Asset Health AI

Increase revenue via higher throughput driven by improved failure prediction, diagnosis and prevention

The Noodle.ai Asset Health AI (AHAI) application is designed for manufacturing companies with complex machinery and low excess capacity.

The AHAI application combines equipment sensor data with contextual data on the equipment type, utilization, maintenance, production and ambient conditions. The application's machine learning models leverage this data to detect anomalous patterns across multiple sensors and predict impending equipment failures. It then recommends an optimum maintenance action to prevent the failure.

With these AI-driven failure predictions and maintenance recommendations, manufacturing operations teams can improve throughput while reducing maintenance spend.

Key Features

Anomaly Detection
Detect complex anomalies from real-time sensor data

Failure Prediction
Predict equipment failure days in advance with associated probability

Causal-factor Identification
Uncover component- and sensor-level factors that resulted in the failure

Asset Life Expectancy Prediction
Assess equipment health and potential remaining useful life

Downtime Duration & Productivity Impact
Analyze upcoming downtime and gauge impact on production

Maintenance Recommendation
Determine optimal maintenance to maximize value

Application Details

YOUR FACTORY

Internal Data
- Production schedule, batch specs
- Process performance & sensor data
- Downtime events & maintenance logs
- Equipment hierarchy & utilization

External Data
- Weather, geo data

NOODLE AI

Enterprise AI® Platform
- Sense | Current state of equipment and machinery
- Predict | Failure probability and key drivers
- Recommend | Optimal maintenance schedule

YOU

AHAI Application Interface
- Monitor | Asset health summary, risk resolution performance, operational metrics, financial metrics
- Risk | Failure probability, time to failure, value at risk, anomalies
- Schedule | Maintenance schedule and recommendations

Key Differentiators

Advanced AI/ML Techniques
Unsupervised learning for anomaly detection, supervised learning for failure prediction, deep probabilistic AI combining deep learning and Bayesian modeling

Scalability
Ability to deploy the same model across a variety of assets and failure modes with feature changes & hyperparameter tuning via the Enterprise AI® Application Trainer

Context
Inclusion of operational context (operating modes, crew, maintenance & repairs, etc.) for improved quality of anomaly detection and failure prediction

Proprietary Failure Detection Library
Noodle.ai's patent-pending Anomalous Risk Signature Library (ARSL) maximizes failure event coverage

Noodle.ai Data Cartridges
Pre-built external data signals, including weather and geo attibutes to accelerate predictive failure detection

Benefits

15-25% reduction in equipment downtime

3-5% improvement in equipment life

10-25% reduction in maintenance cost

Noodle.ai is on a mission to create a world without waste. As the leading source of Enterprise AI®, we're pushing the limits of data science to give business leaders a view into the future, enabling them to achieve radical efficiency within their manufacturing and supply chain operations.

Founded in 2016, Noodle.ai has been selected the #1 B2B Startup by LinkedIn, a Top 100 Startup by CIO Review Magazine, and a 2019 Cool Vendor for AI in Supply Chain by Gartner.

Gartner
COOL VENDOR 2019