Project Design
Phase-I Proposed
Solution

Date	24 September 2022
Team ID	PNT2022TMID30287
Project Name	Machine Learning-Based Predictive Analytics for Aircraft Engine.
Maximum Marks	4 Marks

Proposed Solution:

S. No.	Parameter	Description
1	Problem Statement (Problem to be solved)	❖ To predict the failure of an engine by using Machine Learning to save loss of time & money thus improving productivity.
2	Idea / Solution description	❖ Machine learning (ML) is a type of artificial intelligence (AI) that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so. ❖ Structural failures where a broken connecting rod, crank, valve, or camshaft is present account for seventeen percent of engine failures occurs. ❖ The failure can be detected by installing the sensors and keeping a track of the values. ❖ The failure detection and predictive maintenance can be for any device, out of which we will be dealing with the engine failure for a threshold number of days.
3	Novelty / Uniqueness	❖ An aircraft engine (or aero engine) is a propulsion system for an aircraft. ❖ Aircraft engines are the key module or the heart in aviation progress.
4	Social Impact / Customer Satisfaction	❖ The advent of human flight not only boosted our power of movement, but also enhanced our vision. ❖ There are a number of effects altitude and airplane travel have on the body, including oxygen deprivation, alteration of sleep patterns, and an increased risk of contracting contagious diseases.

5	Business Model (Revenue Model)	❖ Machine learning model predictions allow businesses to make highly accurate guesses as to the likely outcomes of a question based on historical data, which can be about all kinds of things such as possible fraud activity, and more. ❖ The reliability analysis is also important to predict their scheduled maintenance event and the Remaining Useful Life (RUL) of engine parts
6	Scalability of the Solution	❖ This app can help customers to get updates of the flight of any part of the flight. ❖ This is also beneficial for all the airline authorities by reducing complaints and increasing customer satisfaction. ❖ The scalability of the solution is expanded for travelers all over the world, irrespective of their purpose for travelling.