

**Project Title: ML Based Predictive Analytics for Aircraft Engine**

**Project Design Phase-I - Solution Fit**

**Team ID: PNT2022TMID45543**

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<b>1.CUSTOMER SEGMENT(S) (CS)</b>  > Customers are businessmen, student, tourist, traveler and all the people traveling in flight.	<b>2.JOBS-TO-BE-DONE / PROBLEMS ( J&amp;P )</b>  > Engine failure occurs when a turbine engine unexpectedly stops producing power due to malfunction. This lead to a lot of customer dissatisfaction.	<b>3. TRIGGERS (TR)</b>  > To accurately predict the failure of an engine and track the flight  <b>4. EMOTIONS: BEFORE / AFTER (EM)</b>  > The aircraft engine failure occurs, passengers often get annoyed and frustrated. They also might lose to reach on time to some important occasions.
<b>5. AVAILABLE SOLUTIONS (AS)</b>  > The reliability analysis of aircraft engines is essential for ensuring the smooth functioning of each component of an aircraft engine.	<b>6.CUSTOMER CONSTRAINTS (CC)</b>  > Customers require accurate and early predictions of the flight engine failure. And they also look for an alternate solution.	<b>7. BEHAVIOUR (BE)</b>  > The purpose of this research is to develop methods that can be used to generate reliable and timely alerts
<b>8. CHANNELS OF BEHAVIOR ( CH )</b>  > Check the engine regularly and maintained properly. And also check the fuel and oil levels regularly in the aircraft engine.	<b>9. PROBLEM ROOT CAUSE ( RC )</b>  > The root cause of the problem is unforeseen & unpredictable engine failure that cause cancellations and arrival, departure delays.	<b>10. YOUR SOLUTION ( SL )</b>  > 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.