

DATA ANALYSIS

CAR SALES ANALYSIS



SUBMITTED BY

SOMA

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1. Problem Description

With new products, competition is increasing and here data will be a key enabler to allow automotive players to make informed decisions about consumer choice, popular specs combination, appropriate launch time, popular brands and revenue earned.

2. Scope

To understand and insights about the consumer choice, trend in sale and most sought after feature in car through visualization and analyze the given Car Sale dataset.

3. Solution

- ❖ Analyze the dataset and design the query.
- ❖ For each query, choose appropriate mark and channels.
- ❖ Implement the visual encoding using python
- ❖ Create a dashboard using all visualizations.

4. Dataset

Car Sale

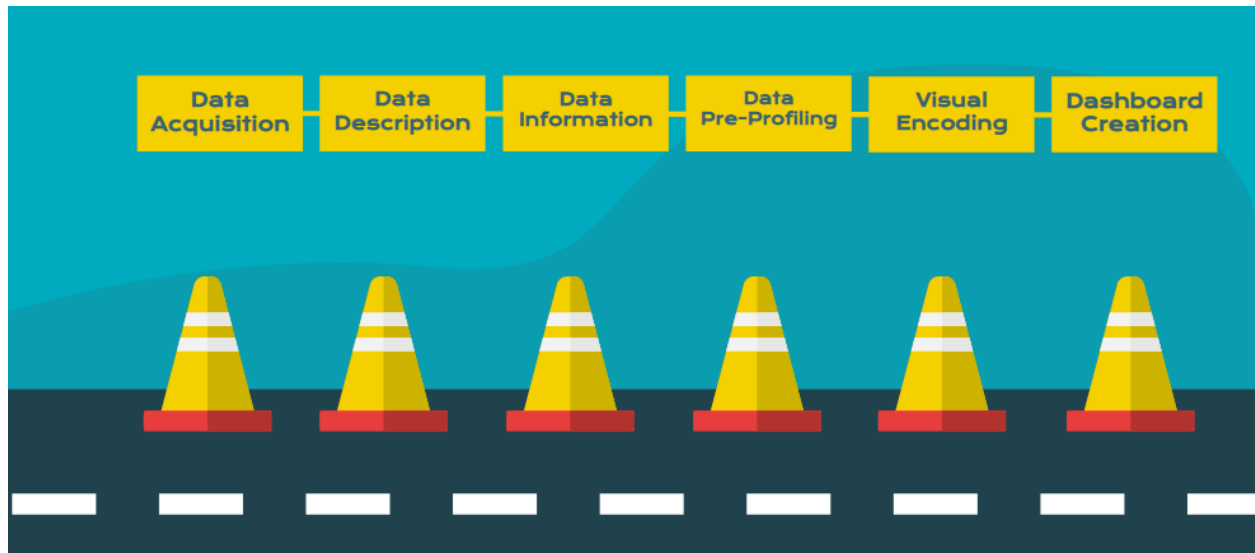
The Dataset contains the list of cars bought in a particular year and month. The data is organized.

URL:

Cleaned dataset :

<https://docs.google.com/spreadsheets/d/1T2QLzYD3QpBQdQbdaVOUEbJ-cFhJtmKQOMgFlp9chTE/edit?usp=sharing>

5. Design and Methodology



Attributes Definition :

S.No.	Attributes	Description
01	car	Brand name of car
02	model	Available car different Variants
03	price	Price of Car in \$
04	body	Body type-Hatchback, Sedan, Crossover etc
05	mileage	Mileage of car
06	engV	Engine version
07	engType	Car Fuel type - Petrol, Diesel, gas etc
08	PurchaseYear	Purchasing year
09	drive	Wheel Drive - Front, back, rear
10	PurchaseMonth	Purchasing month

Queries to be performed

Q1 - What is customer segment based on body?

Attributes required : body, engType, count of car

Q2 - what is the right time to launch a new car?

Attributes required : PurchaseMonth, count of car

Q3 - what is Top 10 popular car brands?

Attributes required : car, count of car

Q4 - what is the sales and revenue in each class?

Attributes required : count of car, price

Q5 - what is the most popular car specification combination ?

