

# Power Outage Analysis Report

## Executive Summary

Metric	Value
Total Reports Analyzed	3
Real Outages Confirmed	2
False Positives Identified	1
Accuracy Rate	66.7%
Report Generated	2025-06-22 16:08:50

## Dataset Information

Dataset contains 3 records spanning from 2024-01-15T12:15:00 to 2024-01-15T16:45:00. Total customers affected: 280.

## Detailed Analysis

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## Executive Summary

- **Total reports analyzed**: 3
- **Real outages confirmed**: 2
- **False positives identified**: 1
- **Overall accuracy rate**: 66.7%
- **Report generated**: 2025-06-22 16:08:50

## Classification Performance

- **Count**: 2
- **Average Confidence**: 0.90
- **Total Customers Affected**: 235
- **Average Customers per Outage**: 118 (if applicable)

- **Count**: 1
- **Average Confidence**: 0.85
- **Total Falsely Reported Customers**: 45
- **Average Customers per False Report**: 45 (if applicable)

## Dataset Information

- **Total records in dataset**: 3
- **Date range**: 2024-01-15T12:15:00 to 2024-01-15T16:45:00
- **Geographic coverage**:
  - Latitude: 40.7128 to 40.758
  - Longitude: -74.006 to -73.968
- **Total customers in dataset**: 280

## Geographic Analysis

- **Total Mapped Locations**: 3
- **Real Outages**: 2 (marked in red)
- **False Positives**: 1 (marked in blue)
- **Map Center**: 40.7399, -73.9865
- **Latitude Range**: 40.7128 to 40.7580 (spread: 0.0452°)
- **Longitude Range**: -74.0060 to -73.9680 (spread: 0.0380°)
- **Real Outages Cluster Center**: 40.7354, -73.9958
- **False Positives Cluster Center**: 40.7489, -73.9680
- **Cluster Separation**: Approximately 0.0309° geographic distance
- **Red Markers**: Confirmed real outages
- **Blue Markers**: Identified false positives

## Detailed Analysis

- **Real outages with >80% confidence**: 2
- **False positives with >80% confidence**: 1
- **Performance Needs Improvement**: Consider reviewing classification criteria and weather thresholds.

- Continue monitoring weather patterns for outage correlation
  - Review sensor calibration for areas with high false positive rates
  - Implement additional validation for reports during mild weather conditions
  - Consider geographic clustering patterns for predictive maintenance
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- Classification based on historical weather data correlation
  - Confidence scores reflect model certainty in classification decisions
  - Geographic analysis helps identify regional patterns and equipment issues

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\*This report was generated by the LLM-Powered Outage Analysis Agent\*

**Real Outages - Detailed List**

Location	Date/Time	Customers	Confidence
40.7128, -74.006	2024-01-15 14:30:00	150	0.92
40.758, -73.9855	2024-01-15 16:45:00	85	0.88

**False Positives - Detailed List**

Location	Date/Time	Customers	Confidence
40.7489, -73.968	2024-01-15 12:15:00	45	0.85