Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	12 0ctober 2022
Team ID	PNT2022TMID01039
Project Name	Project - **Trip Based Modeling Of Fuel Consumption In Modern Fleet Vehicles Using Machine Learning**
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User GPS vehicle Tracking	Tracks location of vehicle Provides necessary information about the vehicle
FR-4	Route planning and monitoring	Route planning via verification Route monitoring via surveillance cameras Extract and collect data from the dataset
FR-5	Fuel consumption and analytics	monitor fuel level 24/7 to see how often vehicles are being refueled and drained.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Navigation: When an application is usable, users can easily navigate its interface,they can understand how the application organizes its content, and know where to access pages such as settings. Purpose of features: With high usability, users can easily determine what a feature is and what it can do. For instance, they might predict that tapping a button with a picture of a magnifying glass may open a search bar. Quality of performance: When a device performs well, it means that the features of a system are functioning well based on what a developer predicted, if an application label states it can improve a cell phone's battery life, the user may assess battery life over time to determine whether the product performed as expected.
NFR-2	**Security**	An application may not grant access until the user creates a strong password. A security system for a product may ask questions that only the user knows the answer to. This can help verify a user's identity when they log into an account.

NFR-3	**Reliability**	Percentage of the probability of failure : to check the percentage of the probability of failure, or failure rate, to determine the reliability of a system. Number of critical failures: Consider recording the amount of critical failures a system experiences during testing to check its reliability.
NFR-4	**Performance**	Performance standards for our product, it's important to consider the perspective of the user the purpose of your product and customer expectations. customers are interested in a product that maintains the privacy of their messages and pictures, add nonfunctional features that enhance your application's security. Depending on our target audience, we prioritize certain nonfunctional requirements over others. if you're producing a wearable device for athletes consider the environmental factors they encounter during training, such as moisture and heat.
NFR-5	**Availability**	A localized application has features that match the geographical location of its users, including aspects such as Languages,Currencies,Measurements, such as pounds vs. kilograms ,Time zones.The environment includes external factors that impact how your system performs humid weather and exposure to water may affect the speed or reliability of an application. An application's environment may also include the schedule on which it runs, such as 24 hours a day or only when the user launches it.
NFR-6	**Scalability**	Scalability is the ability of the application to handle an increase in workload without performance or its ability to quickly enlarge. It is the ability to enlarge the architecture to accommodate more users, more processes, more transactions, and additional nodes and services as the business requirements change and as the system evolves to meet the future needs of the business. The existing systems are extended as far as possible without replacing them. Scalability directly affects the architecture as well as the selection of hardware and system software components.