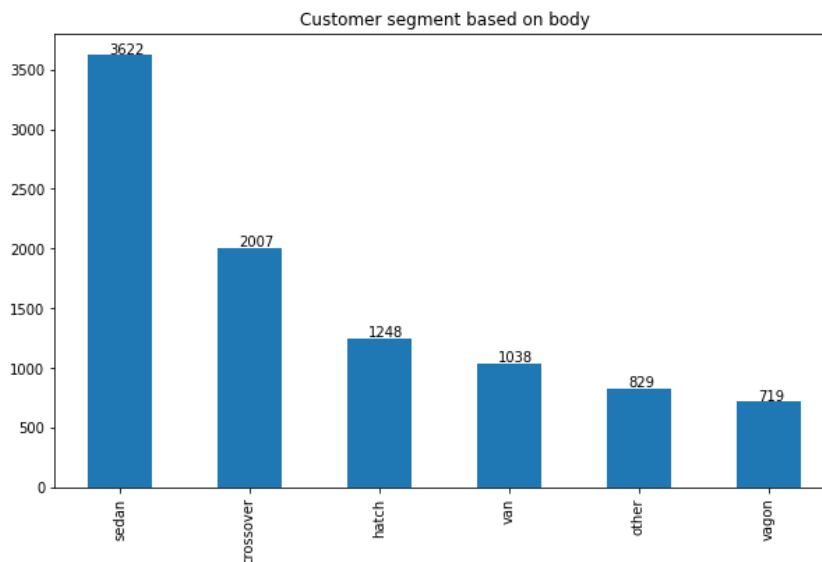
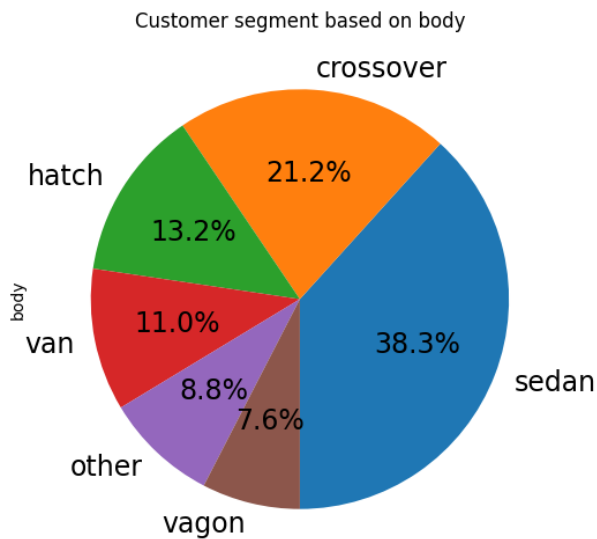
Attributes required : mileage, body, drive, count of car, engType

6. Tool and Language Used

Tool used : Tableau Desktop and Tableau public for creating the dashboard and publishing it.

Language used : Python for data Acquisition, data Description, data Information, data Pre-Profiling and visualization.

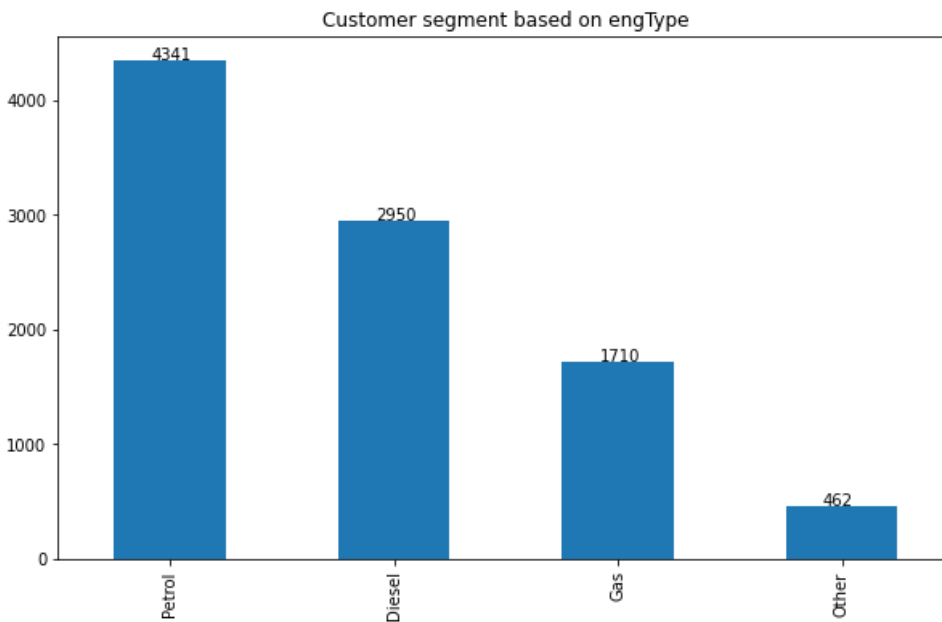
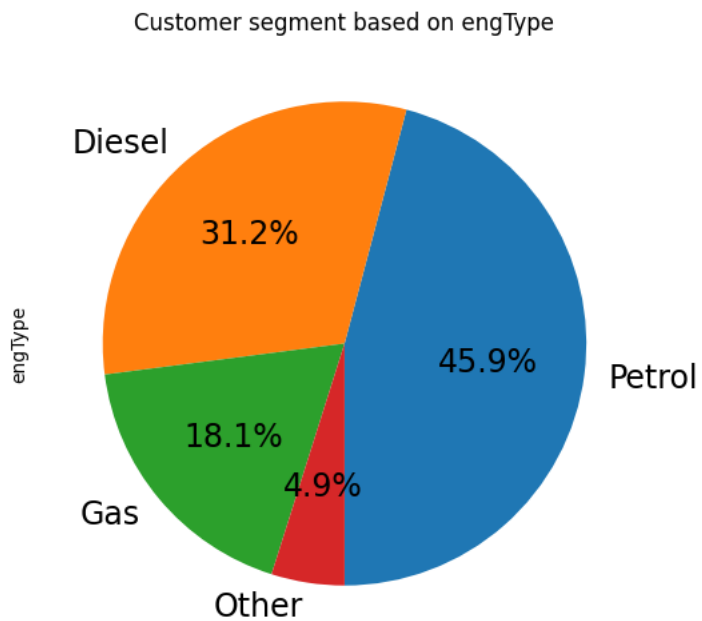
7. Visual Encoding



Observation :

