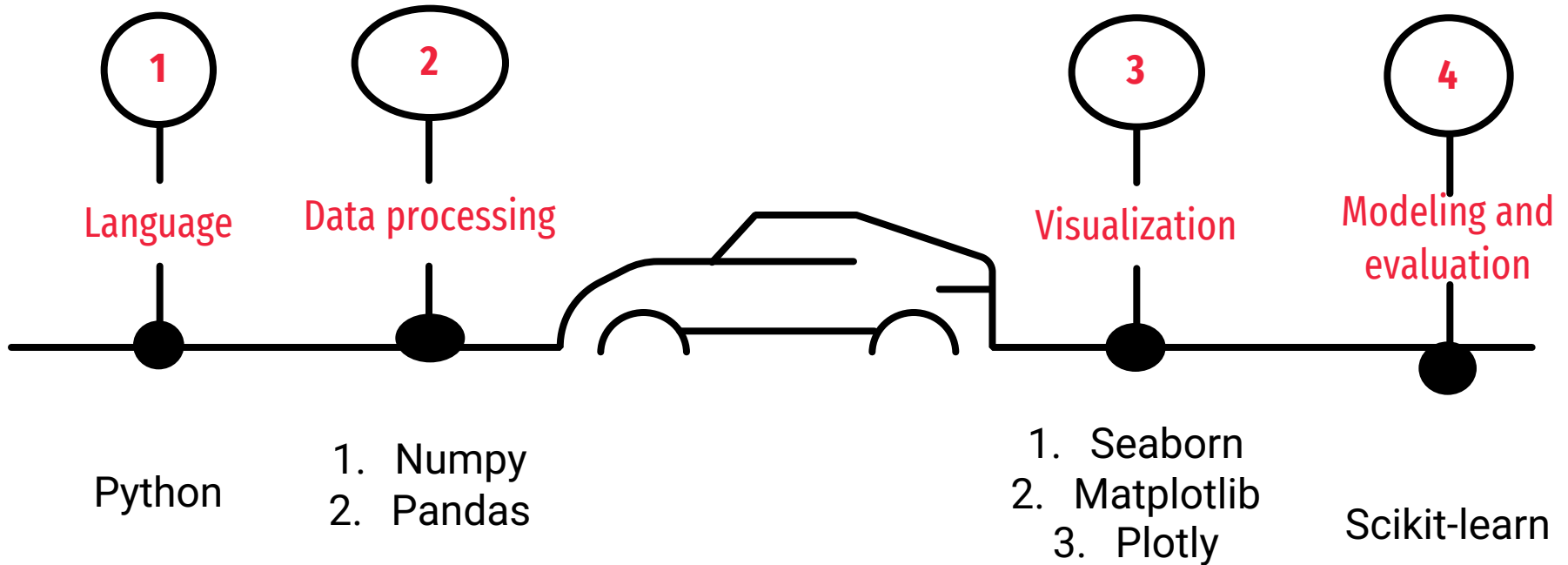
Introduction

Companies try to produce cars with special features to take attention in the market and compete with other competitors. They need to understand the dynamic changes of pricing in the market through the years, and the factors affecting the pricing

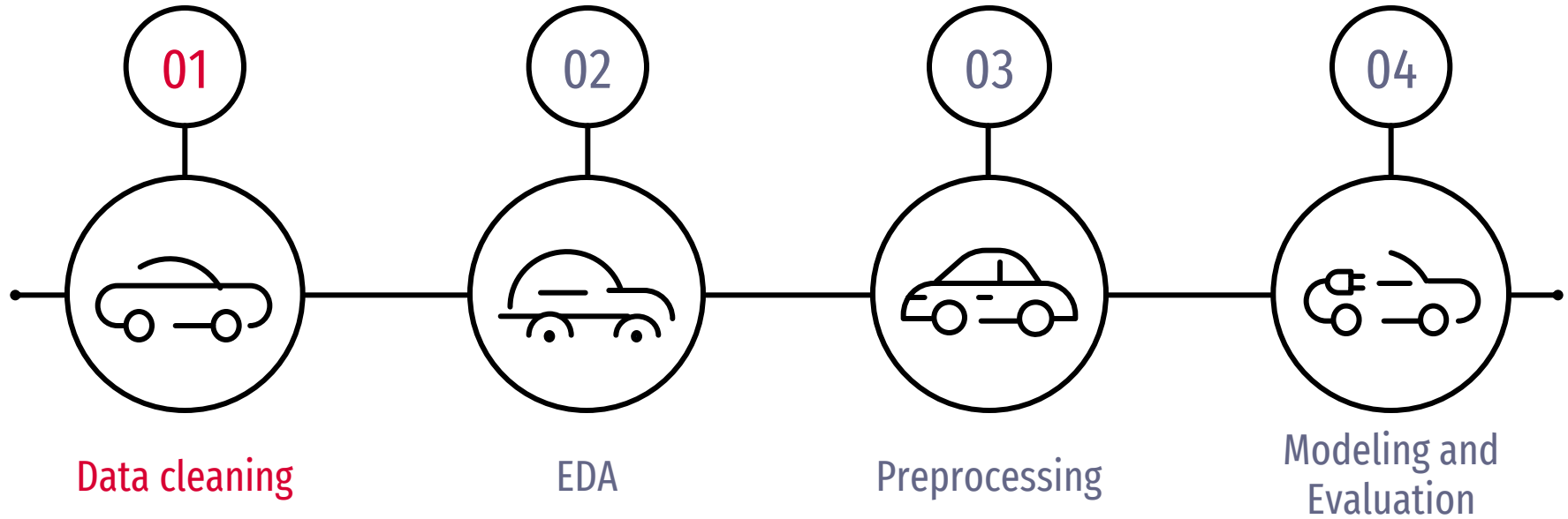
The project will help in clarify the features has a direct impact on the target variable (Selling Price), by build an effective model using Linear regression.



