PVOP

NEAR-100% AUTONOMOUS AERIAL INSPECTION & FAULT DETECTION SYSTEM

ZERO MANUAL EFFORT. FULL ASSET VISIBILITY. ACTIONABLE INSIGHT.

SHORT DESCRIPTION

This fully autonomous aerial inspection system transforms how solar and wind assets are monitored — delivering precise, automated fault detection at module level with zero manual supervision. By cross-referencing aerial data with system diagnostics and performance trends, it offers operators a clear, prioritized picture of asset health. Asset managers gain predictive insights to reduce downtime and OPEX, while O&M teams benefit from smarter maintenance scheduling and less trial-and-error in the field. Scalable across sites and vendor-agnostic, it's the missing link between performance loss and fast, targeted intervention.

EXPECTED IMPROVEMENTS

- Up to **70% faster issue detection** compared to manual or semi-automated inspections
- **30–50% reduction in site visit costs** through precision-targeted interventions
- 3× increase in inspection frequency with no added headcount
- **Fewer performance losses** thanks to faster identification of developing faults
- Accelerated ROI via early anomaly detection and reduced operational downtime

MAIN BENEFITS

For Global Asset Managers:

- **Gain full visibility into asset performance across sites without relying on field teams**
- **Minimize performance losses and improve predictive maintenance strategies**
- **Streamline decision-making with cross-referenced data from aerial, SCADA, and historical logs**

For O&M Managers:

- **Reduce unplanned downtime with actionable fault prioritization**
- **Avoid redundant inspections and unnecessary repairs**
- **Increase team efficiency with insights that direct attention to critical issues only**

USE CASES

A **global asset manager** overseeing 400 MW across multiple European sites integrates autonomous inspections quarterly. This enables predictive replacement of degrading modules and reduces average downtime response by 65%.

An **O&M contractor** deploys the system to run thermal aerial scans over a large plant. The AI identifies and clusters hotspots, flagging only high-impact anomalies and guiding the technician directly to fault locations, cutting inspection time in half.

A **solar co-op or community energy project** uses the system to inspect rooftop installations without physical site access, ensuring regular performance checks without inflating operating budgets.

Book your personalized discovery call here

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