Most of the customer prefer sedan or crossover in body type

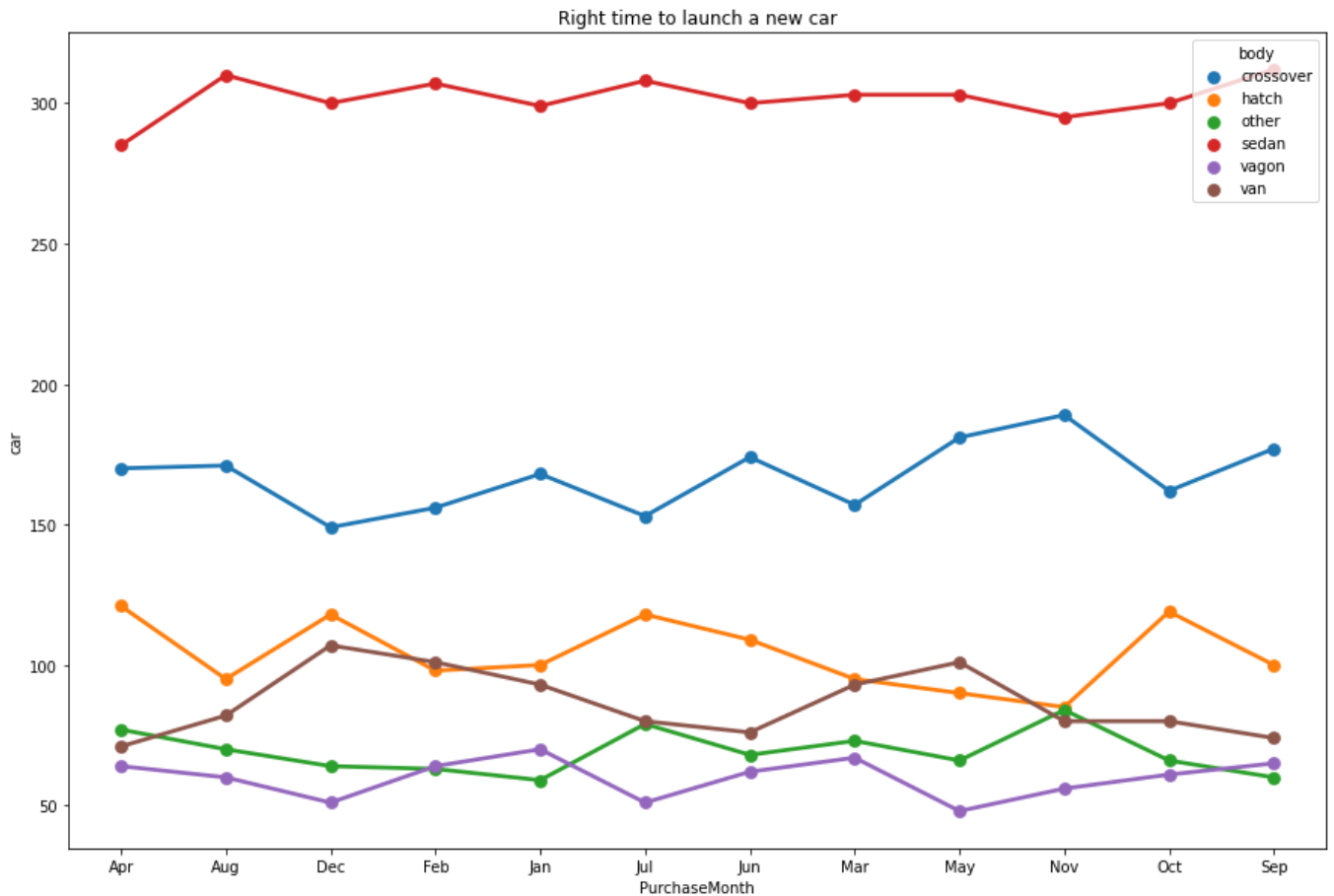
38.3 % customer prefer sedan, 21.2 % customer prefer crossover, 13.2 % customer prefer hatch, 11.0 % customer prefer van, 8.8 % customer prefer other, 7.6% customer prefer vagon



Observation :

Most of the customer prefer petrol or diesel in engine type :