Tools



Stages



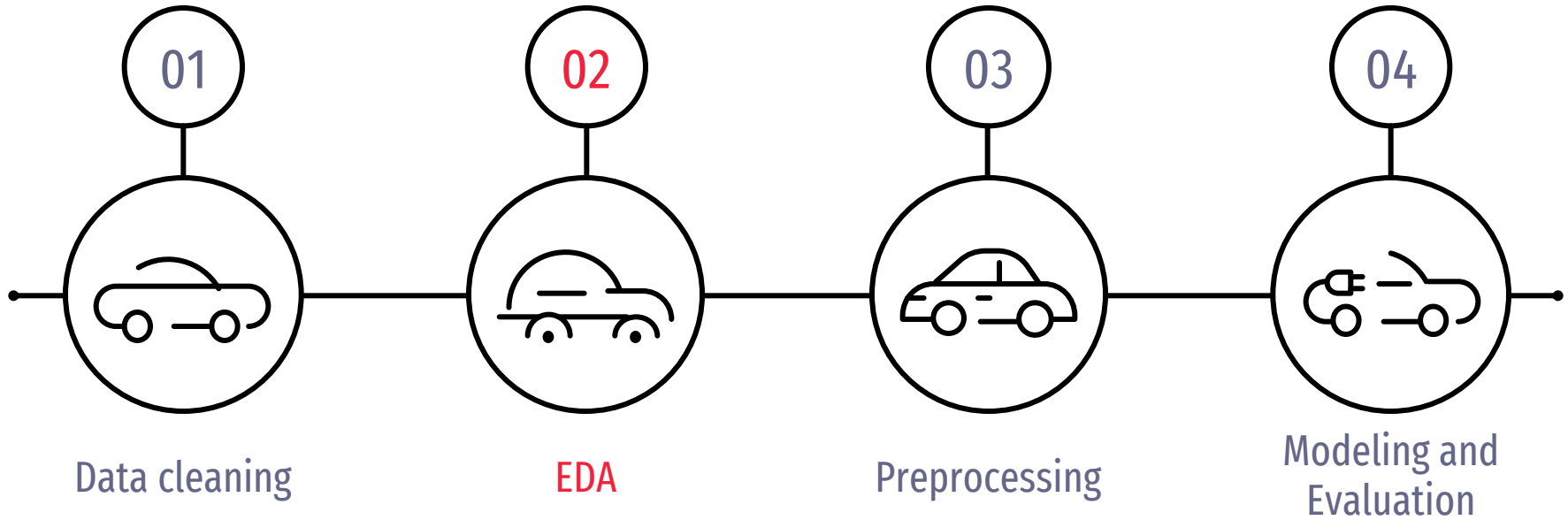
Original Data

	Name	Year	Selling_price	Km_driven	Fuel	Seller_Type	transmission	Owner	Mileage	Engine	Max_Power	Torque	Seats
0	Maruti Swift Dzire VDI	2014	450000	145500	Diesel	Individual	Manual	First Owner	23.4 kmpl	1248 CC	74 bhp	190Nm @ 2000rpm	5.0
1	Skoda Rapid 1.5 TDI Ambition	2014	370000	120000	Diesel	Individual	Manual	Second Owner	21.14 kmpl	1498 CC	103.52 bhp	250Nm @ 1500-2500rpm	5.0

