

Augenblick Hackathon 2025

ML2 - AD :

Anomaly Detection : Sensor Data Monitoring

Team Name: Status200

Team Members: Shravan More
Jatin Gorana

Anomaly Detection & Predictive Maintenance

Overview

- Detect anomalies in industrial sensor data using multimodal data fusion.
- Predict failures and provide early warnings.
- Interactive dashboard for real-time monitoring.

Key Components

- Data Processing: Normalize time-series, extract features, handle missing values.
- Anomaly Detection: Supervised (known failures) & Unsupervised (novel anomalies).
- Time-to-Failure Prediction: Estimate remaining useful life & suggest maintenance.
- Visualization Dashboard: Early warning system, anomaly tracking, prediction insights.

Results & Performance

- Early failure detection (hours/days in advance).
- Monitoring false positives/negatives.
- Clear explanations of anomalies.
- Practical maintenance recommendations.