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, *Summa Cum Laude.*

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.

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)

Mentorship and service

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