

Zhiliang Chen

chenzhiliang@u.nus.edu • Citizenship: Singapore

Education

- 2022 Aug – Present **National University of Singapore**
PhD, Department of Computer Science
Supervisor: Assoc. Prof. Bryan Kian Hsiang Low & Dr. Chuan-Sheng Foo
- 2016 Aug – 2020 May **National University of Singapore**
BSc. Applied Mathematics, B.Comp. Computer Science
Double Degree, *Highest Distinction*.

Publications

- 2025 **DUET: Optimizing Training Data Mixtures via Feedback from Unseen Evaluation Tasks**
Zhiliang Chen, Gregory Lau, Chuan-Sheng Foo, Bryan Kian Hsiang Low.
arXiv: 2502.00270
- 2025 **Broaden your SCOPE! Efficient Multi-turn Conversation Planning for LLMs with Semantic Space**
Zhiliang Chen, Xinyuan Niu, Chuan-Sheng Foo, Bryan Kian Hsiang Low.
ICLR 2025 Spotlight (top 5% of total submissions).
- 2024 **Towards AutoAI: Optimizing a Machine Learning System with Black-box and Differentiable Components**
Zhiliang Chen, Chuan-Sheng Foo, Bryan Kian Hsiang Low. *ICML 2024*.
- 2021 **The Reasonable Crowd: Towards evidence-based and interpretable models of driving behaviour**
Bassam Helou, Aditya Dusi, Anne Collin, Noushin Mehdipour, Zhiliang Chen, Cristhian Lizarazo, Calin Belta, Tichakorn Wongpiromsarn, Radboud Duintjer Tebbens, Oscar Beijbom. *IROS 2021*.

Industry experience

- 2020 - 2022 **Motional (Motion Planning Software Engineer)** – Singapore
Developed motion planning algorithms related to preference-based trajectory planning in C++. Deployed algorithms on Motional's self-driving cars for real-time testing. Followed up with performance analysis and long-term regression tracking in Python. Published papers and patents with ML team.
- Summer 2019 **NuTonomy (Autonomous Vehicle Intern)** – Singapore
Worked with self-driving cars.

Patents

- 2023 Immobility Detection with Situational Context (US11851091B2)
2023 Efficient and optimal feature extraction from observations (US11727671B1)
2021 Data-driven Rulebooks (US11945440B2)

Teaching

- 2023 Teaching Assistant CS4246 AI Planning and Decision Making
2022 Teaching Assistant CS3203 Software Engineering

Honors and scholarships

- 2024 National University of Singapore Research Achievement Award
2022 A*STAR Computing and Information Scholarship (216,436 USD across 4 years)
2017-2020 Dean's list (four semesters)

Mentorship and service

Reviewer for IROS, ICRA, AISTATS, NeurIPS and ICLR.