

Real-World Applications

Improving Roadway and Intersection Safety Using Cost-Effective Sensing and Communication Technologies (USDOT FY23 SMART)

SMART

Edge Server-Based AI Application for Dilemma Zone and Traffic Conflict Events Detection (USDOT SBIR FY22 Phase I & II)



Edge Computing and Sensor Fusion System for Comprehensive Monitoring of Traffic and Road Conditions (USDOT SBIR FY23 Phase I & II)



EDGE AI
TECHNOLOGIES FOR
SAFER,
MORE **EFFICIENT**
TRANSPORTATION



About Us

At AIWAYSION, we provide the next generation Edge AI technology that integrates sensing, analysis and communication functions all in one device. Combining our unique hardware and software technologies, AIWAYSION aims to provide transportation practitioners and researchers customized solutions for the challenges and opportunities of Intelligent Transportation Systems (ITS).

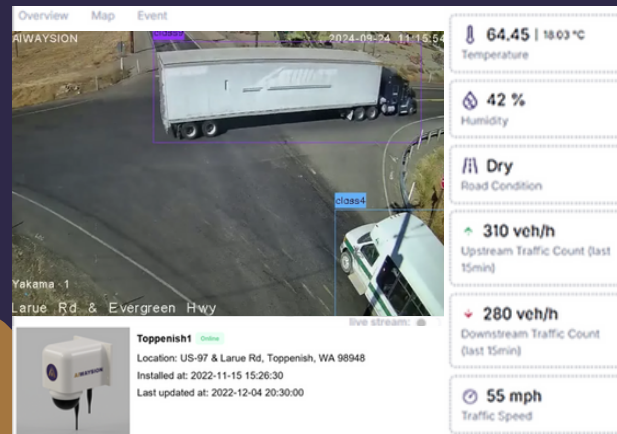
Why Us?

HARDWARE (Plug-And-Play):

- Multi-sensor
 - Camera, Bluetooth/Wi-Fi MAC Address sensor, environmental sensors
- High performance computing board
- Cellular communication module

SOFTWARE (User Friendly):

- Flexible applications
- Comprehensive sensing
- AI-powered algorithms
- In-device (Edge) data analysis
- Leverage existing cameras



Dashboard for Device & Data Management



AIWAYSION
The Future is at the *Edge*



AI Vision Solutions

Comprehensive traffic sensing

- Volume, classification & speed of vehicles and vulnerable road users

Road conditions monitoring

- Road surface (dry, wet, ice, snow)
- Visibility, temperature, humidity...

Hazardous events detection

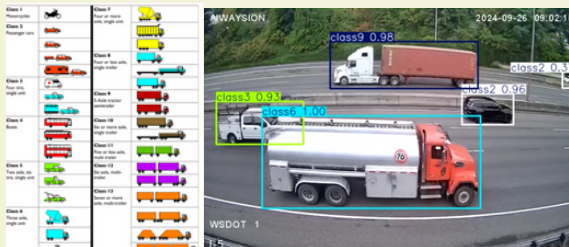
- Adverse road surface conditions
- Collision/near-miss events
- Dilemma zone events
- Stopped vehicles, debris, queues, speeding, wrong way driving

Communication with TMC, road users, and traffic control devices

- Events with snapshots/video clips
- Alerts and messages



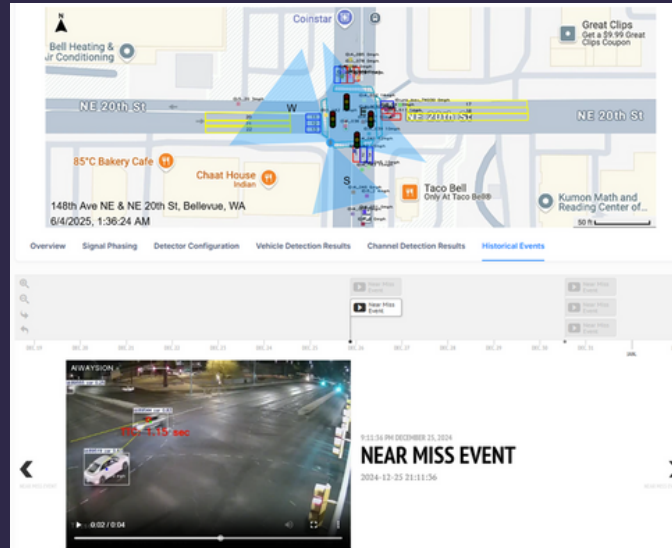
Cellular 4G LTE/5G, Sign/Signal Comms



FHWA 13-Category Classification

Technology

Our AI Vision system can operate using both existing traffic cameras and our Edge AI unit, i.e., Mobile Unit for Sensing Traffic (MUST).



Real-Time Safety Interventions



Pedestrian & Micromobility Data Collection

1: Pedestrian, 2: Wheelchair, 3: Bicycle, 4: E-bicycle, 5: E-Scooter, 6: Skateboard, skates, other micromobility (includes electric powered versions), 7: other animals



Dilemma Zone Events Detection

Customers & Partners



Contact Us

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