



Keyu Chen

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 CurryChen77 |  Google Scholar

Beijing, China

RESEARCH INTERESTS

My research centers on **traffic simulation and motion planning** for autonomous driving, with a particular emphasis on creating **realistic, interactive, and controllable traffic scenarios**. I am passionate about developing reliable closed-loop simulation frameworks to accelerate the safe, robust, and scalable advancement of autonomous driving systems.

EDUCATION

- **Tsinghua University (THU)** September 2023 - July 2028(Expected)
Beijing, China
Ph.D. student at the School of Vehicle and Mobility.
 - Advisor: [Prof. Sifa Zheng](#).
- **Nanjing University of Aeronautics and Astronautics (NUAA)** September 2019 - July 2023
Nanjing, China
B.Eng. in Vehicle Engineering.
 - GPA: 4.1/5 (Top 2%)

FIRST AUTHOR PUBLICATIONS

- [arXiv 2025] RIFT: Group-Relative RL Fine-Tuning for Realistic and Controllable Traffic Simulation.
Keyu Chen, Wenchao Sun, Hao Cheng, Sifa Zheng.
[Paper](#), [Project Page](#), [Code](#)
- [CoRL 2025] FREA: Feasibility-Guided Generation of Safety-Critical Scenarios with Reasonable Adversariality.
Keyu Chen, Yuheng Lei, Hao Cheng, Haoran Wu, Wenchao Sun, Sifa Zheng. (**Oral 4.3%**)
[Paper](#), [Project Page](#), [Code](#)
- [KBS 2023] IGT: Illumination-guided RGB-T object detection with transformers.
Keyu Chen, Jinqiang Liu, Han Zhang. (Bachelors thesis)
[Paper](#)

CO-AUTHOR PUBLICATIONS

- [arXiv 2025] DriveCamSim: Generalizable Camera Simulation via Explicit Camera Modeling for Autonomous Driving.
Wenchao Sun, Xuewu Lin, **Keyu Chen**, Zixiang Pei, Yining Shi, Chuang Zhang, Sifa Zheng.
[Paper](#), [Code](#)
- [TRC 2025] Emergency Index (EI): A two-dimensional surrogate safety measure considering vehicles interaction depth.
Hao Cheng, Yanbo Jiang, Hailun Zhang, **Keyu Chen**, Heye Huang, Shaobing Xu, Jianqiang Wang, Sifa Zheng.
[Paper](#), [Code](#)

HONORS AND AWARDS

- **Outstanding Graduate (Top 1%), NUAA** June 2023
- **Outstanding Bachelor Thesis Award (Top 5%), NUAA** June 2023
- **National Scholarship (Top 1%), NUAA** December 2021