

Defect Analysis Report — CircuitGuard AI

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|---------------|---------------------|
| Report ID: | RPT-4D120A3A |
| Generated On: | 2025-11-12 13:41:19 |
| Model: | ResNet50 (custom) |
| Device: | cpu |

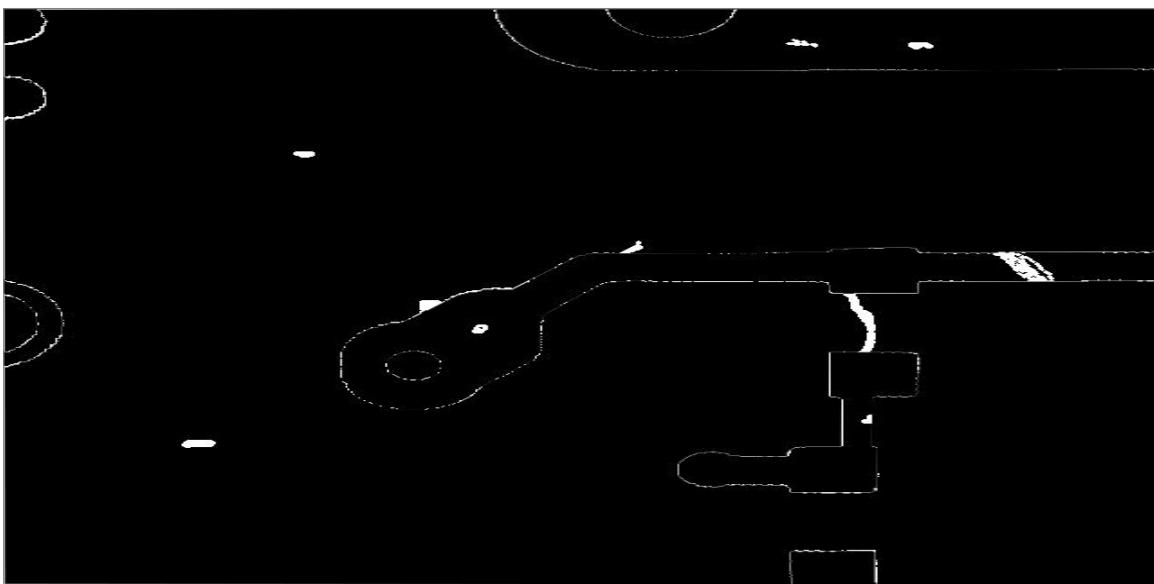
Executive Summary

Detected 6 defect(s). High:4, Medium:2, Low:0. Avg conf: 79.62%.

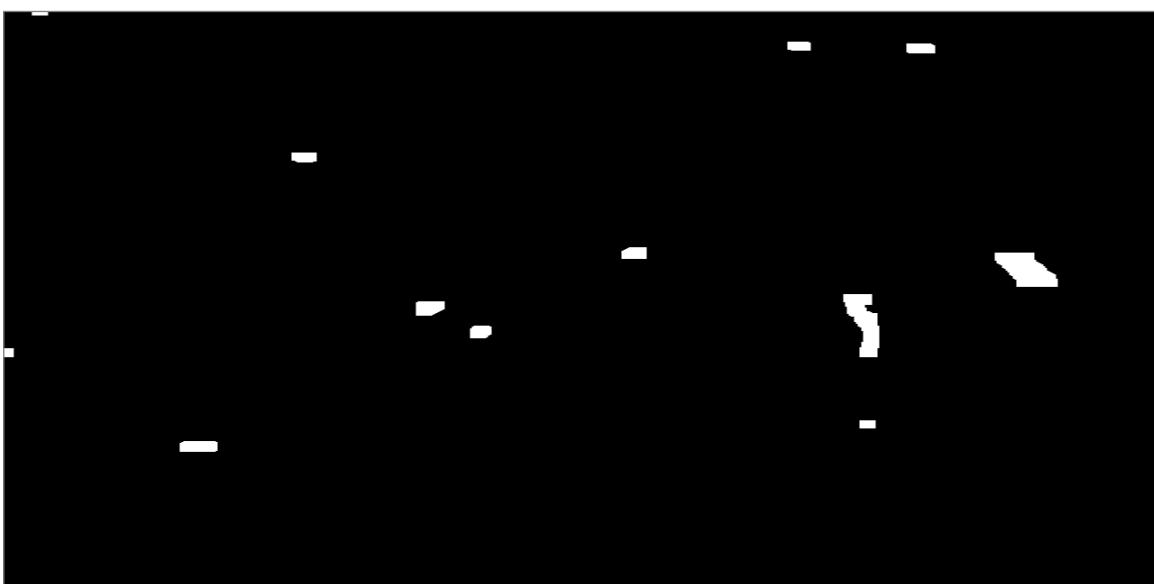
| Metric | Value |
|----------------------------|--------|
| Total Defects | 6 |
| High Confidence (>=80%) | 4 |
| Medium Confidence (60-80%) | 2 |
| Low Confidence (<60%) | 0 |
| Average Confidence | 79.62% |

