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| Qianqian Jin, Ph.D. |

Orlando, FL, USA, 32816, (407) 913-0099, [qianqianjin010@gmail.com|](about:blank), [LinkedIn](http://www.linkedin.com/in/qianqian-jin-06b0ba257) ,[Google Scholar](https://scholar.google.com/citations?user=8K8j7IsAAAAJ&hl=en&authuser=1%20), [GitHub](https://github.com/daydayjin606)

Safety research Ph.D. with deep expertise in quantitative risk assessment and surrogate safety measures across diverse traffic scenarios. Spearheaded the development of analytical frameworks by integrating large-scale traffic datasets to proactively assess and mitigate conflict risks. Strong track record of cross-functional collaboration with academic and industrial teams to deliver data-driven safety insights for intelligent safety systems.

# Skills & Abilities

* Programming Language: Python, R, SQL
* Machine Learning Frameworks: Pytorch, Scikit-learn
* Modeling Techniques: Statistical Models, Machine Learning Model, Deep Learning Model

# Professional Experience

## RESEARCH ASSISTANT | Xiamen uNIVERSITY OF TECHNOLOGY (sep. 2018 – may. 2022)

* Led and implemented a Monte Carlo–Markov chain hybrid model to forecast intersection-level crash risk probability between vulnerable road users (VRU) and vehicles, informing collision avoidance strategy design (**Toyota Motor Corporation project**, 250,000 RMB, Co-author, published)
* Served as the primary data analyst for pre-crash vehicle-VRU scenarios, delivering robust and structured datasets to enable K-medoids clustering for AEB system validation. (**Toyota Motor Corporation project**, Co-author, published)

## Research assistant | UNIVERSITY OF CENTRAL FLORIDA (AUG. 2022 – CURRENT)

* Pioneered conflict risk quantification under varying weather conditions using extreme value theory (EVT), improving risk threshold interpretation for AV safety systems (First author, published)
* Designed the first analytical framework combining safety metrics and EVT to assess right-turn vehicle-pedestrian conflict risks, uncovering potential factors leading to crashes. (First author, under review)
* Engineered a ResNet-based vision pipeline to classify conflict scenarios from CCTV data, achieving 91% accuracy in pedestrian-vehicle conflict detection.

# Publications

* **Jin, Q.,** Abdel-Aty, M., Tang, S. (2025). Assessing Conflict Likelihood and its Severity at Interconnected Intersections: Insights from Drone Trajectory Data. *AAP (Q1)*
* **Jin, Q**., Abdel-Aty, M., Ugan, J., Islam, Z., & Zheng, O. (2024). Identifying the Threshold Discrepancy of Rear-End Conflicts under Clear and Rainy Weather Conditions Using Trajectory Data. *TRR*
* Pan, D., Han, Y., **Jin, Q**., Wu, H., & Huang, H. (2021). Study of typical electric two‐wheelers pre-crash scenarios using K-medoids clustering methodology based on video recordings. *AAP (Q1)*
* Pan, D., Han, Y., **Jin, Q.**, Kan, J., Huang, H., Mizuno, K., & Thomson, R. (2023). Probabilistic Prediction of Collisions Between Cyclists and Vehicles Based on Uncertainty of Cyclists’ Movements. *TRR*

# Educations

* Ph.D., Civil Engineering | Expected May 2025 | University of central Florida | Orlando, Florida
  + **Focus: Intelligent Transportation System, Traffic Safety Modeling, Quantitative Conflict Risk**
* Master, Automotive Engineering | June 2021 | Xiamen University of Technology, Xiamen, China
  + **Focus: Crash Reconstruction, Quantification Crash Risk, VRU safety**
* Online Course: Automotive Software Functional Safety – ISO 26262