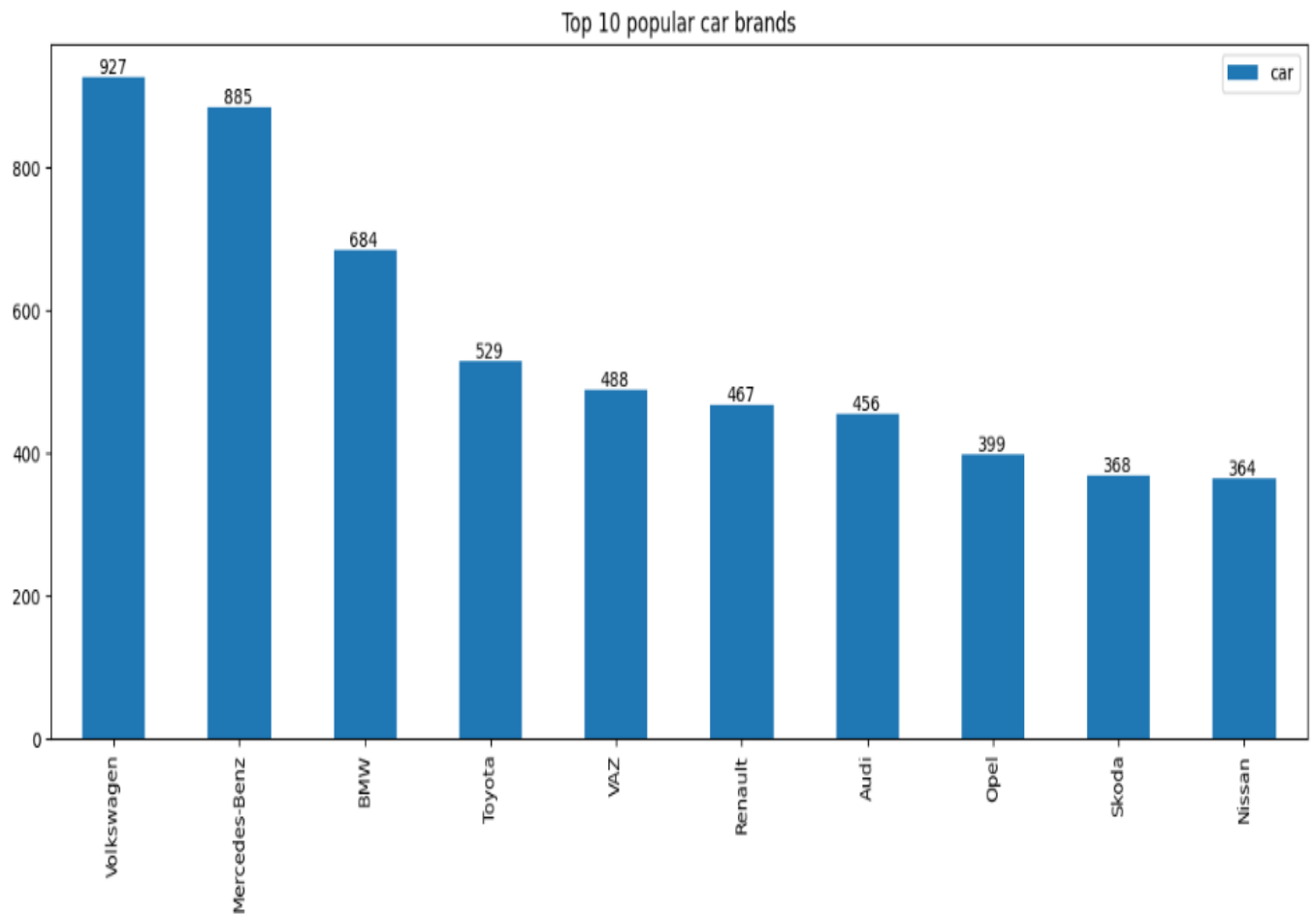
45.9 % customer prefer petrol, 31.2 % customer prefer diesel, 18.1 % customer prefer gas, 4.9 % customer prefer other



Observation :

Right time to launch new car :

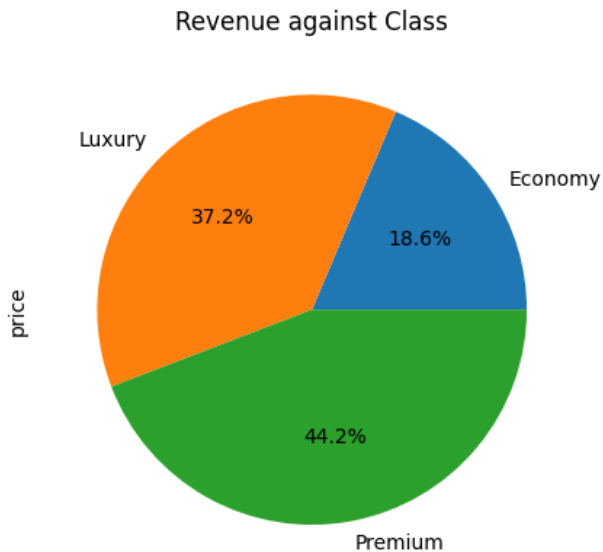
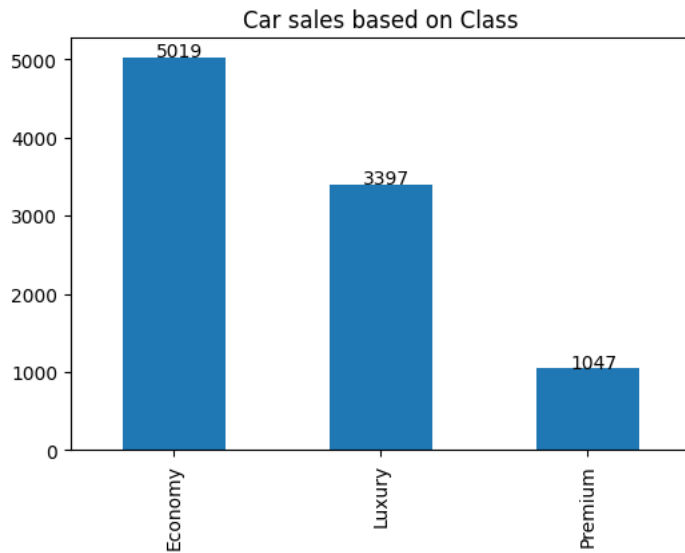
1. For Crossover : November
2. For hatch : April
3. For sedan : september
4. For vagon : January
5. For van : December
6. For other : November



Observation :

Top 10 popular car brands are :

- Volkswagen
- Mercedes-Benz
- BMW
- Toyota
- Vaz
- Renault
- Audi
- Opel
- Skoda
- Nissan