Input & Analysis Maps

Difference Map

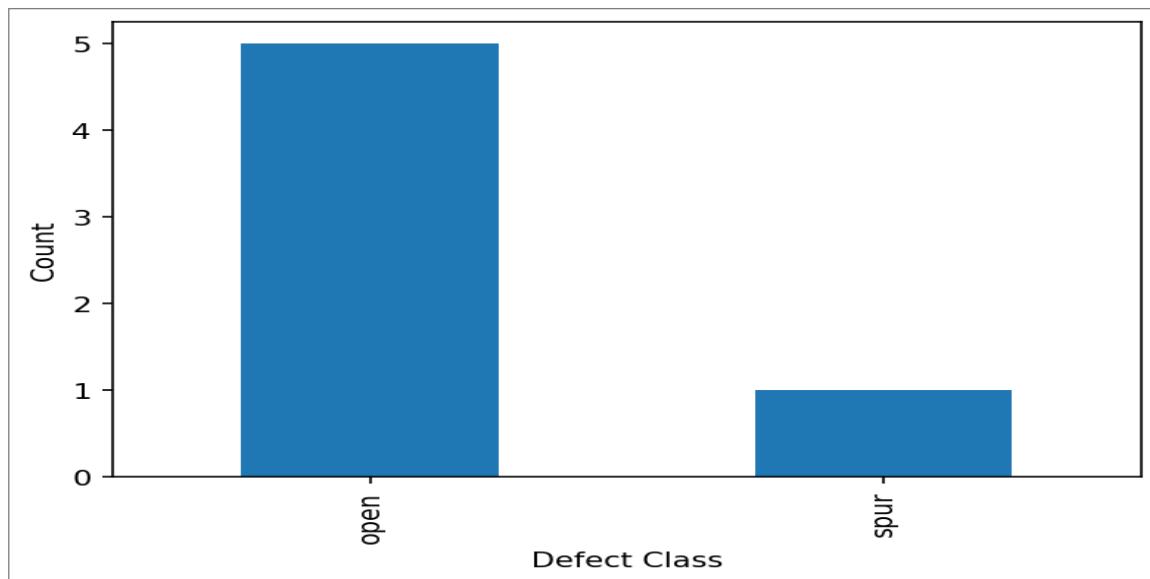


Binary Mask

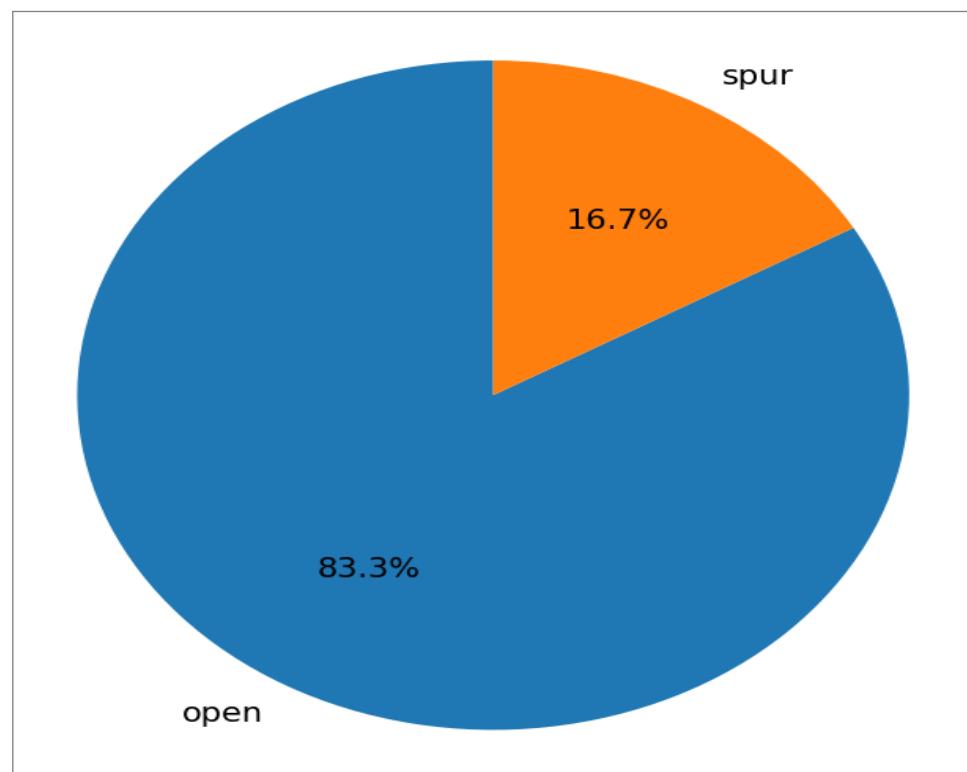


