Solar Panel Detection Report

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Executive Summary

The analysis successfully identified **22** solar panel installations out of **36** total rooftop detections in the provided image. The detection confidence averaged **39.6%**, indicating reliable identification of solar infrastructure.

Detection Summary

Metric	Value	Status
Total Detections	36	
Solar Panels	22	■
Non-Solar Rooftops	3	
Average Confidence	39.6%	
Detection Coverage	100.0%	

Visual Analysis

Figure 1: Solar Panel Detection Analysis with Classification Markers

Detailed Detection Results

#	Type	Confidence	X	Y	Width	Height
1	Solar Panel	76.4%	713	230	50	55
2	Solar Panel	75.1%	832	605	45	64
3	Solar Panel	74.9%	863	222	50	57
4	Solar Panel	72.0%	80	226	38	53
5	Solar Panel	71.9%	802	1049	43	54
6	Solar Panel	71.9%	554	1075	66	56
7	Solar Panel	71.8%	463	1069	44	38
8	Solar Panel	71.6%	184	940	34	63
9	Solar Panel	71.3%	714	160	63	57
10	Solar Panel	70.8%	246	1110	61	62
11	Solar Panel	69.7%	1075	512	54	41
12	Solar Panel	69.5%	1112	1023	63	60
13	Solar Panel	69.4%	156	592	60	58

14	Solar Panel	67.6%	350	256	69	53
15	Solar Panel	67.6%	710	1072	48	72
16	Solar Panel	67.6%	814	1124	50	35
17	Solar Panel	66.6%	601	494	46	50
18	Solar Panel	64.7%	1119	432	54	35
19	Solar Panel	64.4%	1100	864	49	75
20	Solar Panel	64.3%	1072	126	73	49
21	Solar Panel	64.1%	424	502	53	69
22	Solar Panel	62.5%	102	354	81	70
23	Solar Panel	61.0%	652	485	39	48
24	Solar Panel	60.7%	354	910	47	39
25	Solar Panel	60.2%	688	14	69	27
26	Solar Panel	59.6%	638	910	47	49
27	Solar Panel	59.6%	1117	646	72	42
28	Solar Panel	58.1%	262	945	49	42
29	Solar Panel	57.9%	1087	213	50	44
30	Solar Panel	57.6%	819	446	52	47
31	Solar Panel	55.9%	604	624	39	57
32	Solar Panel	53.8%	847	138	62	57
33	Solar Panel	53.0%	461	1122	54	34
34	Rooftop	44.4%	781	935	40	32
35	Rooftop	44.0%	448	674	53	100
36	Rooftop	43.7%	838	10	73	19
37	Rooftop	35.9%	1104	912	41	34
38	Rooftop	30.1%	498	242	55	37
39	Rooftop	29.0%	376	681	55	24
40	Rooftop	26.1%	355	954	40	29
41	Rooftop	25.3%	604	659	50	38
42	Rooftop	24.9%	381	635	52	42
43	Rooftop	11.1%	772	339	270	46
44	Rooftop	10.2%	612	462	23	21
45	Rooftop	8.4%	828	46	77	44
46	Rooftop	7.6%	812	536	65	32
47	Rooftop	6.7%	630	872	37	34
48	Rooftop	6.6%	1014	1072	45	50
49	Rooftop	6.6%	798	156	175	64
50	Rooftop	5.5%	880	1128	29	26
51	Rooftop	4.7%	1142	1135	63	12
52	Rooftop	4.5%	747	652	30	155
53	Rooftop	4.4%	484	365	67	40
54	Rooftop	4.3%	830	646	51	22

55	Rooftop	3.9%	356	881	43	26
56	Rooftop	3.5%	508	490	41	168
57	Rooftop	2.8%	702	1128	71	26
58	Rooftop	2.2%	683	596	50	33
59	Rooftop	2.1%	1190	962	39	359
60	Rooftop	2.1%	1197	658	22	547
61	Rooftop	2.1%	1022	1137	235	8
62	Rooftop	2.0%	727	424	28	49
63	Rooftop	1.1%	739	474	40	151
64	Rooftop	1.1%	518	634	31	81
65	Rooftop	1.1%	8	478	13	66

Recommendations

For Existing Solar Installations:
• Monitor panel performance regularly
• Schedule periodic maintenance and cleaning
• Consider energy storage integration
• Monitor for shading issues from vegetation growth

For Non-Solar Rooftops:
• Evaluate remaining rooftop areas for expansion
• Conduct feasibility studies for additional installations
• Consider energy consumption patterns for sizing

Technical Information

Image Processing:
• Original Image Size: 1209x1142
• Processing Time: 4.22 seconds
• Model Version: v2.1
• Confidence Threshold: 40%

Detection Parameters:
• Analysis Type: Automated AI Detection
• Classification: Solar Panel vs Non-Solar Rooftop
• Coverage Area: 100.0%
• Total Detections: 36