Company Name: California Department of Transportation
Project Title: GenAI to Reduce Highway Congestion

The California Department of Transportation (Caltrans) released a problem statement to process and interpret complex data to improve its traffic pattern analysis, address bottlenecks, and enhance overall traffic management. To solve this issue, Azure Open AI, GenAI technology developed by Microsoft and utilized by Accenture, LLP, used a vast amount of data from authentic, well-recognized sources to analyze potential transportation scenarios and develop solutions, including reducing traffic congestion, enhancing incident response, and improving transit reliability.

The next phase of this project will analyze real-time and historical data from roadways to predict traffic bottlenecks, detect incidents faster, and identify locations for safety enhancements. This cutting-edge solution will empower Caltrans to improve mobility and reduce traffic delays across the state.

"California is a global leader in GenAI innovation, and the signing of these contracts provides the state an essential tool to help solve some of our most pressing transportation challenges. Under Governor Newsom's leadership, California is enthusiastically advancing this cutting-edge technology and will now harness its power to help save lives and streamline mobility for all people." California Transportation Secretary Toks Omishakin

GenAI for traffic safety
Caltrans will also be using GenAI to investigate near misses of injuries/fatalities to identify risky areas and monitor interventions designed to increase safety of vulnerable road users, including bike riders and pedestrians. Under the contract, Deloitte Consulting, LLP used Gemini GenAI technology to help identify high-collision locations and recommended targeted safety improvements across the highway system to proactively address road safety risks — especially for vulnerable road users.

By analyzing various datasets—including crash records, roadway conditions, and equity indicators—GenAI uncovered patterns, prioritized safety interventions, and delivered data-driven insights to help the department better protect all Californians on the road. In the next phase, the tool will expand upon the datasets to better identify and address locations in need of safety upgrades which will be evaluated by the department prior to taking any actions.

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"These historic contracts exemplify Caltrans' commitment to innovation and being a national leader in adopting new technologies to improve lives and communities. Using GenAI through smart, responsible implementation will be a game changer in developing solutions to ease traffic gridlock and reduce deaths and serious injuries on our roadways." Caltrans Director Tony Tavares

https://www.gov.ca.gov/2025/04/29/governor-newsom-deploys-first-in-the-nation-genai-technologies-to-improve-efficiency-in-state-government/