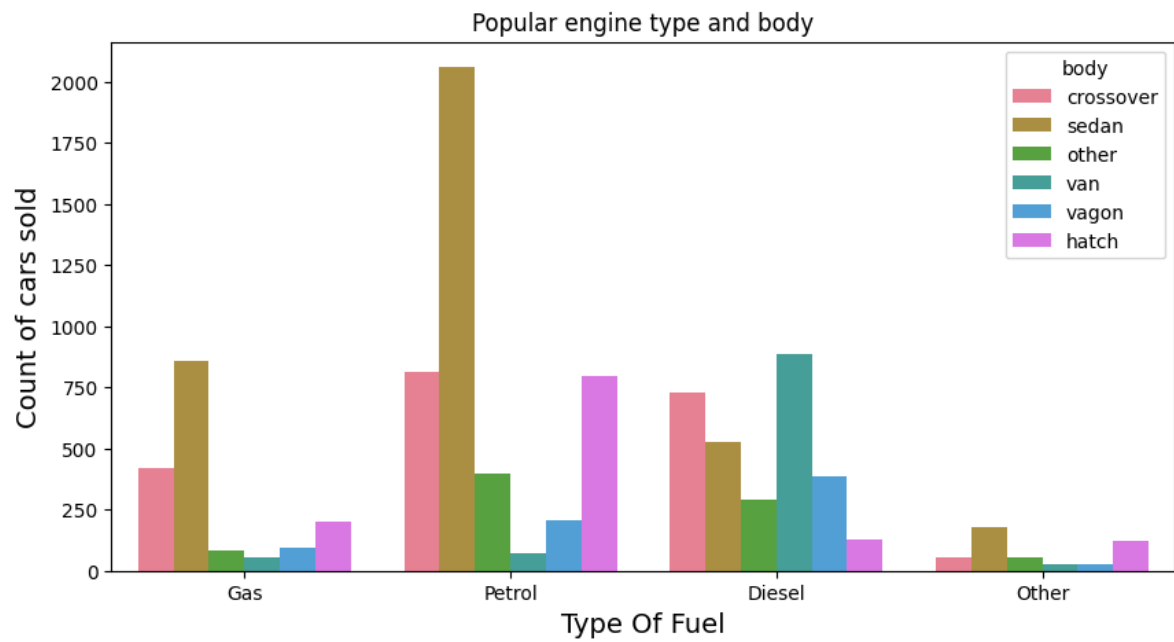
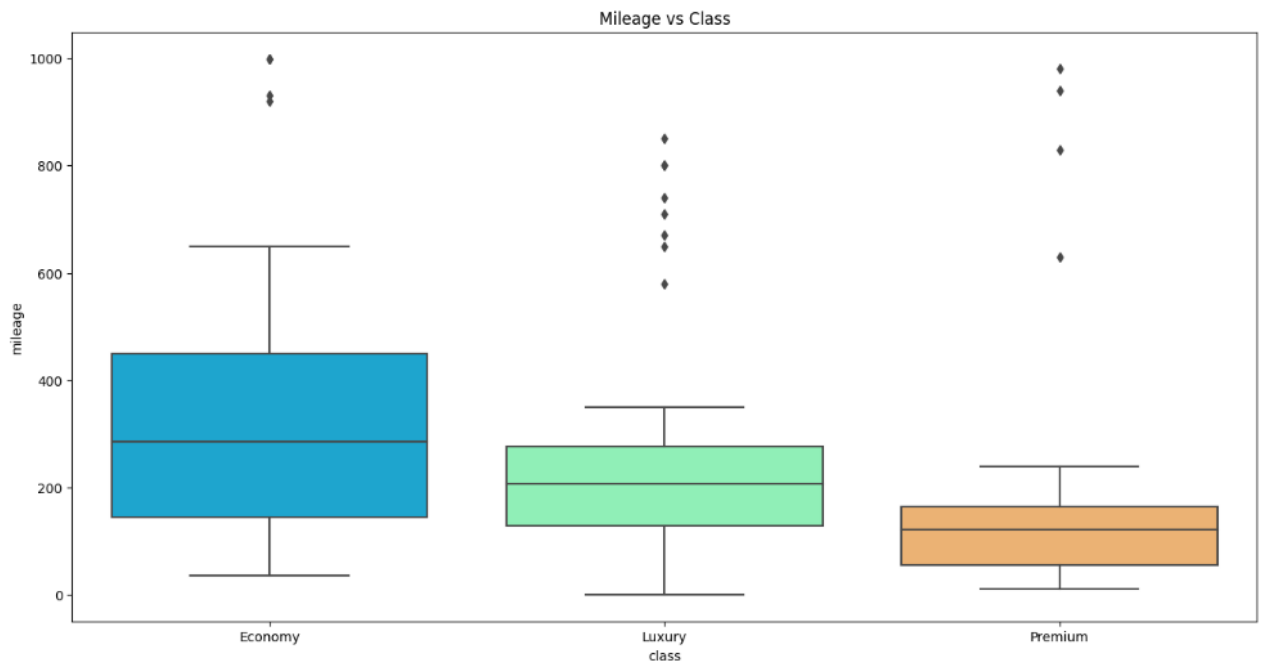


