Energy Conservation AI

Reduce production costs by predicting and optimizing energy consumption across the manufacturing process

The Noodle.ai Energy Conservation AI (ECAI) application is designed for manufacturing companies with energy-intensive machinery or production processes.

The ECAI application ingests energy consumption and pricing data, process parameters, equipment information, and production schedules. The application's machine learning models leverage these inputs to forecast both equipment-based and time-based energy consumption across the entire manufacturing process, identifying opportunities for shaving peak loads and trading surplus energy.

With these AI-driven predictive insights, manufacturing companies can optimize energy consumption and spend.

Key Features

Anomaly Detection
Intelligent anomaly detection framework for energy consumption

Energy Forecasting
Integrated heat- and hour-level energy forecasting engine

Comprehensive Risk Assessment
Identifies monetary value at risk, units of energy at risk, and time to impact

Real-Time Scheduling Intelligence
Address risks of shortfall/surplus, forecast/ commitments, and pricing-driven scheduling

Energy Trading
Identify energy purchasing and reselling opportunities based on real-time shortages and surpluses

Application Details

YOUR FACTORY

Internal Data
- Energy consumption data
- Production & operations data
- Process & sensor data
- Equipment & crew data

External Data
- Local node and grid-wide energy pricing data

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Enterprise AI® Platform
- Sense | Key drivers of variable power usage across all production processes
- Predict | Real-time and day-ahead energy consumption, segmented by production line
- Recommend | Opportunities to trade excess energy or shave peak energy

YOU

ECAI Application Interface
- Monitor | Overview of energy consumption and anomalies in KPIs
- Risk | Visualize peak consumption periods
- Trade | Precision recommendations for energy surplus selling

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Key Differentiators

Proactive Risk Detection & Prioritization
Noodle's Real-Time Energy Risk Assessment Engine accurately detects and prioritizes risks based on production schedule and energy price fluctuations

Comprehensive Feature Library
Industry-specific library of features such as heat sequence, energy consumption variation, material composition, production crew ID, and output grade

Optimized Scheduling
Evaluate forecasted energy pricing to recommend optimal changes in the production schedule

Noodle Data cartridges
Pre-built external data signals including weather and regional transmission pricing data

Benefits

10 - 15%
decrease in energy-related production costs

7 - 10%
surplus energy sales in real-time energy market

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.

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