Project Title: Trip Based Modelling of Fuel Consumption in Modern Fleet Vehicles Using Machine Learning

Project Design Phase-I - Solution Fit
Team ID: PNT2022TMID25555

Define CS, fit into CL

1. CUSTOMER SEGMENT(S) CS

Owners of vehicles/
Owners of fleet vehicles/
Managers

6. CUSTOMER LIMITATIONS EG. BUDGET, DEVICES CL

They have tried to monitor their fuel consumptions but have failed to do so accurately.
Fleet mangers are not able to track fraudulent activities.

5. AVAILABLE SOLUTIONS PROS & CONS AS

Existing solutions provide only analysis.
It is difficult for them to bring in a lot of parameters

Explore AS, differentiate

Focus on PR, tap into BE, understand RC

2. PROBLEMS / PAINS + ITS FREQUENCY PR

We have to predict the fuel consumption of vehicles by using existing data and the type of gas they use.
Customers often try to do rough average calculations to find the amount of fuel that they might consume. But they are not accurate,

9. PROBLEM ROOT / CAUSE RC

The reason for not being able to predict the fuel consumption accurately is that there are a lot of parameters involved, and they vary depending on time. It is not easy to take into the variation in time.
Also some parameters are not judgeable like Roasd conditions and traffic.
For those we need hyper parameters.

7. BEHAVIOR + ITS INTENSITY BE

When they are unable to solve this problem they try to find a way across to get an idea of the solution.
They try to approximate the fuel prediction based on their own heuristics
They try to find whether there are existing solutions for this issue and maybe try and hire a team that can develop a solution for this purpose .

Focus on PR, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS TO ACT TR

When they are unable to predict the fuel consumption.

4. EMOTIONS BEFORE / AFTER EM

They feel ignorant and less in control of their business.
After the problem is solved, they feel empowered and confident.

10. YOUR SOLUTION SL

-Interactive dashboard that provides insights about the vehicles and their fuel consumption.
-We plan to collect data from various sensors in the fleet vehicles and store it in a database
-Use that data to train the models to predict the fuel consumption.
-Also plan to add real time mileage prediction using real time speed and other parameters.

8. CHANNELS of BEHAVIOR CH

ONLINE

Have to keep track of data from the vehicles to maintain statistics and also use them for further predictions..

OFFLINE

For data to be collected hardware devices need to be installed and kept on the fleet.
Devices need to be monitored and kept in proper conditions.

Extract online & offline CH of BE