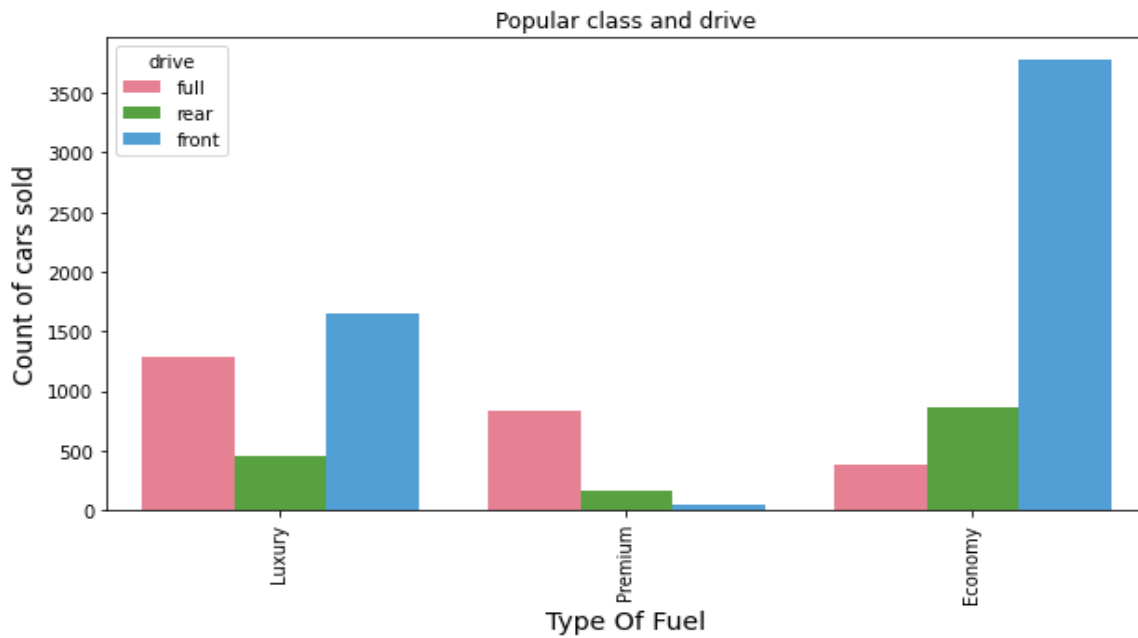
Observations :

Economy Cars are best selling segment but the revenue is comparatively less

Revenues based on class :

1. Economy - 18.6%
2. Luxury - 37.2%
3. Premium - 44.2%

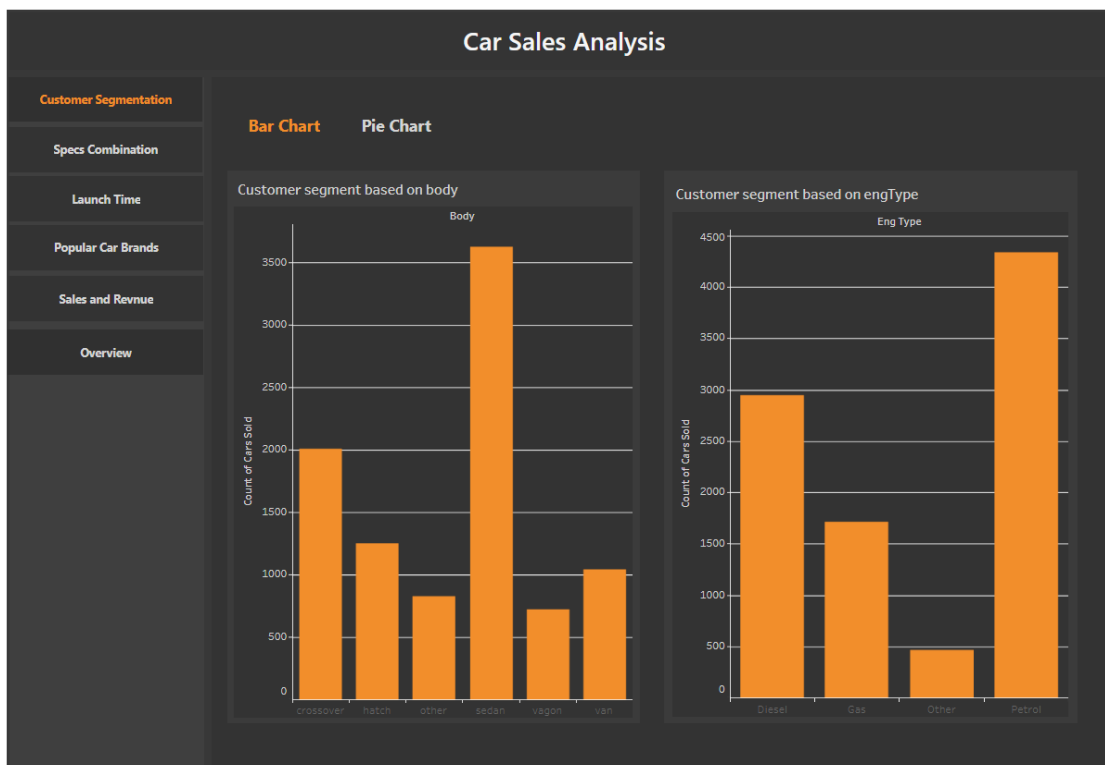
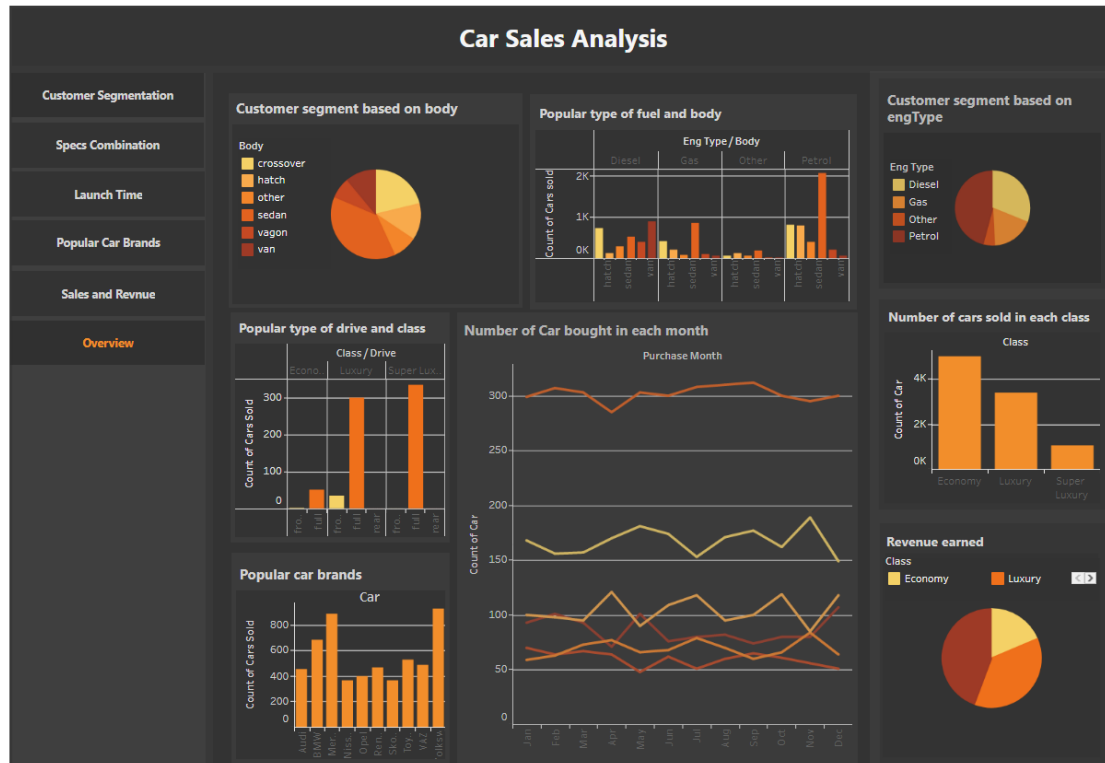


