

BIRD Analytics

A Seamless Full Stack Business Intelligence Platform

ENERGY DOMAIN





About BIRD

- An agile and seamless full-stack data management platform that provides real-time access to any of your data
- Allows users to analyse the data using powerful KPI-driven dashboards or through augmented machine learning insights
- With BIRD, enterprises can build instant data pipelines with transformations and design data warehouses with logical data models
- With BIRD, you have access to the broadest range of structured, semi-structured, and unstructured data sources, like databases, ERPs, flat files, big data sources, and streaming and IoT devices
- BIRD helps reduce the BI team's efforts with its no-code or low-code transformation and universal data model framework
- BIRD Augmented Analytics integrates advanced data science capabilities into the platform, allowing for faster discovery and delivery of new insights to assist every business user in making better, more accurate decisions
- BIRD's intuitive, responsive, web-based client in mobile browsers lets you easily create and explore analytics on the device of your choice.



The Company

The customer offers cutting-edge technologies and energy solutions for the power industry, supporting affordable and reliable power supplies in regions throughout the world. The customer today ranks among the world's leading suppliers of Equipment and Services to the power generation market, backed by \$680 Mn in capital and approximately 20,000+ employees worldwide.

Problem

customer is into manufacturing of comprehensive lineup of gas turbines for a wide range of applications. Sometimes, the company was experiencing break down in machinery due to fissures/cracks formation. There were huge costs incurred (downtime penalties) as well as longer time involved in repair, resulting in a longer period of business interruption. To avoid these losses customer was looking for a highly accurate and dependable solution that can help to predict possible cracks/fissures at least 6 months in advance using AI/ML, to minimize the downtime .

Solution

- To solve the problem using data driven methods.
- Analyze data (size of 100GB) from multiple plants pertaining to with failure / without failure of machines
- Perform Feature Engineering exercise which is the most important step to understand the correlation between the attributes.
- Develop a program to extract the identified features automatically from the data
- Develop a program that detects the presence of a crack just before the turbine fails
- Further processing and fine tuning of the program to predict the failure of the turbine in a certain future time
- Develop UI to support loading of data and to view the model outcome.

Result

- An enhanced program that uses the extracted features and predicts the probability of crack formation/growth for the next
 - few months/quarter/six months and a year

Thank You.

