**Cobify Technical Challenge**

What is the story ?

In this project, we analyzed a dataset containing information about a car's fuel consumption. Our goal was to understand how various factors, such as distance, speed, temperature, and air conditioning, affect fuel consumption.

We started by exploring the data and visualizing the relationships between the different variables. We found that speed and fuel consumption were negatively correlated, indicating that the higher the speed, the lower the fuel consumption. However, we also acknowledged that other factors, such as traffic and road conditions, could influence this relationship.

Next, we wanted to determine if there was a significant difference in fuel consumption between the two types of fuel - E10 and E98. We performed a t-test and found that there was not a significant difference in consumption between the two fuels.

We also investigated the effect of air conditioning on fuel consumption and found that it was a significant factor. The car consumed more fuel when the air conditioning was turned on.

Finally, we built a linear regression model to predict fuel consumption based on all the available features. The model had an R-squared value of 0.85 and a mean squared error of 0.0107.

Overall, our analysis provides valuable insights into how different factors affect a car's fuel consumption. This information can be useful for individuals and organizations looking to reduce their fuel costs and carbon footprint.