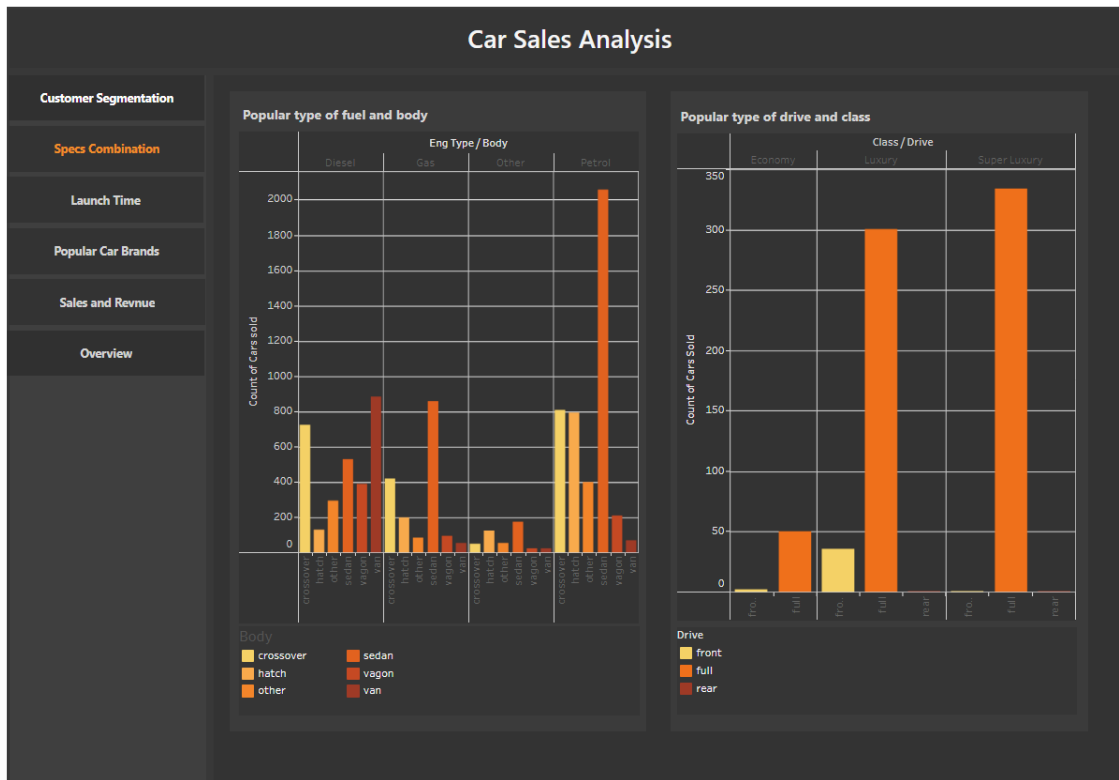


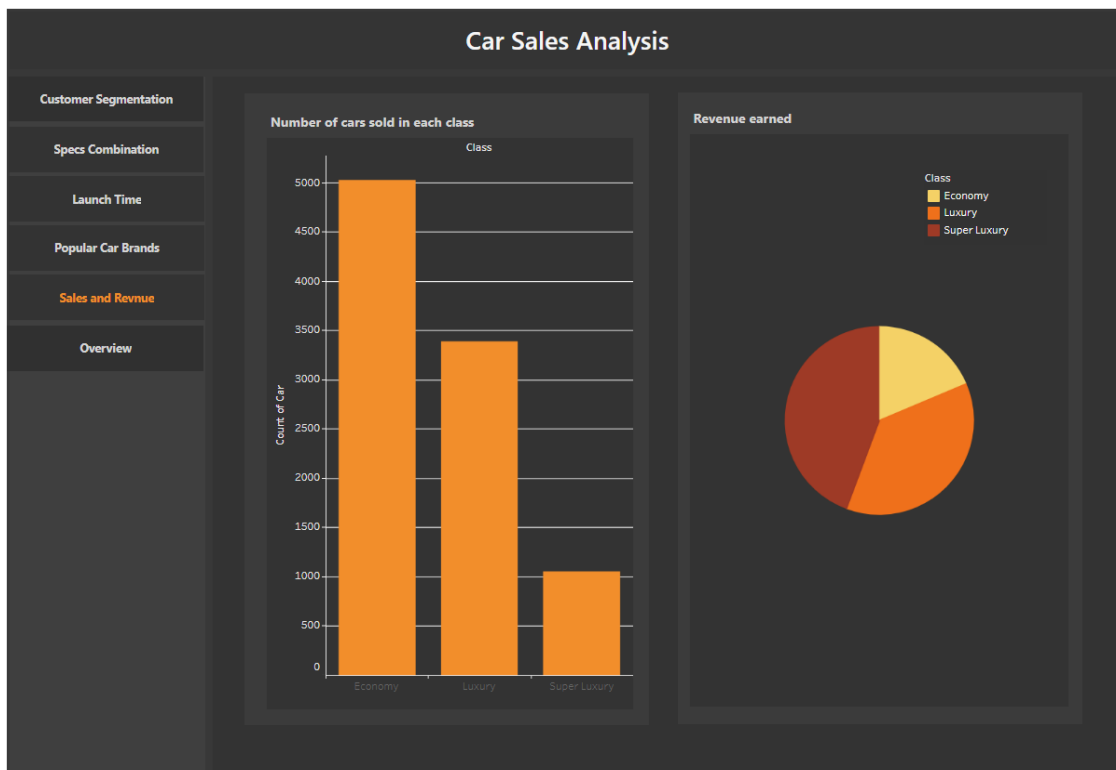
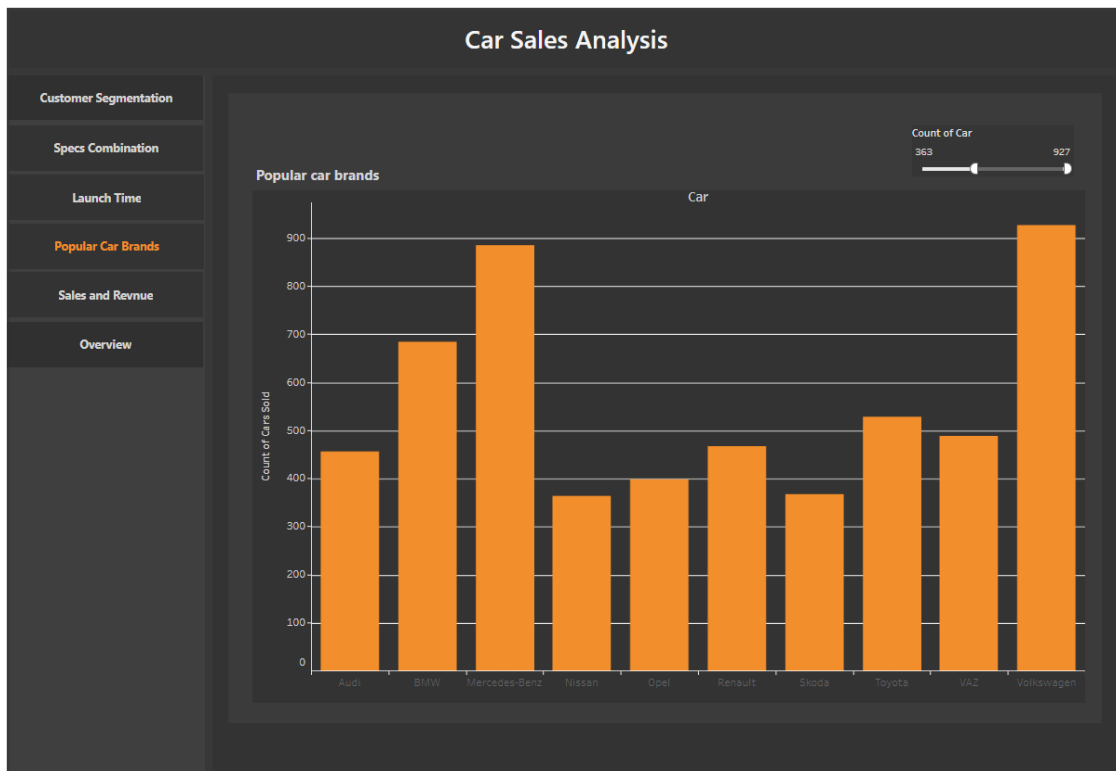
Observation:

sedan Economy class with front drive and type of fuel as petrol with average mileage around 315 is most popular car specification.

8. User Interface







9. References

<https://youtu.be/fhiUI7f5DnI>

https://youtu.be/_qReGTOOrKtK