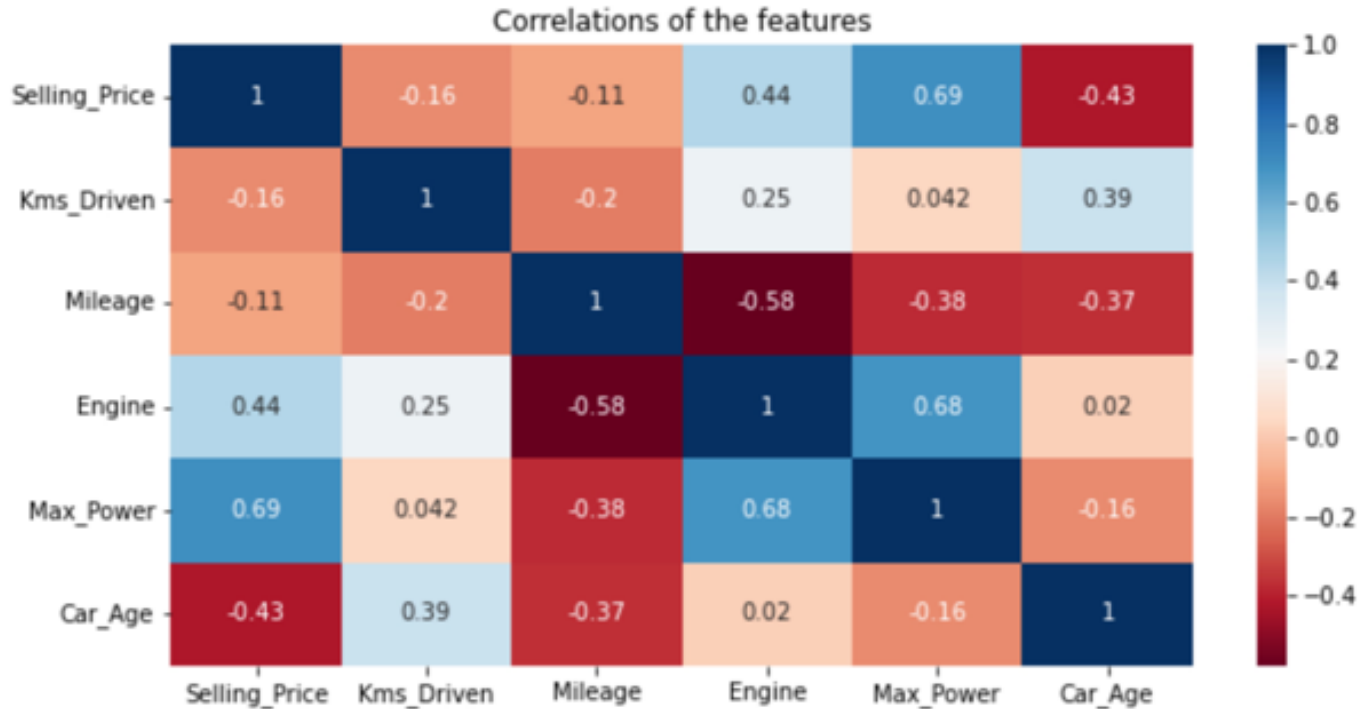
Data after cleaning

	Selling_Price	Kms_Driven	Fuel_Type	Seller_Type	Transmission_Type	Owner_Number	Mileage	Engine	Max_Power	Seats_Number	Car_Age	Car_Brand
0	13.017003	145500	Diesel	Individual	Manual	First Owner	23.40	1248.0	4.304065	5.0	1.945910	Maruti
1	12.821258	120000	Diesel	Individual	Manual	Second Owner	21.14	1498.0	4.639765	5.0	1.945910	Skoda

Stages

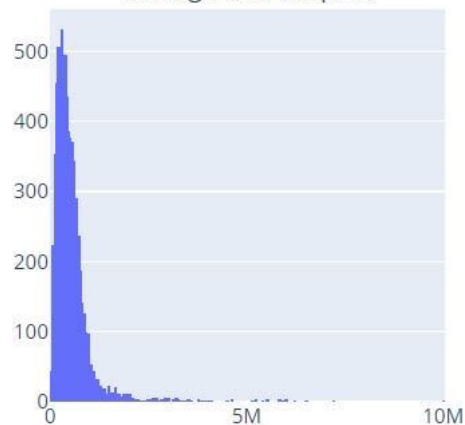


Correlation of the features

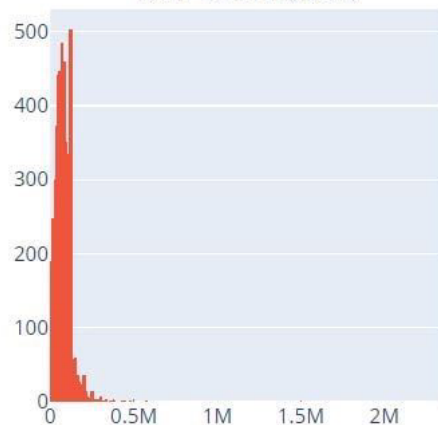


Distribution of the numerical data

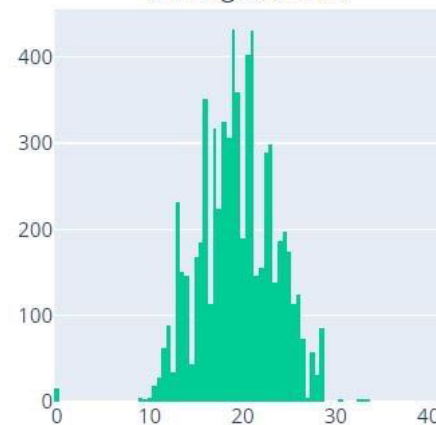
Selling Price (Rupee)



