



SensaVision™ Pedestrian Safety Application

Sensagrate's pedestrian safety system emphasizes pedestrian safety corridors called a "hot zone," a stretch of a roadway involving high rates of historical data of pedestrian and vehicle collisions and fatalities. The system produces a higher detection and tracking accuracy with combined roadside sensor data to improve safety for pedestrians, cyclists, and drivers.

SensaVision collects data with roadside sensors with the ability to identify engagements between pedestrians and vehicles. The data is processed on-premise through algorithms to assess motorized and non-motorized objects with trajectory data for safety analysis. The solution analyzes pedestrian movements and risk engagement with vehicles in the corridor. Our platform helps reduce risks of pedestrian deaths for smart city innovators, department of transportation agencies, municipalities, and intelligent transportation system providers to save lives on roads.

Customers use the analysis to target short-term infrastructure improvements in pedestrian safety, such as redesigning roadways, traffic signals, vehicle speeds, roadway diets, and other planning improvements based on the collected data.

Key Features



Pedestrian Safety
Analysis



Simple GUI Interface



Privacy



Unique Data Output
and Reporting

SensaVision™ Pedestrian Safety System



How It Works

Pedestrian Safety Solution	Identifies and detects the movement of pedestrians, vehicles, and cyclists to identify the tracking and near-miss collision and collisions between vehicles and pedestrians.
Object Detection, Classification, and Tracking	SensaVision performs object detection, classification, and tracking of multiple objects. Process data in real-time on an edge device with traffic data and traffic and mobility machine learning algorithms.

GUI Interface

Event Management	Create trigger zones to identify when a pedestrian crosses a crosswalk at a signalized intersection, designated crosswalks, or crosses into the street beyond the intersection or at mid-block.
Zone Configurations	Identify sidewalks, curbs, and per lane of moving vehicles, which allows the capability of the system to understand events in defined high-risk areas.
Polylines	Set up polylines between sidewalk and street to detect when and where pedestrians enter the road to cross the street off the sidewalk or curb.

Privacy

No Collection of Privacy Data	There is no collection of personally identifiable information (PII).
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Data Output and Reporting

Data Type	Data shared is in JSON format. Data collection on pedestrian movements, utilization of sidewalks, frequency of crossing areas and paths, and analysis of pedestrian-to-vehicle engagements such as near-miss collisions and collisions.
GPS	SensaVision tracking data calculates the precise GPS coordinates of objects to identify, understand and assess the frequency and location of pedestrians' movements and crossings.
Location Data	Provides pedestrian safety data, traffic analysis and flow data, and road traffic monitoring data.
Web Application	Provides data visualizations of graphs of counts, map data with tracking pedestrian locations (GIS) with heat maps, curbside monitoring, and near-miss collision occurrences.



SensaVision™ Pedestrian Safety Benefits

The system provides analytics to improve pedestrian safety and prepare for the future of smart city ITS applications. The three primary benefits of this ITS and smart city solution include:

Provide data analytics to improve pedestrian

- Understand pedestrian movements, behaviors, and frequency when crossing the street.
- Identify efficiencies through risk analysis from near-miss collisions and vehicle speed changes when pedestrians cross the street.

Improve pedestrian safety on roadways

- Real-time metrics to find efficiencies and update road infrastructure to improve safety for planning and design traffic signals and roadways design.
- Integrate into traffic control systems and communicate warnings and alerts to pedestrians and drivers when pedestrians are crossing.

Prepare for the future of smart city safety mobility applications

- Provide real-time alerts and warnings to drivers when a pedestrian crosses the street. Readiness capabilities for smart infrastructure solutions from Vehicle-to-Everything (V2X) communications for Infrastructure-to-Everything (I2X), Infrastructure-to-Vehicle (I2V), and Infrastructure-to-Pedestrian (I2P).