

Predictive maintenance scheduling for solar panels and wind turbines

Automatically monitors solar panels and wind turbines through SCADA data analysis, predicts maintenance needs using AI algorithms, and schedules optimal maintenance windows to minimize downtime and maximize energy production efficiency.

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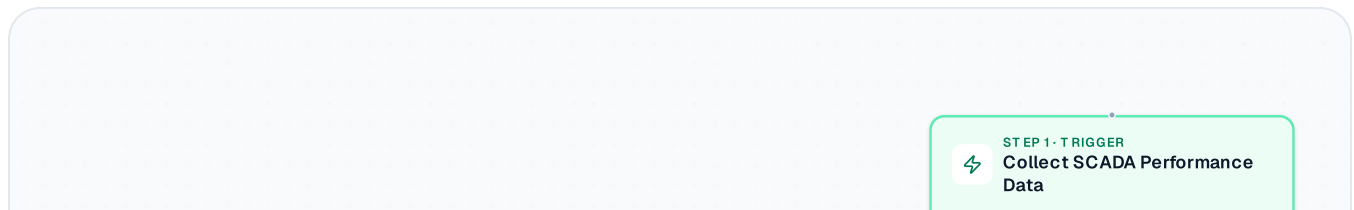


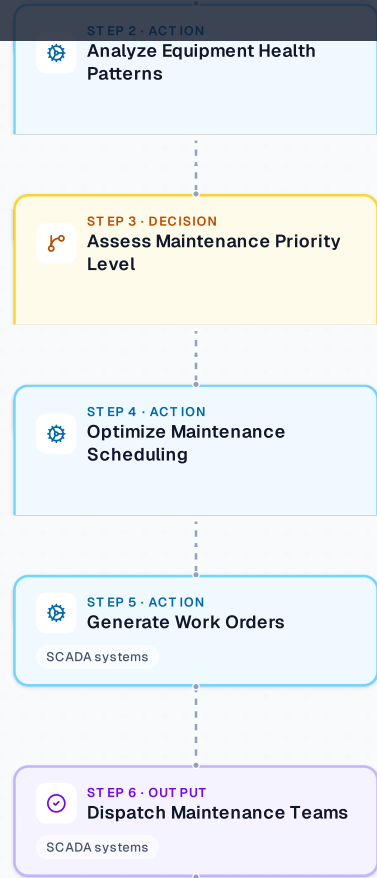
WORKFLOW TRIGGER

Daily SCADA system data collection completes at midnight

Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.





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Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

⚡ TRIGGER

Collect SCADA Performance Data

SCADA systems automatically transmit daily performance metrics including power output, vibration data, temperature readings, and fault

2

 ACTION

Analyze Equipment Health Patterns

AI algorithms process historical and real-time data to identify degradation patterns, anomalies, and performance deviations that indicate potential equipment failures.

SCADA systems

PVSyst

3

 DECISION

Assess Maintenance Priority Level

System evaluates predicted failure probability and energy production impact to categorize maintenance as critical (immediate), moderate (within 30 days), or routine (scheduled intervals).

Homer Pro

4

 ACTION

Optimize Maintenance Scheduling

PowerFactory analyzes grid demand forecasts and weather patterns to schedule maintenance during optimal windows that minimize energy production losses.

PowerFactory

Homer Pro

5

 ACTION

Generate Work Orders

System automatically creates detailed work orders with equipment specifications, required parts, and technician assignments based on maintenance priority and resource availability.

SCADA systems

6

⌂ OUTPUT

Dispatch Maintenance Teams

Automated notifications are sent to maintenance teams with scheduled appointments, equipment diagnostics, and optimized routing to minimize response time and maximize efficiency.

SCADA systems



Outputs

- Prioritized maintenance schedules
- Automated work orders with parts lists
- Optimized technician dispatch notifications



Key Metrics

- Equipment uptime percentage

- Maintenance cost reduction

AI Business OS

- Energy production efficiency



Tools & Integrations

- SCADA systems
- PVSyst
- Homer Pro
- PowerFactory

AI Business OS

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