KMs Driven (KMs)

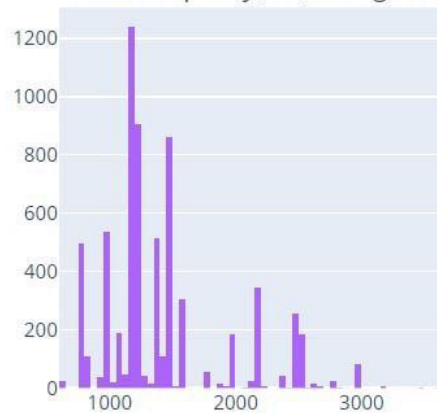


Mileage (KMs/L)

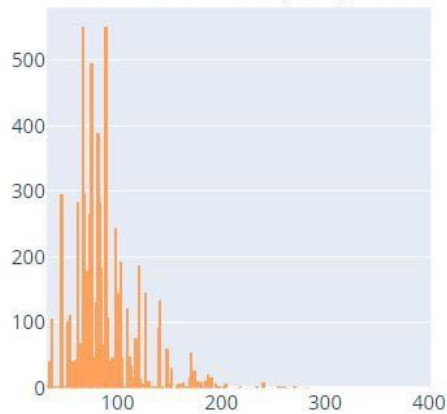


- Rupee
- KMs
- KMs/L
- CC
- BHP
- Years

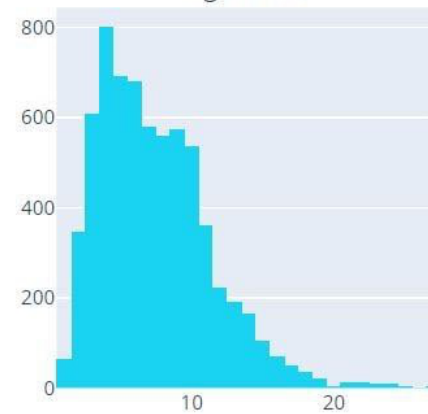
Cubic Capacity(CC) of Engine

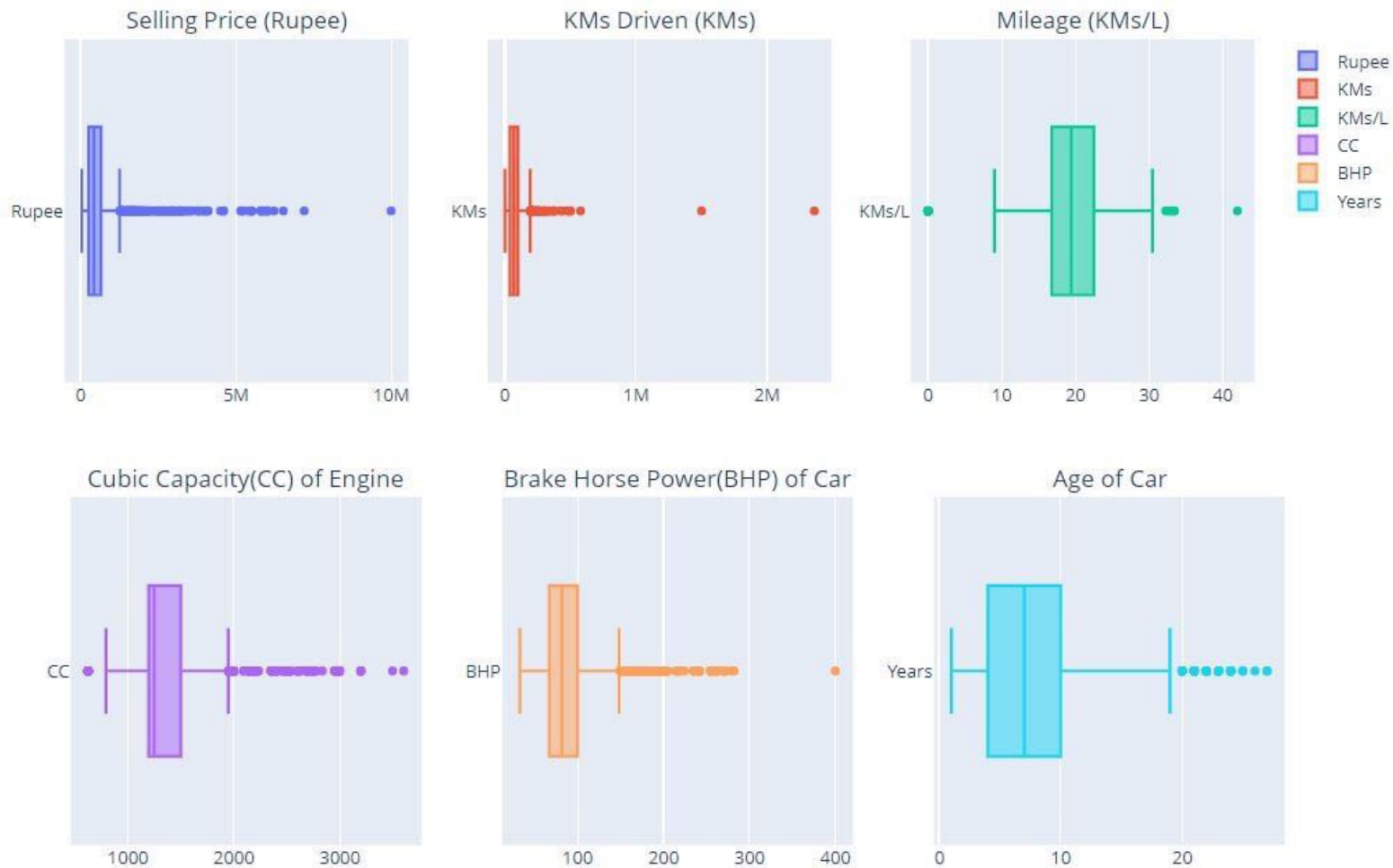


Brake Horse Power(BHP) of Car

