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

Team ID	PNT2022TMID37298
Project Name	Project – Machine Learning Based Predictive Analytics for Aircraft Engine

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	**Functional Requirement (Epic)** ***[User – Flight Safety Officer]***	**Sub Requirement (Story / Sub-Task)**
FR-1	User Registration	Registration through website
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Verification	Fingerprint Verification
FR-4	Inputs/Data	Data generated through a simulation model and engine data.
FR-5	Data processing	Displays the components lifespan, detects errors.
FR-6	Prediction	Notifies when there's a flaw in components and displays the engine failure rate.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The fight safety officer is provided with an undisturbed ambience, a system with a condition for the officer to perform the tasks safely, effectively, and efficiently.
NFR-2	**Security**	Assuring all data inside the system or its part will be protected against malware attacks or unauthorized access.
NFR-3	**Reliability**	A good working system with adequate ML datasets that predict engine failure.
NFR-4	**Performance**	It defines how fast a software system or a particular piece of it responds to the flight safety officer. This metric explains how long a user must wait before the target operation happens given the overall number of users at the moment. As backup will be provided during the process, performance is adequate.
NFR-5	**Availability**	Highly available.
NFR-6	**Scalability**	The solution is highly scalable, it can accommodate a large set of data for any type of engine