Project Title: MACHINE LEARNING BASED VEHICLE PERFORMANCE ANALYZER **Project Design Phase-I - Solution Fit Template**

Team ID:PNT2022TMID12506

1. CUSTOMER SEGMENT(S) CS

- R&D in car manufacturing units.
- Vehicle enthusiasts and aftermarket tuners.
- Vehicle buyers.

6. CUSTOMER CONSTRAINTS CC

- Budget constraints.
- High maintenance.
- Poor fuel economy.

5. AVAILABLE SOLUTIONS AS

- Tuning the ECU.
- Better aerodynamics.
- Hybrid engine architecture (electric + gas).
- Regenerative breaking.

2. PROBLEMS J&P

- Evaluate the efficiency of the vehicle being manufactured/ sold/ tuned.
- The selected vehicle must be able to adhere to the rudimentary needs of an average driver/owner.

9. PROBLEM ROOT CAUSE RC

- Lack/misuse of R&D budget.
- Lack of exposure to automotive technologies.
- Lack of clarity of one's

7. BEHAVIOUR BE

- Authorised service centre.
- Availability of expert opinion.

3. TRIGGERS TR

- Affordable vehicle prices.
- Improved performance.
- Fuel efficient.
- Eco friendly nature.

4. EMOTIONS: BEFORE / AFTER. EM

Before : Confused, Indecisive, Budget deficit.

After : Happy, Satisfied, Worth the money.

10. YOUR SOLUTION. SL

The vehicle performance analyser helps in monitoring the performance of the vehicle using Machine learning. Where the fuel consumption is analysed using various parameters like vehicle weight, horsepower, number of cylinders etc

8. CHANNELS of BEHAVIOUR CH

8.1.ONLINE

Using pre-existing data to predict the vehicle's performance.

8.2.OFFLINE

Observing vehicle performance in action.
Engine tuning using dyno-testing.