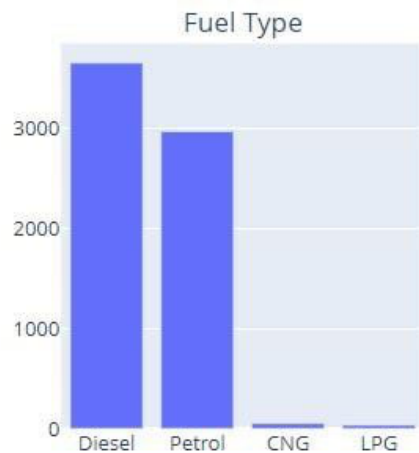


Age of Car

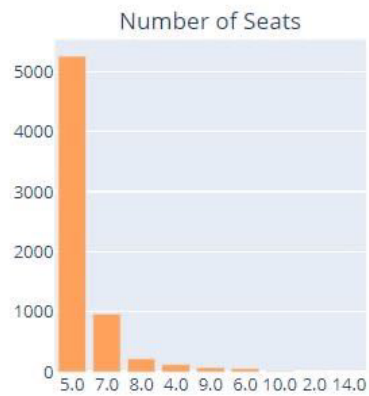
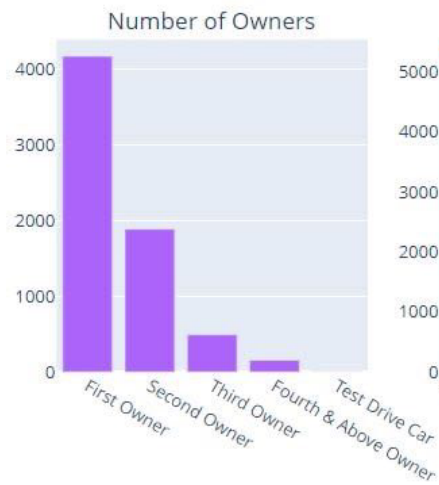




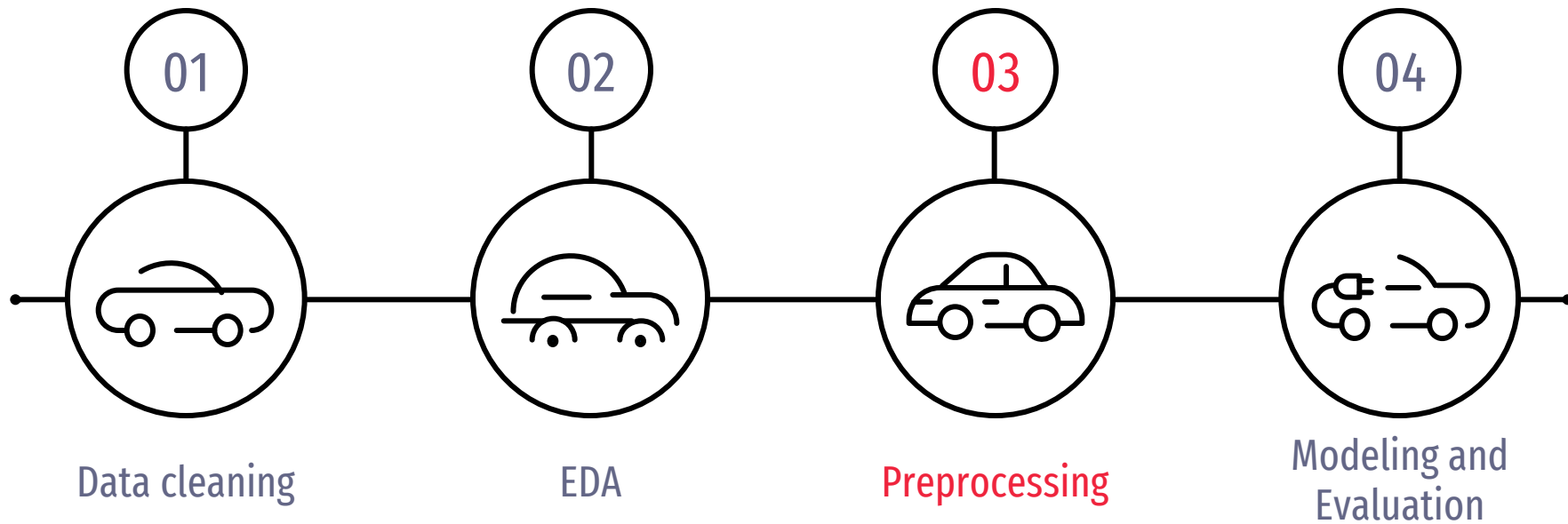
Distribution of the categorical data



- Fuel type
- Seller type
- Transmission Type
- Number of owners
- Number of seats

