Zhiyuan Wang
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PROFESSIONAL SUMMARY

Analytical and impact-driven health data scientist with dual master's degrees in Health Data Science and Health Economics. Skilled in clinical data analysis, statistical modelling, and quality improvement, with extensive experience using large-scale administrative health datasets to support data based decision-making. Proficient in SAS, R, Python, Stata, SQL, and QGIS, with strong capabilities in data extraction, cleaning, and trend analysis. Currently working on identifying indicators of high-cost, low-quality end-of-life care among people dying with dementia in NSW. Strong background in visual storytelling, reproducible workflows, and interdisciplinary collaboration. Passionate about delivering actionable insights for climate resilience and health equity.

EDUCATION

Master of Science in Health Data Science October 2023 - June 2025
University of New South Wales, Sydney

- Graduated with High Distinction.
- Machine Learning, Statistical Modelling, Health Data Management, Visualisation, Computing.
- Dissertation Research: Examined how extreme heat affects unplanned hospital admissions and Emergency Department (ED) visits among older adults in NSW, with effect modification by mental health history and socioeconomic disadvantage, using Admitted Patient Data Collection (APDC) and Emergency Department Data Collection (EDDC) data with time-series and conditional logistic regression.
- Interactive project: https://spicydataboy.com/

Master of Science in Health Economics October 2018 - March 2021
University of Duisburg and Essen, Essen, Germany

- Graduated with Distinction.
- Relevant Courses: Health Economics, Microeconomics, Program Evaluation, Labor Economics.
- Publication: Zhiyuan Wang, "The Long-Term Impact from Colonialism on Public Health Behaviour and Healthcare Utilization in Cameroon," Theoretical and Natural Science 3, no. 1 (April 2023): 438–446, https://doi.org/10.54254/2753-8818/3/20220294.

WORK EXPERIENCE

Research Assistant June 2025 - Present
National Centre of Excellence in Intellectual Disability Health, Faculty of Medicine & Health, UNSW, Sydney

- Conducting literature and scoping reviews for the Intellectual Disability Standard Population project, synthesising evidence to inform improved identification methods.
- Supporting the Capture–Recapture project to enhance population estimates of people with intellectual disability through advanced epidemiological techniques.
- Contributing to the development of a new Activity-Based Funding (ABF) model tailored for people with intellectual disability, including data analysis, policy review, and methodological input.

Casual Research Officer May 2025 - Present
Centre for Big Data Research in Health, Faculty of Medicine & Health, UNSW, Sydney

- Managed large linked hospital datasets from the Centre for Health Record Linkage (CHeReL) to support research on end-of-life care quality for people with dementia in NSW.
- Conducted stratified regression analyses and quality indicator monitoring using R and SAS.
- Integrated socioeconomic and geographic indicators (e.g., IRSD, remoteness) to identify care disparities, contributing to evidence for clinical governance and quality improvement.

- Collaborated with clinicians and health researchers to interpret findings and improve data-informed decision-making.

Casual Senior Consultant October 2023 - Present
Smart and Green Transportation Research Centre, Beijing, China

- Coordinated with public agencies and industry partners to deliver strategic insight reports on pollution control and sustainability policies.
- Translated complex environmental data into actionable recommendations, aligning with policy evaluation frameworks and stakeholder goals.

Senior Data Analyst June 2022 - October 2023
Smart and Green Transportation Research Centre, Beijing, China

- Led end-to-end management of large-scale environmental datasets, with strong emphasis on data governance, cleaning, and reproducibility using SQL and R.
- Supervised ethics and data approval processes; communicated research protocols with government departments.
- Applied machine learning (RNN, LSTM) in Python for predictive modelling and developed real-time dashboards and reports for internal and external stakeholders.
- Presented results in plain language formats to support collaborative decision-making with diverse audiences.

Data Analyst October 2021 - June 2022
China Global Television Network (CGTN), Beijing, China

- Conducted public sentiment and health-related media impact analysis using NLP techniques in Python and R.
- Created interactive geographic visualisations with QGIS and Power BI to map audience engagement and media influence.
- Reported insights to editorial and policy teams, demonstrating strong communication and presentation skills.

Data Analyst March 2021 - October 2021
Smart and Green Transportation Research Centre, Beijing, China

- Contributed to evaluation of vehicle emission control programs through SQL- and Stata-based data analysis.
- Collaborated with the National Development and Reform Commission (NDRC), Toyota Research and Development, and the World Bank Urban Development Department.
- Drafted data access and project proposals, demonstrating strong organisational and documentation skills.

Research Assistant Intern October 2019 - December 2019
RWI - Leibniz Institute for Economic Research, Essen, Germany

- Conducted literature reviews and organized data for a project on historical interventions and their impact on infant health and longevity in Sweden.
- Assisted in quantitative analysis and visualisation with STATA and R.

SKILLS

- Tools & Languages: Python (Pandas, NumPy, scikit-learn, Matplotlib, GeoPandas), R (tidyverse, dplyr, ggplot2), SAS, Stata, SQL (MySQL, PostgreSQL), Power BI, QGIS, ArcGIS.
- Expertise: Statistical modelling, time-series analysis, geospatial statistics, data visualisation.

LANGUAGES

- English (Fluent) | German (Fluent) | Chinese (Fluent).

AWARD

- Second Place, Health Data Science Datathon 2024.
  Designed a predictive model for epidemic outbreaks using EPIWATCH data and NLP.
- Curiosity Cup Global Health Data Science Hackathon 2025.

Ranked 28th/112 teams for scientific writing and SAS analysis on global health data.