

# Video Processing Summary Report

## 1. Object Detection Statistics

Class	Count	Confidence Distribution
bike	120	0.0-0.2: 0, 0.2-0.4: 7, 0.4-0.6: 4, 0.6-0.8: 1, 0.8-1.0: 0
bus	00	0.0-0.2: 0, 0.2-0.4: 0, 0.4-0.6: 0, 0.6-0.8: 0, 0.8-1.0: 0
car	3729	0.0-0.2: 1186, 0.2-0.4: 1200, 0.4-0.6: 1027, 0.6-0.8: 316, 0.8-1.0: 0
traffic_sign	244	0.0-0.2: 0, 0.2-0.4: 9, 0.4-0.6: 1, 0.6-0.8: 2315, 0.8-1.0: 119
traffic_light	00	0.0-0.2: 0, 0.2-0.4: 0, 0.4-0.6: 0, 0.6-0.8: 0, 0.8-1.0: 0
truck	20	0.0-0.2: 0, 0.2-0.4: 2, 0.4-0.6: 0, 0.6-0.8: 0, 0.8-1.0: 0

## 2. Lane Detection Statistics

Metric	Value
Total Lane Detections	1217
Average Lane Width	0
Lane Departure Count	0
Average Steering Angle	7.113314101345353

## 3. Speed Analysis

Metric	Value
Average Vehicle Speed	2.7857715637670486
Maximum Speed Detected	184.46624505568457
Speed Violation Count	25

## 4. Traffic Analysis

Metric	Value
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Average Traffic Density	3.0632183908046002
Maximum Traffic Density	10
Traffic Jam Duration	0

## 5. Processing Performance

Metric	Value
Total Frames Processed	1217
Average FPS	11.654079425853054
Processing Time	104.34114575386047

## 6. Self-Driving Performance Analysis

### *Lane Keeping Performance*

Metric	Value
Lane Centering Accuracy	0.0%
Lane Departure Events	0
Average Lane Position Error	16.5 pixels

### *Steering Behavior*

Metric	Value
Average Steering Angle	7.1°
Steering Smoothness	0.0%
Sharp Turns	0

### *Safety Metrics*

Metric	Value
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Collision Warnings	0
Safe Distance Violations	0
Emergency Maneuvers	0

**System Reliability**

Metric	Value
Lane Detection Success Rate	99.9%
Object Detection Success Rate	99.9%
System Uptime	100.0%