

### Project Initialization and Planning Phase

Date	15th July 2024
Team ID	739740
Project Name	Predictive Modeling For Fleet Fuel Management Using ML
Maximum Marks	3 Marks

#### Define Problem Statements (Customer Problem Statement Template):

In the realm of fleet management, optimizing fuel consumption is crucial due to the significant impact of fuel costs on operational expenses and environmental sustainability. A customer problem statement for predictive modeling in fleet fuel management using machine learning (ML) centers around the need to forecast and reduce fuel consumption effectively. Fleet operators often face challenges such as fluctuating fuel prices, varying driving behaviors, different vehicle types, and diverse routes, all of which contribute to inconsistent and unpredictable fuel usage. The goal is to develop an ML-driven solution that can analyze historical fuel consumption data, driving patterns, vehicle maintenance records, and external factors like weather and traffic conditions. By identifying patterns and predicting future fuel needs, the model can suggest optimal routes, driving behaviors, and maintenance schedules. This will lead to cost savings, enhanced operational efficiency, and reduced carbon footprint. The solution should also provide real-time insights and actionable recommendations to fleet managers, enabling them to make data-driven decisions that improve overall fleet performance.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
Optimize fuel consumption and reduce operational costs	Fleet Manager	Improve fuel efficiency and reduce costs	I face fluctuating fuel prices, varying driving behaviors, different vehicle types, and diverse routes	These factors lead to inconsistent and unpredictable fuel usage	Frustrated due to the inability to control costs effectively and concerned about the environmental impact of inefficient fuel usage

