Danyang Dai

PhD Student - Faculty of Medicine

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Education

Doctor of Philosophy
Brisbane, QLD

University of Queensland
2023 - 2026

- Supervisors: Professor Jason Pole, Associated Professor Sally Shrapnel, Doctor Pedro Franca Gois
- Digital Health Methods for Evaluating Chronic Organ Injuries Resulting from Infectious Epidemics: Acute Kidney Injury post COVID-19 Omicron Surge as an Exemplar

Master of Applied Econometrics
Parkville, VIC

University of Melbourne
2019-2020 Dec

- First Class Honours Thesis (83): Official and online inflation spillover analysis of the euro area.
- Supervision: Professor Kalvinder Shields and Dr. Andrew Clarke.

Bachelor of Commerce
Clayton, VIC

Monash University
2015-2018

Awards

- Digital Health UQ-QH Alliance (DHUQHA) Scholarship

Research Experience

Research Assistant to Professor Tracy Comans
Faculty of Medicine

University of Queensland
2023 Jul - Present

- Australian National Aged Care Classification Risk Adjustment.
- Assigning risk adjustment to each age care facility according to different measurement.

Research Assistant to Associate Professor Sally Shrapnel
School of Mathematics and Physics

University of Queensland
2022 Aug - 2022 Dec

- Project with the International Severe Acute Respiratory and emerging Infections Consortium (ISARIC).
- This study investigates how different COVID-19 variants such as Alpha, Beta, Delta and Omricon cause Acute Kidney Injury (AKI) in patients admited to the hospital.
- Conduct analyses using COVID-19 patient data across 67 countries provided by University of Oxford's Centre for Tropical Medicine and Global Health.
- Develop an algorithm that identifies AKI from Kidney Disease Improving Global Outcomes (KDIGO) measurements.
- Build and maintain a local database that contains all medical records for patients.
- Produce data visualisation and data analysis for the research paper.

Research Assistant to Associate Professor Ben Beck
School of Public Health and Preventive Medicine

Monash University
2021 Oct - 2022 Sep

- Conduct research activities for Sustainable Mobility: city-wide exposure modelling to advance bicycling" (DP210102089) study under the supervision of Assoc Prof. Ben Beck.
- This project aims to develop a platform that models the number of cyclists on each road in greater Melbourne.
- Managing and monitoring the entire 6-month data collection period using data visualisations.
- Design and implement algorithms that calculate trip information including trip distance, duration, speed and acceleration.
- Assist in preparing scientific reports and other documentation, including undertaking literature reviews and data analysis.
- Recruit over 900 participants for the study and distribution of GPS monitoring equipment. Overseeing participant management and providing support when required.

Research Assistant to Econometrics and Business Statistics Department
ECONOMETRICS AND BUSINESS STATISTICS

<div align="right">Monash University
2021 Oct - 2022 March</div>

- Helped develop self-guided intertactive online learning materials for students learning R.
- This short course provides the necessary skills to use R when learning more advanced and specialised topics at Monash.
- The topics covered include: RStudio IDE, basic R programming, troubleshooting, project management, data analysis, modelling, visualisation and communication with data.
- This resouse is used by hundreds of students from Monash University and it is publicly available online at `https://learnr.numbat.space`.

Research Assistant to Dr. Emi Tanaka
ECONOMETRICS AND BUSINESS STATISTICS

<div align="right">Monash University
2021 Jun - 2021 Oct</div>

- This research project looks into how the development of open source software can be quantified as academic achievements.
- Developing an R package (cranscrub) which provide processed data of the number of unique user R package downloads.
- Developed advanced data management skills by processing a large dataset (65GB) on a server using R.

Teaching Experience

Teaching Assistant
ECONOMETRICS AND BUSINESS STATISTICS

<div align="right">Monash University
2021 Jan - Present</div>

- Data visualisation and analytics (ETF5922), Statistical Thinking (ETC2420), Introductory econometrics (ETC2410) and Introduction to data analysis (ETC5510).

Published and working papers

Association of Country Income Level With the Characteristics and Outcomes of Critically Ill Patients Hospitalized With Acute Kidney Injury and COVID-19

<div align="right">Kidney International Reports</div>

MARINA WAINSTEIN, NICHOLAS SPYRISON, DANYANG DAI, MOJI GHADIMI, JONATHAN S. CHÁVEZ-IÑIGUEZ, LILIA RIZO-TOPETE, BARBARA WANJIRU CITARELLA, LAURA MERSON, JASON D. POLE, ROLANDO CLAURE-DEL GRANADO, DAVID W. JOHNSON, SALLY SHRAPNEL

<div align="right">2023</div>

Teach a student how to debug, and they can code for a lifetime: Open-source interactive self-paced R learning website - Conference presentation

<div align="right">Australian Statistical Conference and Australian Conference on Teaching Statistics 2023</div>

DANYANG DAI, MITCHELL O'HARA-WILD, EMI TANAKA

<div align="right">2023</div>

GPS data collection for modelling bicycling activity]{GPS data collection for modelling bicycling activity across Greater Melbourne

<div align="right">Intended Journal: Travel Behavior and Society
Working paper</div>

DEBJIT BHOWMICK, DANYANG DAI, BEN BECK.

Affiliation

Committee Member
QUEENSLAND DIGITAL HEALTH CENTER HDR SYMPOSIUM WORKING GROUP

<div align="right">Brisbane
2023 May - Present</div>

- Assisting in bring all HDR students in the digital health space together.
- Organising Queensland Digital Health HDR Symposium happening in October 2023

President
R-LADIES MELBOURNE

<div align="right">Melbourne
2020 March - Present</div>

- Giving Public Workshop: R Markdown - A Better Way of Communicating with Data.
- Workshop on website development using Blogdown
- Host public events including TidyTuesdsay
- In charge of the Github account and maintaining repositories.