

Zhi Yan Chew
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Employment

- Research Engineer** at the Department of Architecture, National University of Singapore (NUS) | **Feb 2025 - April 2025**
- Worked closely with the PI and external collaborator, and was mainly responsible for data analysis with R for mobility and travel behavior research.
- Substitute Teacher** at SJKC Chung Hwa Belemang, Malaysia | **May 2022 - August 2022**
- Student Assistant** at Transportation Department, Tsinghua University | **September 2019 - November 2020**

Educational Background

- Master's Degree in Architecture, Building, and Planning** | **2022 - 2024**
- Track: Urban System and Real Estate
 - Eindhoven University of Technology, The Netherlands
- Bachelor's Degree in Civil Engineering** | **2018 - 2022**
- Major in Construction Management and minor in Transportation Engineering
 - Tsinghua University, Beijing, China
- Cambridge A-Level** | **2017 - 2018**
- Taylor's College, Kuala Lumpur, Malaysia

Honors and Awards

Fund International Experience Grant, University of Technology, Eindhoven, 2023
Malaysian Excellent Undergraduate Scholarship, Tsinghua University, 2021
Tsinghua University Freshman Scholarship, 2018

Research Projects

- Master's Graduation Project** | **January 2024 - August 2024**
- Develop Bayesian Belief Networks (BBNs) to synthesize social networks at the ego and ego-alter levels for more accurate and predictive travel behavior simulation and models.
 - Model I examines the influence of socio-demographic factors on the composition and size of an individual's social network and the aggregated frequency intervals of joint activities; Model II focuses on how specific socio-demographic differences between ego and alter, geographic distance, relationship type, and duration impact joint activity frequencies.
- Human Mobility Challenge 2023** | **August 2023 - October 2023**
- Trained a Long-Short Term Memory (LSTM) Recurrent Neural Network (RNN) from a time series synthetic human mobility dataset to predict future mobility trajectories, codes written in Python.
- Traffic Accidents Analysis Project** | **February 2023 - June 2023**
- Investigate the relationship between general and bus stop-related factors and the severity of traffic accidents in Greater London.
 - Used Python and QGIS for data processing, quantitative analysis, and spatial analysis.
 - The binomial logistic regression model is used to test the conceptual model in SPSS.
- Bachelor's Graduation Project** | **December 2021- May 2022**
- Provides a framework and model to assess accessibility under natural disasters using crowdsourcing big data.
 - Used Python (Pandas, Numpy, Matplotlib, etc.) for data processing, management, and visualization.
 - Analyze how people's travel patterns are affected by natural disasters and accessibility as an indicator.

Skills

Language: Mandarin (native), English, and Malay
Programming Language: Python (Pandas, NumPy, Matplotlib) and R, Data Analysis: SPSS, Spatial Analysis: QGIS