Statistical Charts

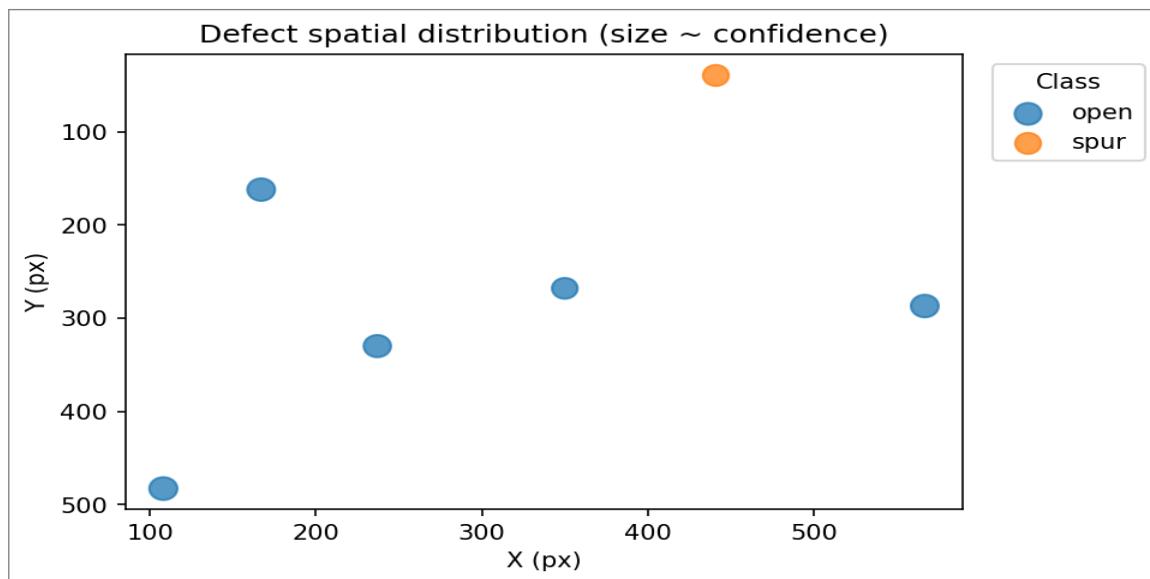
Defect Count by Class



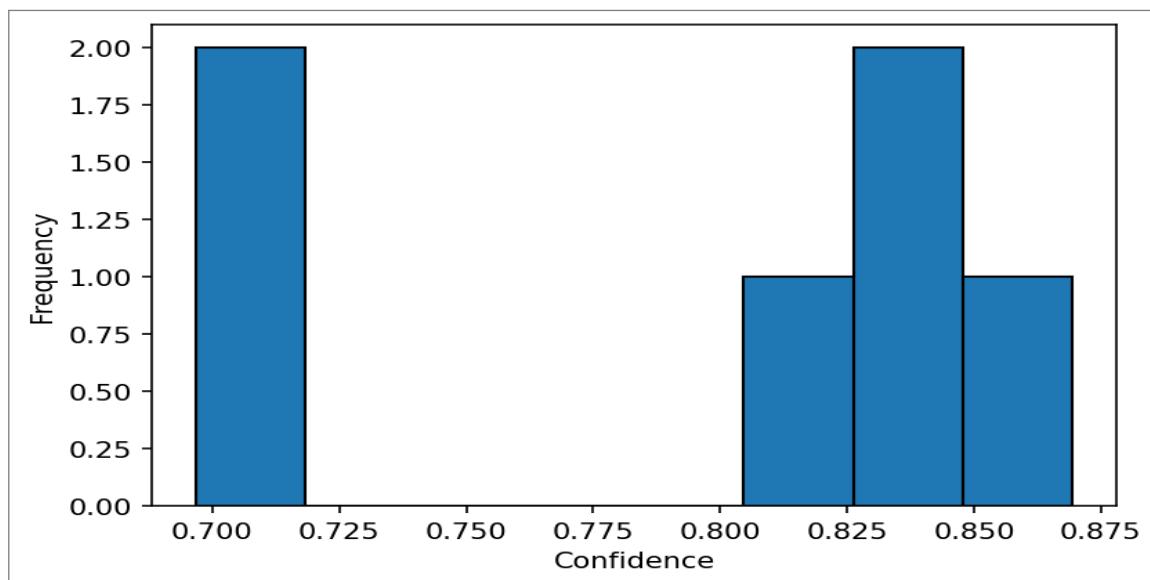
Defect Distribution (Pie)



