

Wenbo Xiao

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EDUCATION

- **Graz University Of Technology** Graz, Austria
Dipl.-Ing. in Mechanical Engineering (Double Master Program) Sep. 2023 – Present
 - **Relevant Courses:** Vehicle Dynamics, Automated Driving, Embedded Mechatronic Architectures, Electric Vehicles and E-Mobility Systems.
- **Tongji University** Shanghi, China
Master of Engineering; Institute of Intelligent Vehicles Sep. 2022 – Present
 - **Relevant Courses:** Machine Learning, Optimization Theory and Methods, Automated Driving and Perception, Model Predictive Control, Vehicle System Dynamics, Matrix Theory.
- **Tongji University** Shanghai, China
Bachelor of Engineering in Vehicle Engineering; GPA: 4.4/5.0 Sep. 2017 – June. 2022
 - **Relevant Courses:** Automotive Engineering, Automotive Design Theory, Automatic Control Theory, C/C++ Programming, Computer Hardware Technology, Theory of Machines and Mechanisms, Linear Algebra.

EXPERIENCE

- **Institute of Automotive Engineering, Graz University of Technology** Sep. 2023 – Present
Research Assistant | Validation and Verification of ADS
 - **Responsibilities:** Virtual validation of automated driving systems.
- **Institute of Intelligent Vehicles, Tongji University** Jan. 2022 – Sep. 2023
Research Assistant | Safety and Comfort of ADS
 - **Responsibilities:** Research related to SOTIF of automated vehicle and scenario-based testing methods. Studies related to subjective discomfort evaluation of vehicle occupants.
- **Tongji DIAN Racing Team** Oct. 2018 – Dec. 2021
Chassis Engineer & Team Leader
 - **Responsibilities(2018-2020 Chassis Engineer):** As a suspension engineer, design, manufacture and assembly of suspension systems for electric race car *DRe20*. Testing, data acquisition and chassis tuning of *DRe19* and *DRe20*.
 - **Responsibilities(2020-2021 Team Leader):** Team management, project coordination and technical supporting (design, manufacturing, testing, and competition of *DRe21*), sponsorship and finance management.
 - **Achievements:** We won *overall champion in FSEC 2020*, ranked overall no.4 in FSEC 2021.

PROJECTS

- **GNN-Based Scenario Classification(Ongoing, Master Thesis)** FTG of TU Graz
Graph Neural Networks | Driving Scenario Classification | Transfer Learning
 - **Objective:** Pre-training GNN to embed scenario graph sequence into vector based on open source driving database. Training scenario classification model based on the pre-trained model and small amount of labeled scenarios.
- **Chat2Scenario: Scenario Extraction Tool** FTG of TU Graz
Scenario-based Testing | Large Language Model | [Project Link](#)
 - **Objective:** Utilizing LLM for understanding user input, and automatically retrieving scenarios from dataset based on user requirements.
 - **Responsibilities:** Method framework construction, scenario retrieving function coding(python).
 - **Achievements:** Conference paper, IEEE IV 2024 accepted.
- **Research on Occupant Subjective Discomfort** Tongji University - SAIC Motor Ltd.
Discomfort measurement | Data Analysis | Naturalistic Driving Studies(NDS)
 - **Responsibilities:** Using statistical methods to study subjective discomfort based on NDS data, including driving scenario data, subjective occupant feedback, and objective physiological recordings.
 - **Achievements:** SAE technical paper, SAE 2022 Intelligent and Connected Vehicles Symposium accepted.

SKILLS

- **Programming Language** Python, C/C++, Matlab & Simulink
- **Software & Tool** Git, PyTorch, ADAMS Car, Vires VTD, Catia, Solidworks