**ANALYSIS – 3 SUMMARY**

**Memory Usage Reduction:**

* Explored techniques to reduce memory usage of the dataset.
* Implemented strategies such as removing duplicate rows, eliminating unnecessary columns, and optimizing data types using type conversion.
* These methods contributed to optimizing the dataset's memory footprint.

**Average Price Analysis by Fuel Type and Gearbox:**

* Calculated the average price of vehicles based on fuel type and gearbox using the groupby method.
* Visualized the results through a bar plot, providing a clear representation of average prices for different fuel types and gearbox combinations.

**Average Power Analysis by Vehicle Type and Gearbox:**

* Computed the average power of vehicles based on vehicle type and gearbox using the groupby method.
* Presented the findings through a bar plot, illustrating the average power for each combination of vehicle type and gearbox.

**Average Price Analysis by Brand and Vehicle Type with Heatmap:**

* Conducted an analysis to determine the average price of vehicles by brand and vehicle type using the groupby method.
* Represented the results with a heatmap, offering a visual interpretation of average prices for each brand and vehicle type combination.

In summary, this analysis addressed memory optimization, explored average prices based on various factors, and employed visualizations such as bar plots and heatmaps to enhance the understanding of the dataset's key features.