Project Design Phase – I

PROBLEM SOLUTION FIT

TEAM ID	PNT2022TMID15221
PROJECT TITLE	Machine Learning-Based Predictive Analytics for Aircraft Engine
DATE	15 October 2022

1.CUSTOMER SEGMENTS Customers are businessmen, student, tourist, traveler and all the people traveling in flight.	**4.CUSTOMER LIMITATIONS** Customers require accurate and early predictions of the flight engine failure. And they also look for an alternate solution.	**5.AVAILABLE SOLUTIONS** The reliability analysis of aircraft engines is essential for ensuring the smooth functioning of each component of an aircraft engine.
2.PROBLEM Engine failure occurs when a turbine engine unexpectedly stops producing power due to malfunction. This lead to a lot of customer dissatisfaction.	**6.PROBLEM ROOT / CAUSE** The root cause of the problem is unforeseen & unpredictable engine failure that cause cancellations and arrival, departure delays.	**7.BEHAVIOR** The purpose of this research is to develop methods that can be used to generate reliable and timely alerts
3. TRIGGERS TO ACT To accurately predict the failure of an engine and track the flight. **4. EMOTIONS** The aircraft engine failure occurs, passengers often get annoyed and frustrated. They also might lose to reach on time to some important occasions.	**10. SOLUTION** Preventable fuel problems such as exhaustion. Structural failures where a broken connecting rod, crank, valve, or camshaft is present account for seventeen percent of engine failures occurs.	**8.CHANNELS OF BEHAVIOR** Check the engine regularly and maintained properly. And also check the fuel and oil levels regularly in the aircraft engine.