**Project Design Phase-I**

**Proposed Solution**

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| Date | 04 November 2022 |
| Team ID | PNT2022TMID27752 |
| Project Name | Machine Learning based Vehicle Performance Analyzer |
| Maximum Marks | 2 Marks |

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | The main goal is to predict the performance of the car to improve certain behaviours of the vehicle. This can significantly help to improve the system's fuel consumption and increase efficiency. The performance analysis of the car is based on the engine type, no of engine cylinders, fuel type, horsepower, etc. The performance objectives like mileage, dependability, flexibility and cost can be grouped together to play a vital role in the prediction engine and engine management system. |
|  | Idea / Solution description | SENSOR BASED PREDICTION OF VEHICLE PERFORMANCE  A sensor based vehicle information system (SVIS) is proposed to study vehicle environment perception in this paper. The different types of sensors are installed on the road side environment and wireless communication technology is used to realize the sense information between sensor, base stations and servers. The system considered the high speed  characteristics of vehicles, when vehicles will be passing a road ahead that is prone to accidents; the vehicles driving states should be predicted to ensure drivers have advance information about road and safe from accidents. To evaluate the performance and stability the traditional sensor mounted system compared with SVIS system. The simulation results  show the accuracy and efficiency of proposed system. |
|  | Novelty / Uniqueness | The prediction of vehicle driving state in high speed environment. We tested the vehicle mounted system and compared the results of driving states. This sensor can ensure the system stability. Furthermore the system will provide accurate road information and efficient for warming applications. This sensor is cheaper than the other and estimates almost all attributes of the vehicle. |
|  | Social Impact / Customer Satisfaction | * Reduce Costs * Expand Your Customer Base With the Localization * To Maintain a safer driving |
|  | Business Model (Revenue Model) | **Informs the customer to check the car**  The SVIS sensor will alert the user for the car requirement through your mobile phones.  **Helps the customer**  The office workers are busy and they are unable to take care of their car. So this sensor can make alert of the users by using smart phone connection. By this users will never find difficulties. |
|  | Scalability of the Solution | With an sensor they can find the problems of the vehicle and will fixed it. This model are available in the Toyota company and thereby increasing its global reach and Ultimately growing usage. |