

LOUIS SUNGWOO CHO

ITS Engineering Consultant | Traffic Analyst | Illinois E.I.T

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PROFESSIONAL SUMMARY

Avid Intelligent Transportation Systems (ITS) Engineering Consultant with Chicago Department of Transportation (CDOT) and ITS project experiences supporting traffic operations, Advanced Traffic Management Systems (ATMS), Miovision traffic data, Transit Signal Priority (TSP), signal timing datasets, traffic data analysis using Python and SQL, and QA/QC. Strong technical interests in Intelligent Transportation Systems, Connected and Automated Vehicles (CAV), Transit Signal Priority (TSP), and AI/big data applications for improving traffic safety, mobility, reliability, and corridor performance with a long-term goal of contributing to futuristic smart mobility projects.

EDUCATION & CERTIFICATIONS

M.S. Civil Engineering (Transportation)

University of Illinois Urbana-Champaign | May 2025

B.S. Honors Civil Engineering, Minor in Computer Science

University of Illinois Urbana-Champaign | May 2024

Illinois E.I.T

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CORE SKILLS

ITS/Traffic: Advanced Traffic Management Systems (ATMS); Miovision traffic data; Transit Signal Priority (TSP); traffic operations; signal timing datasets; corridor performance monitoring; real-time traffic monitoring at the CDOT Traffic Management Center

Technical Communication: Technical summaries; prototype system architecture documentation; ITS project reporting; presentation-ready technical content; ITS America CAIN pedestrian accessibility poster support

Emerging Mobility Interests: Intelligent Transportation Systems; Connected and Automated Vehicles; Transit Signal Priority; AI and big data applications for traffic safety, mobility, reliability, and corridor performance

Data Analytics: Python and SQL for traffic volume data analysis and cleaning; database QA/QC; City of Chicago Average Daily Traffic (ADT) Volume Data Portal review; R-Shiny dashboard support; data reliability reporting

Project Coordination: CDOT, CTA, vendor, and consultant coordination; procurement workflow support; deliverable tracking; stakeholder communication; cross-functional project support

Professional Growth: Expanding expertise in CAV applications, transit focused ITS, TSP implementation, BRT corridor planning, traffic operations

PROFESSIONAL EXPERIENCES

ITS Consultant | Alrek, Contract with Chicago Department of Transportation (CDOT) | Chicago, IL

Dec 2025 - Present

- Support CDOT, Parsons, AECOM, and Miovision with traffic operations and ITS projects involving ATMS, Chicago Traffic Tracker, traffic data, signal timing datasets, TSP, and corridor performance monitoring.
- Coordinate the Chicago Accessible Intersection Navigation (CAIN) Project with multiple vendors and traffic engineers to assist visually impaired pedestrians crossing major intersections; created the CAIN poster and presented to USDOT SMART Grant Officials at the ITS America 2026 Conference at Detroit, Michigan.
- Analyze traffic volume and corridor operations data to identify discrepancies, trends, and operational issues supporting reporting, planning, and operations decisions.
- Perform Python and SQL-based QA/QC of CDOT traffic databases and the city's official data portal to identify duplicate, missing, or inconsistent traffic count records across multiple data sources.
- Monitor real-time road traffic situation at the CDOT Traffic Management Center
- Prepare and clean signal timing datasets for traffic signal operations, TSP coordination, and data-driven corridor analysis

Autonomous Vehicles Research Assistant | University of Illinois Urbana-Champaign | Urbana, IL

May 2022 - May 2025

- Deployed ROS-based planning and control using Python on a physical autonomous vehicle platform at the Illinois Center for Transportation, validating trajectory tracking in real-world test conditions.
- Applied traffic flow modeling and stability analysis in mixed human-autonomous traffic and analyzed robotaxi trajectory data for lane-changing and car-following behavior and conducted trajectory prediction research using Deep Learning.
- Conducted safety verifications, implemented collision avoidance and control algorithms, and generated test track on self-driving simulation platforms.

SELECTED PROJECT EXPERIENCES

- CAIN Pedestrian Accessibility ITS Project - Created and presented the technical poster for ITS America focused on accessible pedestrian navigation, transit equity, and ITS technology.
- Parsons/CDOT ATMS QA/QC – Leverage and test ATMS and Chicago Traffic Tracker to test quality control and assurance; analyze congestion data to discuss corridor improvements.
- Chicago Centralized Transit Signal Priority / CDOT-CTA Coordination - Supported signal timing data preparation, procurement workflow coordination, and stakeholder alignment for TSP-related ITS implementation.