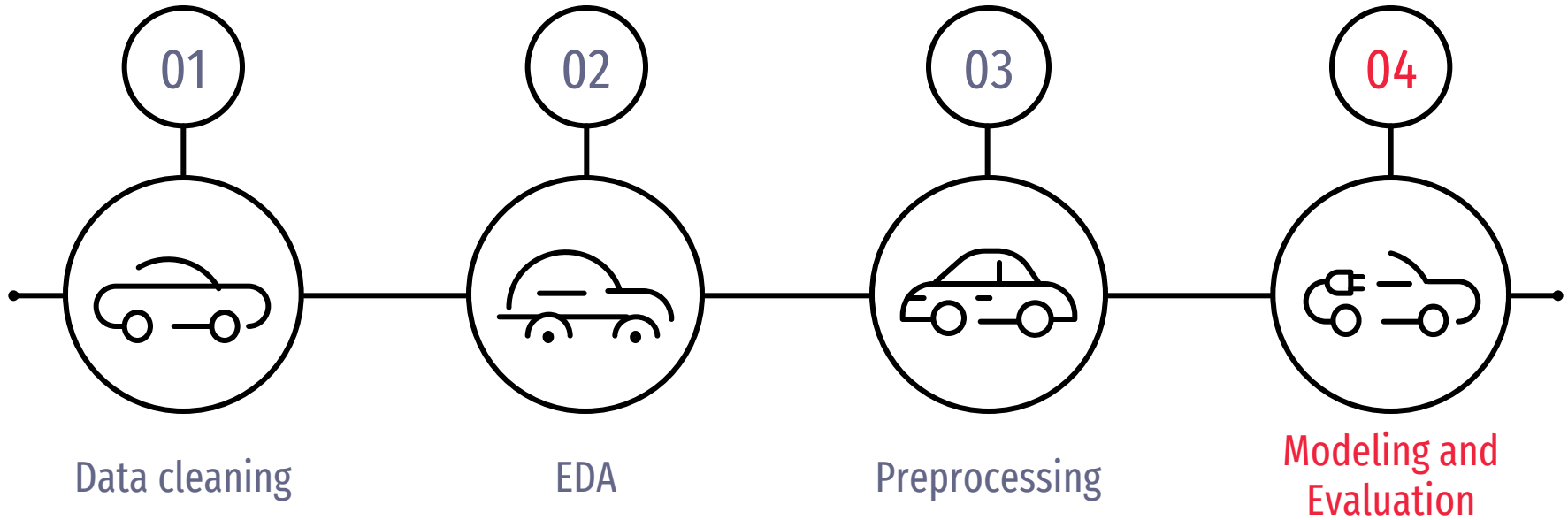


Stages



Feature engineering and data scaling

Stages



Data for modeling

	Selling_Price	Kms_Driven	Fuel_Type	Seller_Type	Transmission_Type	Owner_Number	Mileage	Engine	Max_Power	Seats_Number	Car_Age	Car_Brand
0	13.017003	145500	Diesel	Individual	Manual	First Owner	23.40	1248.0	4.304065	5.0	1.945910	Maruti
1	12.821258	120000	Diesel	Individual	Manual	Second Owner	21.14	1498.0	4.639765	5.0	1.945910	Skoda

