

# 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 and Environmental Engineering (Specialization: Transportation Engineering) **GPA: 3.75/4.00**
- Minor in Computer Science (Focus Area: Artificial Intelligence and Big Data)
- **Relevant Coursework:** Transportation Engineering; Data Structures; Numerical Methods in Python; Introduction to CS and Programming in Java and C++; Discrete Mathematics; Systems Engineering and Economics; Statics; Dynamics; Solid Mechanics; Fluid Mechanics; Structural Engineering; Engineering Design in Revit; Project-Based Civil Engineering; Linear Algebra; Probability and Statistics; Differential Equations; Multivariable Calculus; Physics; Chemistry

## EXPERIENCES

**President @ Institute of Transportation Engineers UIUC Chapter**

August 2022 – Present

Advised by Professor Lewis Lehe, UIUC Department of Civil and Environmental Engineering

- Currently in charge of organizing and hosting transportation conferences and seminars
- Connecting prospective students and networking with transportation professionals
- Contribute to building the website for ITE@Illinois

**Research Assistant**

May 2022 – Present

Advised by Professor Sayan Mitra, UIUC Department of Electrical and Computer Engineering

*DryVR++ Lane Map Generator for Control Verification*

- Parsed road attributes from ASAM OpenDRIVE files into Python files
- Created a data visualizing function to draw the road attributes inside the ASAM OpenDRIVE file
- Generated multiple lanes from the file parser into the control verification simulators

**Head Planner in Amtrak Rail Network**

March 2022- May 2022

*Amtrak Train Scheduling Helper Project*

- 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++

**Main Programmer**

March 2022- May 2022

*Structural Design and Analysis of a Truss Bridge*

- Lead programming tasks for structural analysis using MATLAB and SAP 2000
- In charge of communicating with team members to monitor and address the progress of tasks
- Mathematically analyzed a truss bridge system to determine the strength required for each truss members

**Urban Planner**

Jan 2021 - May 2021

*Town Design Project in Urban Planning*

- Designed a new house for a software engineering client using Autodesk Revit
- Allocated team members' houses in certain locations of the town
- Initiated additional urban components such as streetlights, roads, hills, playground, etc. for the town's final design
- Main communicator responsible for monitoring and reporting project progress to the instructors

## SKILLS:

**Programming Languages:** Python, Java, C++, HTML, CSS, JavaScript, React

**Tools:** Git, Microsoft Excel, Microsoft Word, Microsoft PowerPoint, AutoCAD, Revit

**Languages:** English, Korean