

# LOUIS SUNGWOO CHO

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## EDUCATION

<b>University of Illinois at Urbana–Champaign (UIUC)</b>	Aug 2020 – May 2025
M.S. Civil Engineering (Transportation)	GPA: 3.46/4.00
B.S. (Honors) in Civil Engineering (Transportation), Minor in Computer Science	GPA: 3.55/4.00

## RELEVANT EXPERIENCES

<b>Autonomous Driving Simulation</b>   <i>Machine Learning, Python, CARLA, ROS, Gazebo</i>	May 2023 – May 2025
<ul style="list-style-type: none"><li>Performed trajectory simulations of self-driving vehicles for traffic flow modeling, controls, and visualize trajectories.</li><li>Collaborated in a team of 3 to refine safety of autonomous vehicles.</li></ul>	
<b>IL 9 Road Design Improvement</b>   <i>Python, Bentley OpenRoads</i>	Jan 2024 – May 2024
<ul style="list-style-type: none"><li>Performed <b>horizontal and vertical geometric alignments</b> for roadway design, applying AASHTO standards.</li><li>Calculated grades and vertical curve parameters to ensure safety, visibility, and smooth driving conditions.</li><li>Integrated <b>Bentley OpenRoads</b> with Python-based calculations to streamline alignment evaluation.</li></ul>	
<b>Bus Rapid Transit (BRT) Feasibility Planning</b>   <i>Python, Planning, Optimization, Data Analysis</i>	Jan 2023 – Mar 2023
<ul style="list-style-type: none"><li>Conducted a feasibility study for a proposed <b>Bus Rapid Transit (BRT)</b> system in Champaign–Urbana.</li><li>Applied <b>optimization models</b> and <b>Python programming</b> to estimate boarding and alignment passengers, and assess potential improvements in travel efficiency during transit planning.</li></ul>	
<b>University of Illinois Traffic Impact Analysis Study</b>   <i>HCS, Planning, Data Analysis</i>	Oct 2022 – Dec 2022
<ul style="list-style-type: none"><li>Collected and analyzed traffic data at five UIUC intersections to assess 2024 traffic impact.</li><li>Modeled LOS and delays using HCS; incorporated growth, trip generation, and rerouting scenarios.</li><li>Recommended low-cost geometric and signal timing changes to improve intersection performance.</li></ul>	

## LEADERSHIP & SERVICE

<b>Institute of Transportation Engineers (ITE@UIUC)</b>	Aug 2022 – May 2025
<i>President, Graduate Student Rep, Council Representative</i>	<i>Urbana, IL</i>
<ul style="list-style-type: none"><li>Led chapter growth, increasing event participation by 60%; organized industry panels on <b>ITS</b> and <b>CAVs</b>; directed a <b>transit ridership analytics project</b> (Top 3 Award out of 200+ at UIUC EOH); volunteered for engineering council; and contributed to case study on <b>High-Speed Rail (Chicago–St. Louis)</b>.</li></ul>	

## AWARDS

Charles E. DeLeuw Scholarship – Urban Transit Systems Travel Abroad	Mar 2025
UIUC Engineering Open House – Outstanding Exhibit, <i>3rd Place</i>	Apr 2024
Grant W. Shaw Scholarship – Leadership in Traffic Engineering	Mar 2023

## SKILLS

**Programming:** Python, Java, C++, HTML/CSS/JavaScript, ReactJS  
**Transportation/Simulation:** ROS, CARLA, Gazebo, HCS  
**Tools:** Git, Cloud, Docker, LaTeX, Bentley OpenRoads, AutoCAD, Revit  
**Languages:** English, Korean