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Improving Road Safety and Mobility with EDGE AI

Written by SmartPoint and Supermicro

A Department of Transportation (DOT), in partnership with The Curiosity Lab at Peachtree Corners, is deploying a cutting-edge traffic safety and mobility solution that harnesses the power of edge computing and real-time AI to improve outcomes for drivers.

At the center of this innovation is a high-performance, low-latency edge architecture built on Supermicro and Intel's Edge AI Portfolio (Metro AI Suite) and graphics processing from SmartPoint , a Georgia-based managed services and technology company specializing in edge infrastructure.

Using a combination of video cameras and LiDAR sensors, SmartPoint's edge nodes process traffic data directly at the roadside — without sending it to the cloud. This enables AI models to interpret roadway conditions in real time, providing instant situational awareness to traffic operations teams and connected vehicle systems.

Key benefits for DOT and drivers may include:

- Real-time hazard detection (stalled vehicles, near misses, unsafe turns)
- Smarter traffic signal timing based on live congestion data
- Improved pedestrian and cyclist safety at complex intersections
- Predictive analytics to support proactive infrastructure maintenance

The project, located along Peachtree Corners ' autonomous vehicle test corridor, serves as a scalable model for how state agencies can implement AI at the edge to enhance roadway safety, optimize traffic flow, and support the future of connected transportation.

By combining public-sector innovation with private-sector technology leadership, DOT and The Curiosity Lab are putting Georgia at the forefront of smart mobility.

Partner Name

Supermicro

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