Western Systems
Innovative Transportation Solutions

CURRUX VISION

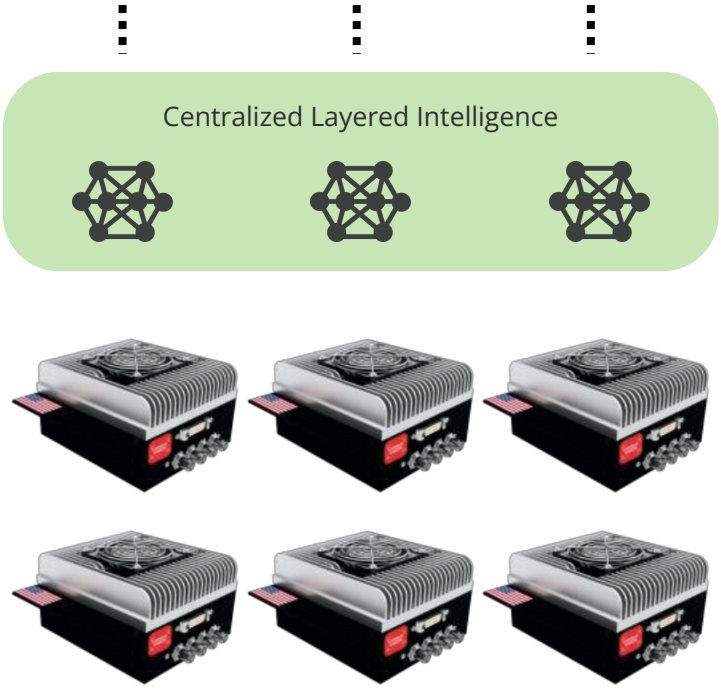
THE SMARTEST TRAFFIC MANAGEMENT SOLUTION

Layered Intelligence with Sophia AI

Transforming Detection into Understanding with Context-Aware Intelligence for Smarter Intersections

Sophia AI extends computer vision beyond raw detection with contextual, human-like reasoning that interprets intersection health in real time.

By continuously evaluating detection quality and scoring system performance, Sophia AI gives users a clear, data-driven viewof intersection operation without the need for constant monitoring.



Use Cases:

1. **Detection Performance Verification**
   Evaluates detection accuracy with superhuman precision.
2. **Camera Shift Awareness**
   Detects lane template misalignment.
3. **Video Corruption**
   Identifies glare, dirt, and fog, etc. that disrupt detection.
4. **Road Obstruction & Construction**
   Recognizes flooding and debris.
5. **Accident Detection**
   Interprets crashes and stoppages with contextual reasoning.
6. **Abnormal Traffic & Queueing**
   Distinguishes normal congestion from abnormal backups.
7. **Holistic Performance Scoring**
   Combines multiple metrics into a single health score.

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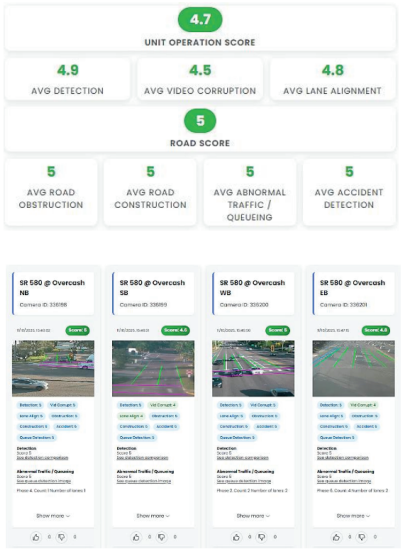
For the Engineer Who Can't Be Everywhere at Once

Sophia AI – Your Second Set of Eyes

Sophia AI never sleeps. It continuously monitors every intersection, interprets what it sees, and proactively alerts operators before issues escalate. While a human engineer can review a handful of intersections, **Sophia AI analyzes them all, every 15 to 30 minutes, every day**, transforming thousands of camera views into clear, contextual insights that keep cities operating efficiently. ***It spots what the engineer might miss***, a shifted pole, a smudged lens, or an unexpected traffic pattern, and provides precise context for timely action.

Sophia AI Scorecards & Detailed Analysis in Natural Language



Updated Automatically
Every 15–30 minutes, each scorecard provides a detailed evaluation.

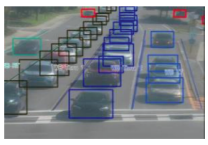
Per-Camera Scoring
Precisely identify issues

"Like or Dislike" Feedback
Continuously improve contextual analysis

Overall Unit Operation
- Detection
- Video Corruption
- Lane Alignment

Road Health
- Road Obstruction & Flooding
- Road Construction
- Abnormal Traffic & Queueing
- Accident Detection

Intersection Name	AI State	Cameras	SDLC	OS	RS
SR 580 @ Overcash Dr	✓	✓	✓	5	5
Park Blvd @ 113th St N	✓	✓	✓	5	5
Belcher Rd @ Curlew Rd	✓	✓	✓	5	5



****Abnormal Traffic / Queuing** Score: 2**

> *"Phase 2. Count: 28 Number of lanes: 3*
> *Phase 5. Count: 4 Number of lanes: 1"*

****Road Obstruction** Score: 2**

> *"There are several objects scattered on the road, including what appears to be a black plastic bag and cardboard pieces. These objects could potentially cause a hazard and obstruct traffic flow."*

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