

Video Processing Summary Report

1. Object Detection Statistics

| Class | Count | Confidence Distribution |
|---------------|-------|--|
| bike | 71 | 0.0-0.2: 0, 0.2-0.4: 47, 0.4-0.6: 19, 0.6-0.8: 5, 0.8-1.0: 0 |
| bus | 23 | 0.0-0.2: 0, 0.2-0.4: 11, 0.4-0.6: 12, 0.6-0.8: 0, 0.8-1.0: 0 |
| car | 498 | 0.0-0.2: 0, 0.2-0.4: 189, 0.4-0.6: 175, 0.6-0.8: 98, 0.8-1.0: 36 |
| traffic_sign | 36 | 0.0-0.2: 0, 0.2-0.4: 22, 0.4-0.6: 13, 0.6-0.8: 1, 0.8-1.0: 0 |
| traffic_light | 0 | 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 | 0 | 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 |

2. Lane Detection Statistics

| Metric | Value |
|------------------------|-------------------|
| Total Lane Detections | 1775 |
| Average Lane Width | 0 |
| Lane Departure Count | 0 |
| Average Steering Angle | 7.167352254149898 |

3. Speed Analysis

| Metric | Value |
|------------------------|-------------------|
| Average Vehicle Speed | 11.53414269746174 |
| Maximum Speed Detected | 358.8111117077983 |
| Speed Violation Count | 1 |

4. Traffic Analysis

| Metric | Value |
|--------|-------|
|--------|-------|

| | |
|-------------------------|--------------------|
| Average Traffic Density | 0.2933558558558556 |
| Maximum Traffic Density | 3 |
| Traffic Jam Duration | 0 |

5. Processing Performance

| Metric | Value |
|------------------------|-------------------|
| Total Frames Processed | 1775 |
| Average FPS | 12.16682864723779 |
| Processing Time | 145.8062779903412 |

6. Self-Driving Performance Analysis

Lane Keeping Performance

| Metric | Value |
|-----------------------------|-------------|
| Lane Centering Accuracy | 0.0% |
| Lane Departure Events | 0 |
| Average Lane Position Error | 24.3 pixels |

Steering Behavior

| Metric | Value |
|------------------------|-------|
| Average Steering Angle | 7.2° |
| Steering Smoothness | 0.0% |
| Sharp Turns | 0 |

Safety Metrics

| Metric | Value |
|--------|-------|
|--------|-------|

| | |
|--------------------------|---|
| Collision Warnings | 0 |
| Safe Distance Violations | 0 |
| Emergency Maneuvers | 0 |

System Reliability

| Metric | Value |
|-------------------------------|--------|
| Lane Detection Success Rate | 99.9% |
| Object Detection Success Rate | 26.8% |
| System Uptime | 100.0% |