

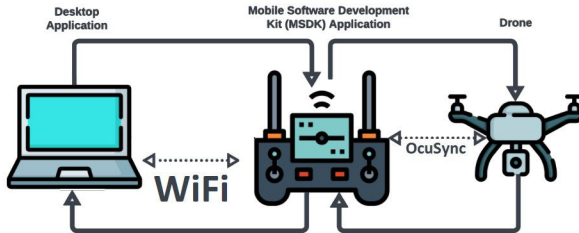
Drone Based Autonomous Wind Turbine Inspection

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Overview

Goal: Autonomous Wind Turbine Inspection



Desktop App

- Path planning
- Image processing

Controller App

- Data transfer
- Issue commands via SDK

Approaching Turbine



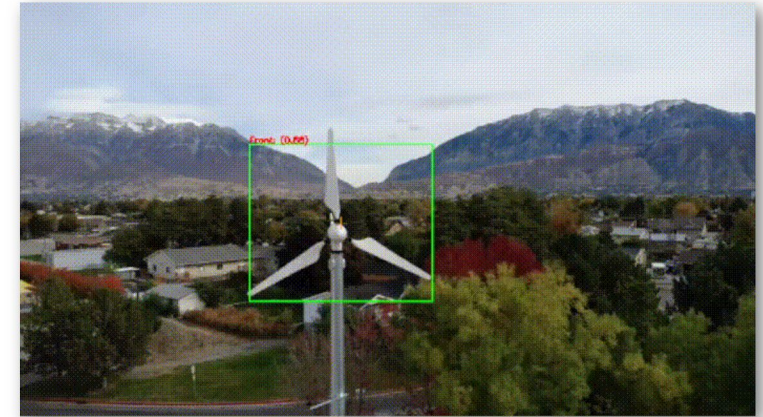
Drone Actions

1. Detect Wind Turbine
2. Estimate distance to turbine
3. Approach turbine incrementally

BIBLIOGRAPHY

1. Edward Haymore et. al. *Analysis of Small Wind Turbine Inspection via Autonomous Drone*, Accepted at Intermountain Engineering, Technology & Computing Conference, 2025

Blade Inspection



Drone Actions

1. Set zoom
2. Detect blades
3. Compute flight vector
4. Fly along vector
5. Return to center of turbine