Models

Lasso

01

Ridge

03

Random Forest

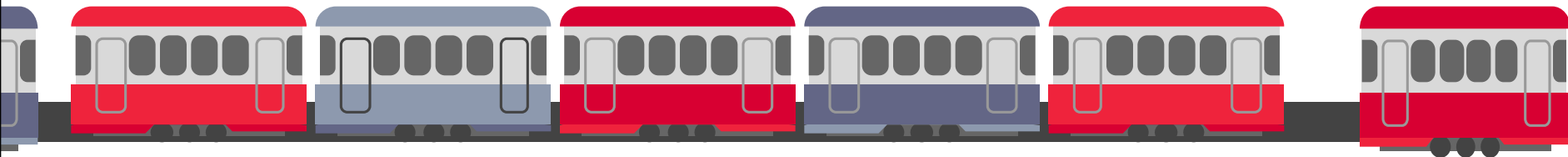
05

02

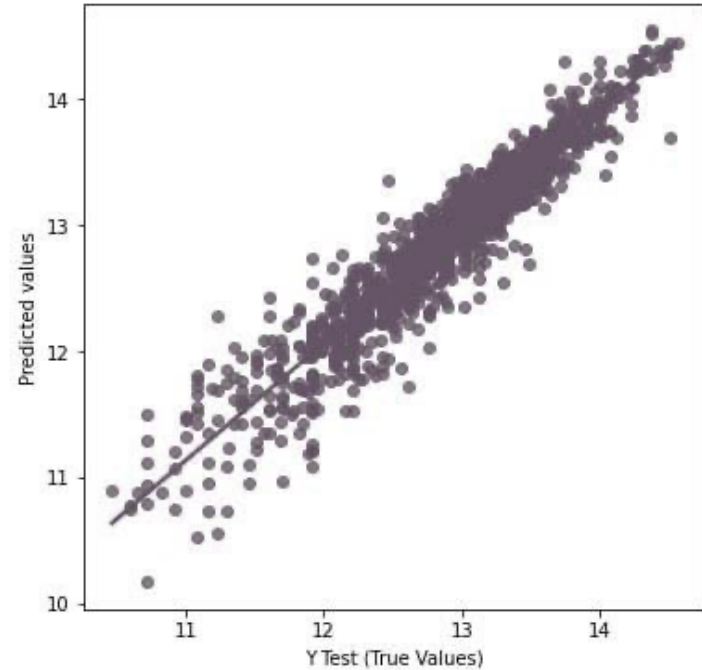
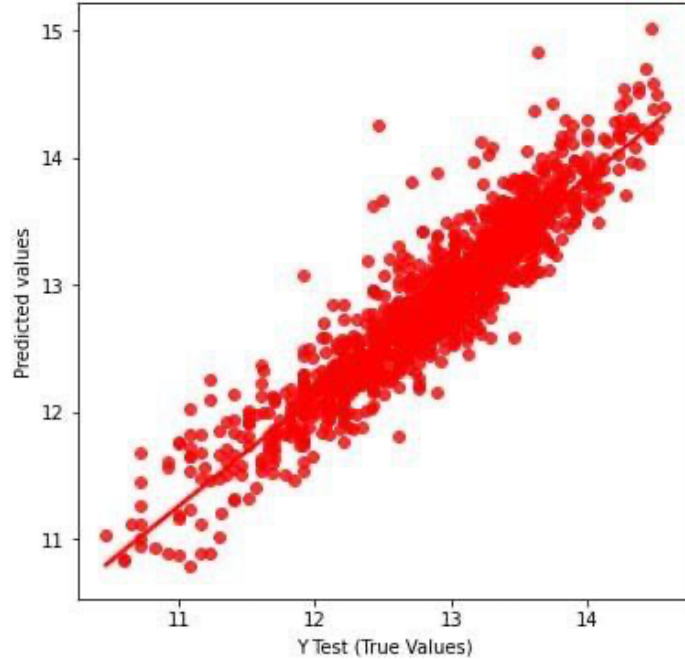
XGBoost

