

Yifan Wang

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Education

2022.09 - now

Master Candidate, Tongji University

College: College of Transportation

Major: Transportation Engineering

Expect graduation time: Sep, 2025

Advisor: Prof.Xuesong Wang

English: IEILS 6.5 (6.0)

GPA: 85.55/100

2018.09 - 2022.07

Bachelor of Science, Tongji University

College: College of Mathematical Science

Major: Applied Mathematic

GPA: 87.76/100, TOP 30%

Research Publications

Journal Articles

- 1 **Y. Wang**, X. Wang*, T. Wang, and M. Quddus, "Freeway real-time crash prediction using floating car data," *Transportation Research Part C: Emerging Technologies* (Q1 TOP, IF=7.6), vol. 171, 2025. [DOI: 10.1016/j.trc.2025.105009](https://doi.org/10.1016/j.trc.2025.105009).
- 2 **Y. Wang** and X. Wang*, "Interpretability in traffic crash analytics: A semi-data-driven Bayesian network approach with application to highway safety," Minor revision in *Accident Analysis and Prevention* (Q1, IF=5.7).

Conference Proceedings

- 1 **Y. Wang**, Z. Chen, and X. Wang*, "Optimization of road geometry parameters based on vehicle operation state," in *Transportation Research Board 104th Annual Meeting*, Washington D.C., USA, 2025.

Projects


MIT-UF-NEU 2025 Joint Summer Research Camp

Now



📌 Research topic: Uncertainty quantification and calibration of EV charging demand. The camp is hosted by Prof. Jinhua Zhao from MIT, Prof. Shenhao Wang from UF, Prof. Haris Koutsopoulos from NEU. I will cooperate with Dr. Yunhan Zheng from MIT.

Projects (continued)



Multi-Modality Whole Heart Segmentation

- 2024.05  For the open whole heart datasets, Hessian matrix is introduced based on the 3D U-Net model, and two model structures are set up to enhance the model segmentation ability. This work was cooperated with Prof. Guang Yang from Imperial College London, UK.


Operational Safety Evaluation of Autonomous Driving Vehicles

- 2023.12-2024.04  Clean the traffic participant data extracted from the cameras installed on the roadside.
 Identify the target vehicle trajectory from the traffic participant data.



Driving Alertness Screening and Application Research

- 2022.09-2023.02  Merge and clean different datasets from driving simulation experiments, like vehicle and physiological data, and write a manual about data cleaning.
 Build the traditional statistical models and analyze the important factors of brake reaction time and lane departure.

Traffic Safety Management and Risk Control in Suzhou, China




- 2023.09-2024.06  Analyze the relationships between different variables using the Bayesian network, like traffic flow, weather, and crash.

Skills


- Software  Python, Matlab, Stata, SPSS, ArcGIS, \LaTeX
Ability  Advanced statistic analysis, Causal inference, Machine learning, Traffic big data

Miscellaneous Experience

Awards and Achievements

- 2019  **Second prize**, National college students mathematics competition, Mathematical society of China.
2020  **Third scholarship**, Tongji University.
  **Scholarships for social activities**, Tongji University.

Organization Experience

- 2020-2021  **Chairman**, Mathematics modeling organization, Tongji University.