





Road Violation Enforcement



Road Incidents & Hazards



Traffic & Junction Analysis



Roadway Inpection



Roadwork Safety & Productivity

# Road, Traffic and Roadwork

# Monitoring, Analysis, and Violation Enforcement

cyRoad Agentic Al Video Intelligence delivers end-to-end traffic and roadway moniotring and anlaysis by leveraging advanced analytics and Al-powered automation. Built on the cyNeuron engine and cyVisionAl platform, it enables authorities and operators to monitor, analyze, and enforce safety standards, optimize traffic flow, and maintain infrastructure health with efficiency and precision.

### cyNeuron

# Human-Like Video Understanding With an Intuitive Copilot and Al Agents

Transcends rule-based video analytics, making intelligence accessible with natural language interaction.

Achieve unparalleled video comprehension through proprietary domain-specific and highly efficient Vision Language Models (VLM) alongside other Vision Al technologies that analyze road and traffic-specific contexts, understand scenes, identify vehicles, persons, interactions and events, through spatio-temporal analysis.

The Agentic Al layer brings a set of Al Agents that automate complex tasks such as generating incident reports, summarizing video footage and automating case management, all instantly available via cynapse.ai Vision Copilot.















Alert Agent

Discovery Agent

**Q&A Agent** 

**Summarization Agent** 

**Generation Agent** 

Investigation Agent



# **Enforcement** Automation

#### **Road Safety Violation Enforcement**

- Driving in Bus Lane
- Driving in the Wrong Lane/Direction
- Illegal Overtaking
- Illegal Parking
- > Illegal Reversing
- Illegal Stopping
- ► Illegal Turn / U-Turn
- ▶ Illegal Wait / Drop off / Pick Up

- > Not Stopping at Pedestrian Crossing
- > Not stopping at Stop Line
- > Overspeeding
- > Red Light Crossing
- Stopping at the Carriageway
- > Stopping or Driving on the Shoulder
- > Vehicles Below Minimum Speed in a Fast Lane
- > White Line Crossing



# **Traffic** Monitoring and Analysis

#### **Traffic Volume**

 Average speed, directional count, congestion, queue length, wait time

#### **Vehicle**

 Counting, classification, lane, direction, path, speed, LPR

#### **Micromobility Devices**

 Counting, classification, lane, direction, path, speed, rider gender & age, helmet, LPR

#### **Pedestrians**

 Counting, gender & age, lane, direction, path, grouping, crossing



### **Road Incidents** & Hazards

#### **Incidents**

- > Stationary vehicle, reverse vehicle flow
- > Vehicle on fire, overturned vehicle
- > Hazardous or oversized Vehicle

#### **Hazards**

- Obstacles, debris, fallen objects
- > Oil spill, mud spill, flood, puddle
- Smoke and fire



# **Roadway** Inspection

#### **Road Surface**

 Cracks, potholes, sinkholes, faded road markings

#### **Road Infrastructure Defects**

 Damaged traffic lights, road signs, signboards, barriers, guardrails



# Roadwork Safety and Productivity

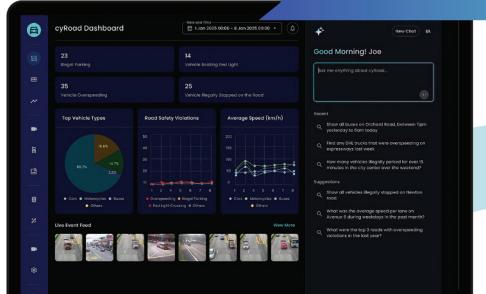
#### **Safety Enforcement**

- > Barricades and cones compliance
- > Worker PPE compliance
- > Congestion and slow traffic in lane

#### **Productivity Monitoring**

- Work start/end time
- > Worker counting
- > Equipment utilization

The cyRoad dashboard delivers a comprehensive view of video intelligence, with quick access to insights and events through an interactive copilot



# Why cyRoad?





Powered by Agentic Al



Revolutionary Video Understanding



User-Defined Events



Works With Any Video/Visual Source



Vision Copilot with Al Agents



**Edge/On-Prem/Cloud** 

## about cynapse.ai

cynapse.ai is a leading provider of Verticalized Agentic AI Video Intelligence solutions, enabling organizations to enhance safety, security, compliance and operational efficiency. cynapse.ai solutions are designed to detect and respond to risks, threats, and violations while uncovering opportunities across smart cities, transportation, seaports, airports, and correctional services. Offering human-like video understanding through cyNeuron and 150+ pre-defined analytics, and turning it into everyday value through AI Agents and an intuitive copilot, cynapse.ai is making video intelligence more powerful and accessible than ever before.

