

Education			
Undergraduate:	Tongji University	Vehicle Engineering (5 years)	2019.09 - 2024.07
Direct Ph.D. Program:	Tongji University	Vehicle Engineering	2024.09 - Present

Research

Paper

- [First Author]* Chen, Z., Leng, B., Li, Z., Deng, H., Jin, G., Yu, R., & Wen, H. (2025). HCRMP: A LLM-Hinted Contextual Reinforcement Learning Framework for Autonomous Driving. arXiv preprint arXiv:2505.15793.
- [Student First Author]* "Efficient and Flexible Autonomous Parking Planning based on Adaptive Multi-Step Motion Primitives", Journal of Intelligent Transportation Systems: Technology, Planning, and Operations
- [First Author]* Chen, Z., Li, Z., Wu, J., et al. (2022). A Global Path Planning Method for Multi-Vehicle Autonomous Parking Based on Multi-Attribute Decision Making. Journal of Tongji University (Natural Science Edition), 50(S01), 135-139. DOI:10.11908/j.issn.0253-374x.23718.
- Li, Z., Jin, G., Yu, R., Chen, Z., Li, N., Han, W., ... & Filev, D. (2025). A Survey of Reinforcement Learning-Based Motion Planning for Autonomous Driving: Lessons Learned from a Driving Task Perspective. arXiv preprint arXiv:2503.23650.

Patents and Software Copyrights

- [2024.12] A Reward-Driven Intelligent Driving Method Based on Large Language Model Scene Understanding (Pending)
- [2023.04] A Global Optimal Path Planning Method for Multi-Vehicle Autonomous Parking (Under substantive examination)
- [2022.12] A Traffic Light Recognition Method Based on Color Gamut Difference and Its Application (Under substantive examination)
- [2022.10] Software for Multi-Modal Emergency Travel Service Support during Rail Transit Incidents (Granted)
- [2022.09] A Method for Identifying Passenger Emergency Travel Demand during Rail Transit Incidents Based on Passenger Flow Big Data (Under substantive examination)

Project

- Roadside-Information-Enhanced Interactive Learning for Decision-Making and Control* [2025.04 - Present]
Jointly developed with Changan Automobile to construct risk constraints against unreasonable driving actions. Established a self-learning decision and control method guided by rule-based mechanisms and game theory.
- Research on Planning and Control Algorithms for Collaborative Autonomous Parking* [2023.07 - 2024.07]
Optimized local parking paths and completed validation through real-world vehicle testing.
- A Global Path Planning Platform for Multi-Vehicle Parking* [2022.12 - 2023.11]
Developed a global path planning platform for multi-vehicle parking. Implemented a complete, end-to-end automatic parking system covering multi-vehicle space allocation, global guidance, local path planning, and demonstration on a visualization platform.
- An Intelligent Sign Language Translation and Interaction System for the Hearing-Impaired* [2022.04 - 2023.04]
Jointly developed with Huawei to achieve real-time recognition of sign language and convert it into text.

Work

SenseTime Research / Fundamental Vision / Algorithm Research Intern [2024.02 - 2024.08]

- Built scenarios in the CARLA simulator, generated simulation data for the UniAD framework, and performed subsequent data processing and model training.

SAIC Volkswagen / EHH Department / Short-term Intern [2024.01 - 0204.02]

- Gained an understanding of the EHH department's structure and explored the applications and technical prospects of AI in intelligent driving.

Awards

- 2020-2021 Academic Year: United Electronics Scholarship
- 2020-2021 Academic Year: Tongji University Scholarship for Social Activities
- 2020-2021 Academic Year: Excellent Student Leader of Tongji University
- 2021-2022 Academic Year: Deran Fund - Deran Scholarship
- 2021-2022 Academic Year: Tongji University Excellent Student Scholarship
- 2022-2023 Academic Year: Tongji University Excellent Student Scholarship
- Gold Medal, Tongji University Division of the 7th China International College Students' "Internet+" Innovation and Entrepreneurship Competition
- Gold Medal, Tongji University Division of the 8th China International College Students' "Internet+" Innovation and Entrepreneurship Competition