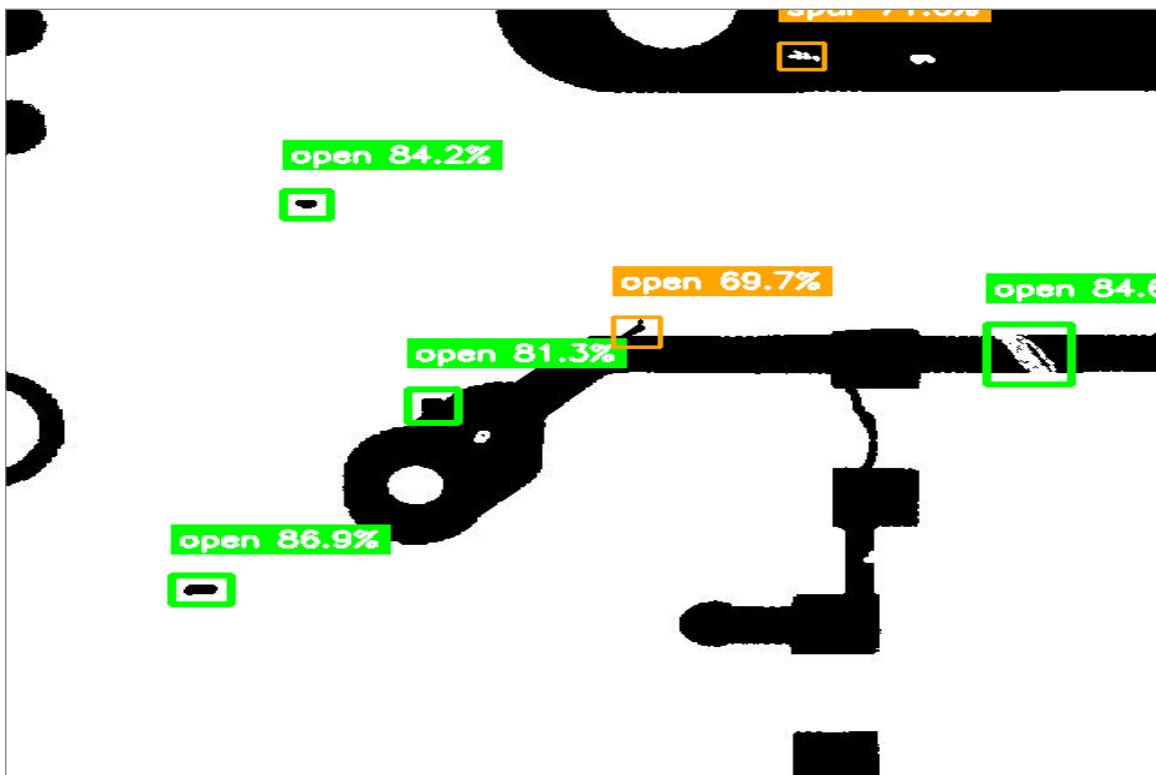
Spatial Distribution (size ~ confidence)



Confidence Histogram



Annotated Results & Defect Details



| ID | Type | Confidence | Position (X,Y) | Size (WxH) | Area (px ²) |
|-----|------|------------|----------------|------------|-------------------------|
| #1 | open | 86.9% | (108,483) | 33x24 | 217 |
| #4 | open | 81.3% | (237,330) | 28x28 | 200 |
| #6 | open | 84.6% | (567,287) | 47x50 | 824 |
| #7 | open | 69.7% | (350,268) | 26x25 | 148 |
| #8 | open | 84.2% | (167,162) | 26x23 | 124 |
| #10 | spur | 71.0% | (441,39) | 25x22 | 106 |

Recommendations

If no defects detected, lower diff threshold or min ROI area. Inspect high-confidence defects first.

Conclusion

Automated inspection completed in 2.09 seconds.