LOUIS SUNGWOO CHO

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EDUCATION

University of Illinois at Urbana Champaign, Grainger College of Engineering   **August 2020 - May 2024 (Expected)**
- **B.S** in Civil & Environmental Engineering (Transportation)   **GPA: 3.61/4.00**
- **Minor** in Computer Science (Artificial Intelligence & Big Data)
- **Relevant Coursework:** Public Transportation Systems; Traffic Capacity Analysis; Transportation Engineering; Applied Machine Learning; Algorithms & Models of Computation; Data Structures; Numerical Methods in Python; Introduction to CS and Programming in Java and C++; Discrete Mathematics; Database Systems; Systems Engineering and Economics; Statics; Dynamics; Solid Mechanics; Fluid Mechanics; Structural Engineering; Construction Management; Civil Engineering Materials; Water Resources Engineering; Engineering Design in Revit; Project-Based Civil Engineering; Linear Algebra; Probability and Statistics; Differential Equations; Multivariable Calculus; Physics; Chemistry

EXPERIENCES

Undergraduate Researcher   **May 2023 – Present**
Smart City Laboratory at UIUC
- Assisting Professor Alireza Talebpour, Department of Civil & Environmental Engineering (Transportation) at UIUC.
- Currently doing research in Multi-agent Deep Reinforcement Learning based Framework for Traffic Shaping.

President   **August 2022 – Present**
Institute of Transportation Engineers UIUC Chapter (ITE@UIUC)
- Currently in charge of organizing and hosting transportation conferences, seminars and field trips.
- Connecting prospective students and networking with transportation professionals.
- Contributed to building the website for ITE UIUC Chapter.
- Mentored Civil and Environmental Engineering (Transportation) Majors, Computer Science Majors and Minors.
- Lead Exhibitor for ITE@UIUC at the UIUC Engineering Open House.

Undergraduate Researcher   **January 2023 – May 2023**
Human-Centered Autonomy Laboratory at UIUC
- Assisting Professor Katherine Driggs-Campbell, Department of Electrical & Computer Engineering at UIUC.
- Developing an End-to-End Autonomous Driving Model using TransFuser.
- Investigating on retrieving motion-planning data using various sensors.

Research Assistant   **May 2022 – August 2022**
Reliable Autonomy Group at UIUC
- Assisted Professor Sayan Mitra, Department of Electrical & Computer Engineering at UIUC.
- Contributed to Verse Generator for Control Verification.
- Created a data visualizing function to draw the road attributes inside the ASAM OpenDRIVE files using Python.
- Generated multiple lanes from the file parser into the control verification simulators.

Head Planner   **March 2022 – May 2022**
- Planned the shortest rail path for passenger trains in the given rail network.
- Main communicator in charge of project management and progress report.
- Designed and analyzed graph algorithms for path optimization.
- Assisted with implementing dynamic programming for optimizing the rail network for trains using C++.

SKILLS:

Programming Languages: Python, Java, C++, HTML, CSS, JavaScript, ReactJS, MySQL, MongoDB, NodeJS, Neo4j, MATLAB
Tools: Git, LaTeX, Microsoft Excel, Microsoft Word, Microsoft PowerPoint, HCS, AutoCAD, Revit
Languages: English, Korean

AWARDS AND RECOGNITIONS:

Grant W. Shaw Memorial Scholarship, issued by the Department of Civil and Environmental Engineering, UIUC   **March 2023**