

Aviation Use Cases

Anomaly Detection for Aircraft Engine Sensors



Problem Statement

An aviation maintenance company wanted to use raw aircraft sensor data to identify abnormalities in engine performance and prevent unscheduled shop visits

Objective

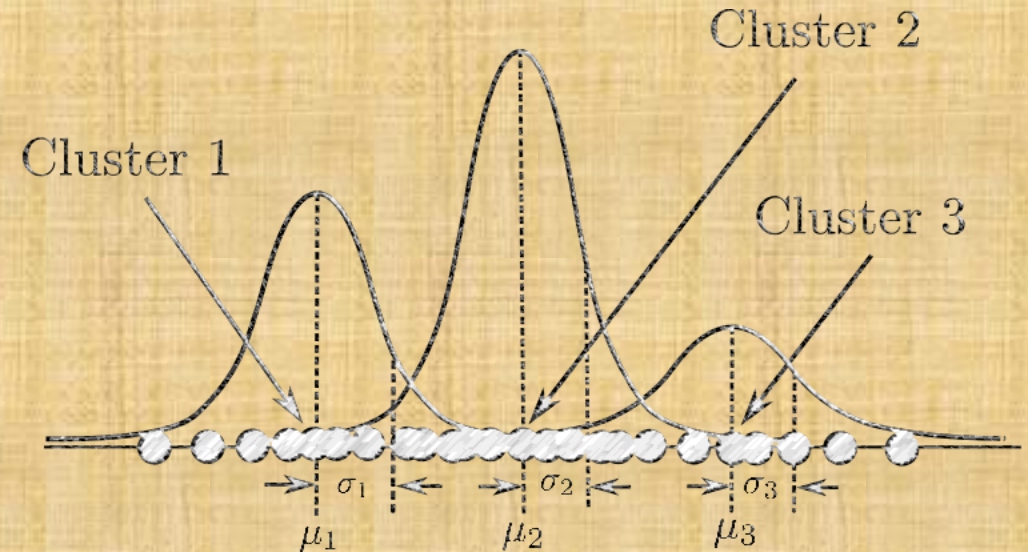
The objective was to develop a simple anomaly detection model for multiple engine components by using relevant raw sensor data

Identify relevant sensors for each engine component

Preparing feature vector from sensors

Used Gaussian Mixture Models to detect abnormalities across data vector

Report severe cases to direct preventative action



Gaussian Mixture Model to detect abnormalities using multiple sensors for given component



Resulted in savings of \$27M by nipping high severity abnormalities