

CV

0405850590 | tiyin@student.unimelb.edu.au | **Technical Skills:** Python, R, QGIS, SQL, Power BI

About

Rich experience in transport data analytics. Skilled in modelling, optimization, and applying machine learning techniques to real-world projects.

LinkedIn:

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Education

UNIVERSITY OF QUEENSLAND | FEBRUARY 2017 – JUNE 2020 | GPA: 6.6/7

- Bachelor of Engineering, specialized in civil engineering and data science
- Related coursework: Traffic Flow Theory, Transport Modelling, Operations Research, Machine Learning, Game Theory

LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | SUMMER SCHOOL | GRADE: A

- Summer School
- Course: Applied Econometrics and Big Data

Honors & Award

- DG Special Prize for BikeHack19 (a Hackathon competition, 2019)
- Philip Dimmock Memorial Bursary (for the best student of civil engineering cohort, 2018)
- Membership in EAIT Scholars Program (for students whose GPA is within the 5% of their EAIT Scholars cohort, 2018 - 2019)

Experience

UNIVERSITY OF MELBOURNE	Research project: Service Load Estimation for Melbourne Tram, September 2020 – Now, Full-time Objective: Develop models that helps the Department of Transport to monitor the service crowdedness with data from multiple sources <ul style="list-style-type: none">• Developed a data fusion model with machine learning techniques that multiple data sources provided by the Department of Transport for the estimation of passenger loads, achieving 80%-90% accuracy.
CSIRO DATA61	Research project: Detect the first and last mile travel modes of public transport November 2019 – February 2020, Full-time Objective: Look into ways of combining walking, cycling and driving as the first or last leg in a multi-modal pathfinding application. <ul style="list-style-type: none">• Matched mobile GPS with smart card data to obtain individual travel trajectories that are associated with public transport.• Designed a heuristic model to detect the first/last mile travel mode of public transport

UNIVERSITY OF QUEENSLAND	<p>Research project: Modelling Objective and Subjective Public Transport Performance August 2019 – June 2020, Full-time</p> <p>Objective: Establish the relationship between customer satisfaction feedback and observed measures of attributes related to network performance.</p> <ul style="list-style-type: none"> • Applied econometrics models on the survey data and discovered passengers have different expectations to different types of public transport attributes. • Matched survey data with smartcard transaction to evaluate how the actual network performance would influence people’s satisfaction and identified the key performance metrics. • Presented results in an international conference in Toronto, helping transit operators to make investment strategies that improve passengers’ satisfaction with public transport. <p>Research project: Exploring infrequent use of public transport in Brisbane November 2018 –July 2019, Full-time</p> <p>Objective: Explore infrequent users of public transport</p> <ul style="list-style-type: none"> • Processed the one-year smart card data in Brisbane. • Clustered public transport users based on regularity and visualized the travel time and locations of infrequent public transport users. • Presented results in an international conference in Paris, helping in transit operators to develop demand responsive services for infrequent public transport users. <p>Academic tutor, University of Queensland 27th July 2018 – Present, Casual</p> <ul style="list-style-type: none"> • Gave lab demonstration during the practical session for CIVL2131: Fluid Mechanics. • Organized students in groups and helped them to finish their lab reports.
BRISBANE CITY COUNCIL	<p>Engineering intern 28th May 2018 – 22nd June 2018, Part-time (QGIS)</p> <ul style="list-style-type: none"> • Helped the flood management team to renew council’s asset database. • Developed skills in data processing and visualization using QGIS.

PUBLISHED PAPERS

CONFERENCE PRESENTATION

“Infrequent Public Transport Use: An Investigation with Smart Card Data”, TRANSITDATA2019-5th International Workshop and Symposium, Sorbonne University, Paris, France, July 2019.

“Modelling the Effects of Objective System Performance on Customer Satisfaction Metrics”, TRANSITDATA2020-6th International Workshop and Symposium, University of Toronto, Toronto, Canada, July 2020.

REFEREES

Professor Mark Hickman
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Chair of Transport Engineering
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Professor Carlo Prato
School of Civil Engineering (UQ)
Acting Head of School
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