# CONCLUSION

Thus, we have visualized and derived various insights from the considered Indian automobile dataset by performing data analysis that utilizes machine learning algorithms. We have performed univariate analysis, analysing the data in perspective of a single attribute then with bivariate analysis, analysis using two attributes and then with multivariate which deals with more than two attributes at the same time presenting various levels of visualizations using bar plots, histograms, scatter plots, boxplots, violin plots.

We have found that the Maruti, Hyundai and Honda are the biggest manufactures with most of the cars in the range of 3-12 lakhs. Almost, all the automobile were either petrol or diesel fuel type.

Mumbai, Pune, Kochi, Kolkata has more petrol cars whereas Hyderabad, Chennai, Coimbatore, Jaipur, Delhi, Bangalore, Ahmedabad has more diesel cars.

Then, using PCA and K-means we divided the market into 4 segments.

Segment 0: Price high, Mileage low, Owner type 1, Diesel, transmission automatic, Engine High

Segment 1: Price low, Mileage good, Owner type 2,3or 4, Petrol, transmission manual, seats fewer, Engine low.

Segment 2: Price low, Mileage good, Owner type 1, Diesel-CNG, transmission manual, seats more, Engine low.

Segment 3: Price average, Mileage average, owner type2, Petrol, transmission automatic, seats fewer, Engine average.

In conclusion the attributes Engine, Power, Mileage are the major factors affecting the price of the car largely and the rest of the attributes have some impact but not a huge one. Thus, we could conclude that price is heavily correlated with car engine, power and mileage attributes of the dataset. Segment 3 is the targeted Segment of the manufacturers like Maruti, Hyundai and Honda.