Aviation Use Cases
Engine Water Wash Prediction

Problem Statement

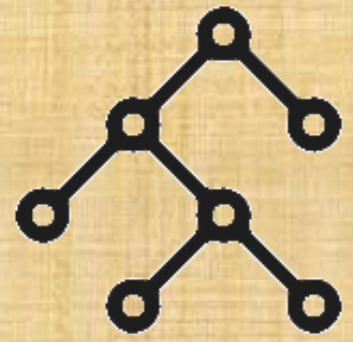
An aviation maintenance company wanted to predict effectiveness of scheduled engine water wash to avoid bearing extra costs of unplanned maintenance

Objective

The objective was to develop a machine learning algorithm on top of sensor data after engine water wash to predict its effectiveness using AI

Identified the most important engine sensors affected → Preparing feature vector from sensors → Used Random Forest Model to predict probability of effectiveness → Highlight low probability cases immediately after water wash

- Sensor 1
- Sensor 2
- Sensor 3
- Sensor 4
- Sensor 5



Random Forest Model Considering multiple sensors to determine effectiveness of water wash

Implemented for 3-4 family of engines and resulted in savings of $70M