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

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Team ID	PNT2022TMID21701
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)	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 Password	Set Password Confirm Password
FR-4	User Verification	Email Verification
FR-5	User Dataset	Add to Prediction System
FR-6	Dataset Pre-processing	Apply 80-20 rule on the dataset Transform Categorical data into Numerical values
FR-7	User Engine Data Intake	Get data input through Web Interface Communicate data to ML model
FR-8	Display Engine Failure Rate	Process input to arrive at a conclusion Display Probability of Engine Failure in Web Interface

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Usability is a non-functional requirement, because in its essence it doesn't specify parts of the system functionality, only how that functionality is to be perceived by the user, for instance how easy it must be to learn and how efficient it must be for carrying out user tasks.
NFR-2	**Security**	Functional security requirements describe functional behaviour that enforces security. Functional requirements can be directly tested and observed. Requirements related to access control, data integrity, authentication and wrong password lockouts fall under functional requirements.
NFR-3	**Reliability**	Reliability requirements are typically part of a technical specifications document. They can be requirements that a company sets for its product and its own engineers or what it reports as its reliability to its customers. They can also be requirements set for suppliers or subcontractors.
NFR-4	**Performance**	Performance requirements define how well the software system accomplishes certain functions under specific conditions. Examples include the software's speed of response, throughput, execution time and storage capacity. The service levels compromising performance requirements are often based on supporting end-user Tasks.

NFR-5	**Availability**	Availability describes how likely the system is accessible to a user at a given point in time. While it can be expressed as an expected percentage of successful requests, you may also define it as a percentage of time the system is accessible for operation during some time period.
NFR-6	**Scalability**	Non-functional Requirements capture conditions that do not directly relate to the behaviour or functionality of the solution, but rather describe environmental conditions under which the solution must remain effective or qualities that the systems must have. They are also known as quality or supplementary requirements.