Project Title: Machine Learning based Vehicle Performance Analyzer
Project Design Phase-I - **Soluton Fit Team ID:** PNT2022TMID51272

1. CUSTOMER SEGMENT(S) `CS`

Who is your customer ?

- ❖ People who uses their vehicle on daily basis.

6. CUSTOMER CONSTRAINTS `CC`

What constraints prevent your customers from taking action or limit their choices of solutions?

- ❖ Complex Design of the vehicle which restricts the users themselves to take immediate actions on any repair or damage of the vehicle.

- ❖ Only trained technicians will be able to identify and rectify the problems and issues arising on vehicles.

5. AVAILABLE SOLUTIONS `AS`

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have?

- ❖ Nowadays quick vehicle service schemes has been established in many authorised service centres.
- ❖ Vehicle service centres are more in number also in all geographic locations when compared to earlier.
- ❖ Availability of spare parts is also very easy for every kind of vehicle in these days as internet helps to get these spare parts online.

2. JOBS-TO-BE-DONE / PROBLEMS `J&P`

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

- ❖ Vehicles must have both powerful and fuel efficient engines.

- ❖ It is equally important to monitor the vehicle usage pattern and also to record the performance of the vehicle, so that if any deviations occur in the performance it will immediately notify the user, to get it done by the service centre.

9. PROBLEM ROOT CAUSE `RC`

What is the real reason that this problem exists? What is the back story behind the need to do this job?

- ❖ People doesn't know about the importance of maintaining a vehicle.

- ❖ It is an important duty for each and every one of us to ensure that our vehicle doesn't cause any kind of pollution to the environment.

- ❖ Proper servicing and maintenance of vehicle also ensures the safety of the user.

7. BEHAVIOUR `BE`

What does your customer do to address the problem and get the job done?

- ❖ First of all, if any problems or repairs occur in a vehicle it will be notified to the user via vehicle performance analyser through email or sms.

- ❖ After the notification from the vehicle, the user must take the vehicle to the nearest service centre to get the repairs and problems to be rectified.

- ❖ If the user takes immediate action after notification means the minor problems can be rectified easily orelse the user's ignorance may lead to some major problems which may reduce the safety of the user and also may cost a lot of money to rectify such major problems.

3. TRIGGERS `TR`

What triggers customers to act?

- ❖ Keeping customers waiting too long for services to be completed.

4. EMOTIONS: BEFORE / AFTER `EM`

How do customers feel when they face a problem or a job and afterwards?

- ❖ Unsatisfied and Frustrated > Feeling comfortable and Happy.

10. YOUR SOLUTION `SL`

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behavior.

- ❖ The vehicle performance analyser helps in monitoring the performance of the vehicle using Machine learning. It takes engine performance, braking performance and safety as the main constraints and if any anomalous activities are found on the performance of the vehicle then it is immediately notified to the user and it ensures the safety of both the user and the vehicle. The main contribution is that it helps in protecting the environment, as proper servicing of the vehicle will reduce the carbon emissions.

8. CHANNELS OF BEHAVIOR `CH`

8.1 ONLINE
What kind of actions do customers take online?

- ❖ Customers will book their service slots based on their availability and time schedule.

- ❖ Customers will also get live updates from the service center regarding the service completion status of their vehicle so that they need not stay in the service center for a longer period of time , it is easier for them to collect the vehicle from the service center once the service is done.

8.2 OFFLINE
What kind of actions do customers take offline?

- ❖ Customers will test drive the serviced vehicle to ensure that the problem/repair is rectified and will check whether the repair notification has disappeared after the service.