Dai Anran

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Education

National University of Singapore   Aug. 2023 – Present

Doctor of Philosophy in Operations Research and Analytics   *Singapore*

National University of Singapore   Jan. 2022 – Jun. 2023

Master of Science in Civil Engineering (Transportation Engineering)   *Singapore*

Tongji University   Aug. 2017 – Jun. 2021

Bachelor of Engineering in Transportation Engineering   *Shanghai, China*

Research Experience

Strategies for Mitigating Bus Bunching in Modular Transit Systems

Advisor: Dr. Yang Kaidi   *Jul. 2022 – Jun. 2023*

- Propose a comprehensive strategy for bunching modular vehicles.
- Solve with an Actor-Critic DRL approach to minimize the total costs.

Driver Scheduling for Intelligent Heterogeneous Vehicle Platooning Systems

Advisor: Dr. Zhou Xuemei   *Mar.2021 – Jul.2021*

- Establish a driver scheduling model based on the Set Covering Problem.
- Prove the availability by computational results using the Column Generation.

Decision-making at Unsignalised Intersections via Driver Hazard Perception

Advisor: Dr. Wu Zhizhou   *Mar.2019 – Jun.2020*

- Collect video data of unsignalised intersections; data processing.
- Establish a decision tree model to analyze the factors influencing drivers.

Human-Machine Interface Design Based on Head-up Display

Advisor: Dr. Wang Ling   *Oct.2018 – Mar.2019*

- Design a HUD interface with in-vehicle navigation and other information.
- Assist in developing an APP considering applications of connected vehicles.

Capabilities

Technical: PTV Visum, PTV Vissim, TransCAD, RailSys, CAD, Revit, Tekla

Coding: Python, C++, C#, R, SQL Server

Language: Mandarin (Native), English (Fluent)