04

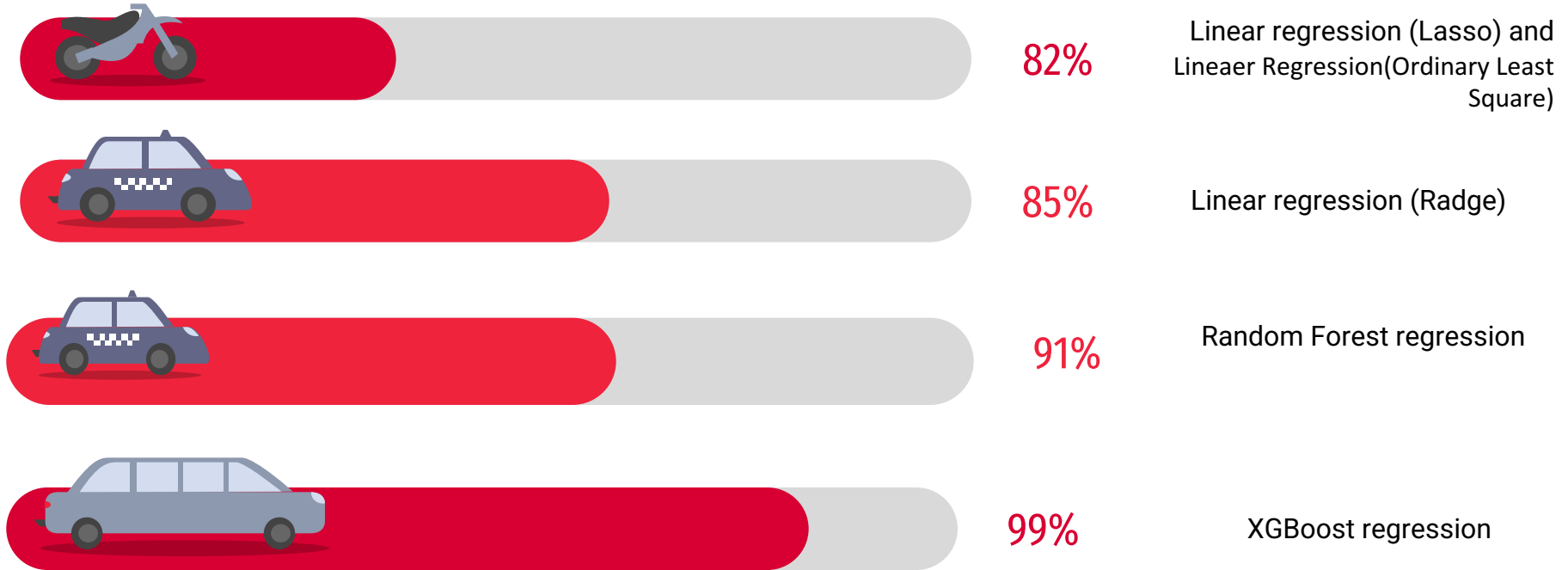
Ordinary Least
Square



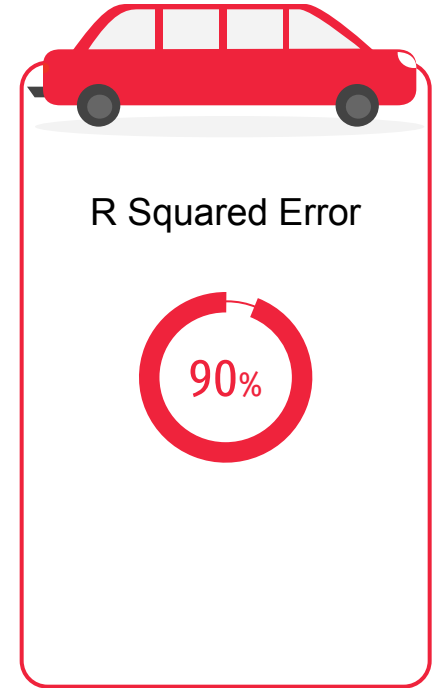
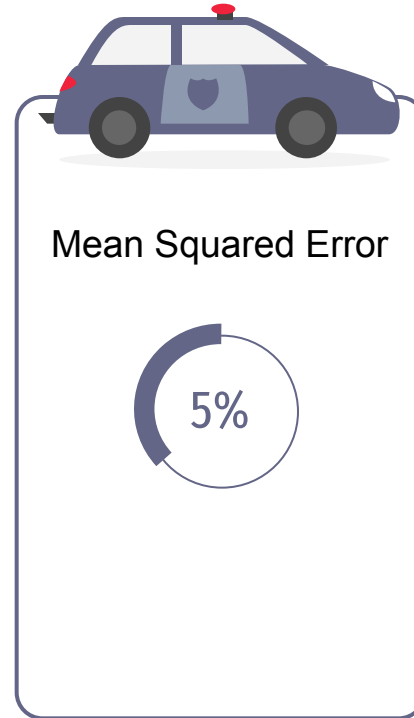
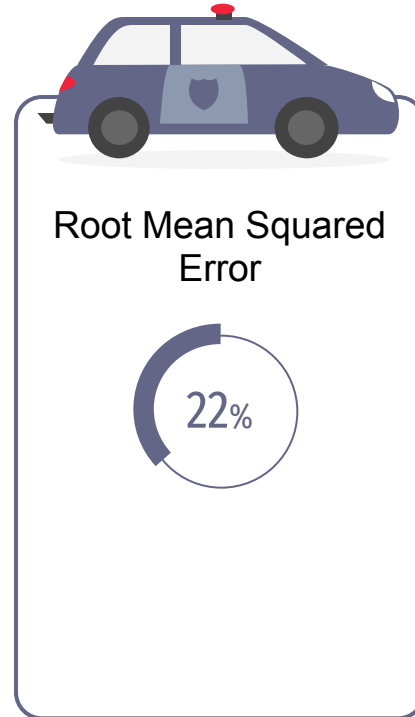
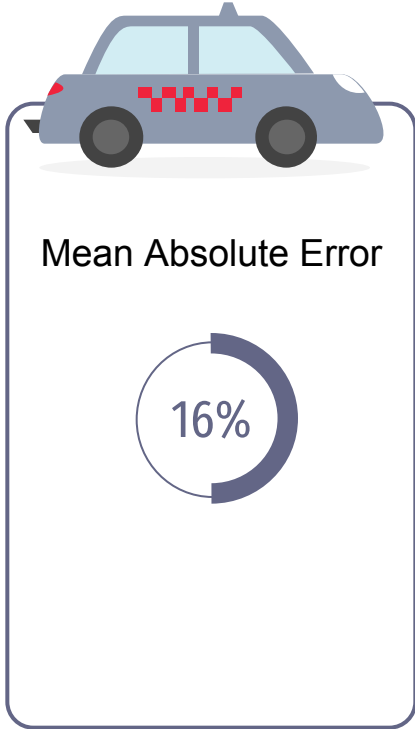
Comparing



Accuracy



Evaluation



Thanks!

Any questions?

