UNIVERSITY OF MINNESOTA
Driven to Discover®
Crookston Duluth Morris Rochester Twin Cities

Open Funded PhD Position in AI for Transportation (2024 Fall)

Position Description

Dr. Seongjin Choi's research group is looking for 1-2 highly motivated Ph.D. students for Fall 2024 semesters. The positions are in the Department of Civil, Environmental, and Geo-Engineering at the University of Minnesota, Twin Cities. Those with a passion for applying machine learning and deep learning to urban transportation and mobility data and utilizing advanced AI methods to solve transportation and mobility problems, are highly encouraged to apply.

Areas of research interest, though not limited to, are:

- Urban transportation and mobility data analytics
- Generative AI for transportation and mobility data
- Spatiotemporal data modeling (forecasting, imputation)
- Modeling CAV, C-ITS using Reinforcement Learning
- Other applications of machine learning and deep learning in the transportation domain

Preferred candidates should have strong quantitative and modeling skills, and excellent communication skills. They should be interested in using data-driven, AI methodologies for extensive data analysis and AI/deep learning model development. A strong background in mathematics, machine learning, and computer programming (Python, C++) is highly recommended. **Successful candidates will be funded in various ways including Research Assistantship and Teaching Assistantship, which generally includes stipend, full tuition, and health insurance.**

About the University of Minnesota, Twin Cities

The University of Minnesota, Twin Cities (UMTC), is among the largest public research universities in the United States, offering undergraduate, graduate, and professional students a multitude of opportunities for study and research. The Department of Civil, Environmental, and Geo- Engineering (CEGE) at the University of Minnesota features state-of-the-art facilities, including the Minnesota Traffic Observatory (MTO) and the Minnesota Supercomputing Institute. MTO is a transportation laboratory focusing on the testing and evaluation of new transportation management and operational strategies and traveler information technologies. CEGE is one of twelve departments within the College of Science and Engineering, which offers outstanding opportunities for interdisciplinary research due to the unique combination of mathematics, physical sciences, and engineering in one college.

About Dr. Seongjin Choi

Dr. Seongjin Choi is an Assistant Professor in the Department of Civil, Environmental, and Geo- Engineering at the University of Minnesota, Twin Cities. Dr. Choi received his Ph.D., M.S., and B.S. degrees from Korea Advanced Institute of Science and Technology at the Department of Civil and Environmental Engineering in 2021, 2017, and 2015, respectively. Prior to joining the University of Minnesota, he was a postdoctoral researcher at McGill University. Dr. Seongjin Choi's research interests are broad and interdisciplinary, encompassing Urban Mobility Data Analytics, Spatiotemporal Data Modeling, Deep Learning & Artificial Intelligence, and Connected Automated Vehicles (CAV) & Cooperative-ITS. He is particularly driven by the desire to optimize urban mobility and contribute to the development of a sustainable and efficient urban transportation system. His works involve utilizing data analytics to draw valuable insights from urban mobility data and applying cutting-edge AI technologies in the field of transportation.

How to apply

If you're interested, please send me an email at **chois@umn.edu**. Please include **a CV**, **a research statement**, and **an academic transcript**. Please use "Prospective PhD student [Your name]" as your email subject.

See more information from How to Apply to CEGE Graduate Programs and Financial Support