# Weisi Chen

Data Scientist
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## Profile

I am a highly disciplined and hard-working individual professional with a strong passion for technology, programming, data analysis, data visualization, and statistical modeling. Leveraging a unique blend of training in pharmacy and health data science, I specialize in deriving actionable insights from complex health datasets.

I am proficient in statistical software such as R and SAS, and have extensive experience using these tools for data analysis, visualiztaion, and statistical modelling. I am deeply committed to continuous learning and professional development, always eager to explore new packages, techniques, or skills that can enhance my ability to analyze data effectively and deliver meaningful insights.

My current interest lies in population-level analysis using linked health data to drive impactful health decisions and inform evidence-based strategies. I thrive on tackling challenging problems with analytical precision and creativity, always striving to deliver impactful results in every project I undertake.

## Education

**Sept 2021 - March 2023** **University of New South Wales** **M.S. Health Data Science**
WAM: 88%

*Dissertation: Changes in atherosclerotic cardiovascular disease risk over time among people living with HIV*

**March 2015 - March 2019** **University of Sydney** **B.S. Pharmacy**

## Employment History

**July 2023 - Present**

**University of New South Wales**, Sydney, NSW
**Data Scientist**, School of Population Health

I contributed to two projects in this role:
1) ACCESS: Aboriginal Community Controlled Ear Health Support System: Developing, embedding, and evaluating best practice models of care.

2) Evaluation of Sustaining NSW Families, NSW Health.

**My role included:**

- Critically reviewing the literature on epidemiological and statistical methods to inform the development of analysis plans.
- Drafting data management and data analysis plans, with input from the research team.

- Implementing the data management plan to prepare analysis-ready datasets from linked datasets, including data cleaning and manipulation, using R and SAS software.
- Executing statistical analysis of linked data (e.g., logistic regression and reverse probability weighting), with academic supervision, using statistical packages R and SAS.
- Drafting scientific papers, protocols, and conference abstracts, with academic supervision.
- Contributing to the project management of research projects to the highest scientific and ethical standards.
- Drafting applications and contributing to ongoing reporting to the relevant ethics committees and data custodians for research projects.
- Maintaining regular communication with project investigators and Aboriginal community organizations to ensure the program is delivered in a culturally appropriate manner.

**Feb 2023 - Dec 2023**

**University of Sydney**, Sydney, NSW
**Data Scientist/Research Officer**, School of Pharmacy, (FTE 0.4)

In this role, I contributed to the Multi-Agency Data Integration Project (MADIP): Investigating high-risk prescribing in Australian older adults.

**Key Responsibilities:**

- Preparing analysis-ready datasets from linked datasets, including data cleaning and manipulation, using R software.
- Conducting data analysis and statistical modeling (e.g., logistic regression) relevant to the project.
- Assisting with ongoing data management and documentations for reproducibility..

## Research Interests

I am passionate about pharmaco-epidemiology, with a particular focus on high-risk medication prescribing using national, population-level linked data.

I have extensive experience with data analysis, visualization, and statistical modeling tools.

My goal is to contribute to public health improvement by analyzing and understanding medication prescribing patterns, ultimately informing safer, evidence-based healthcare practices.

## Publications

Google Scholar Profile

### Peer-reviewed Journal Articles

1. Huynh, A. L. H., Wang, Y., Ma, L., Low, Y. L. C., **Chen, W.**, Fowler, C., Tan, E. C., Masters, C. L., Jin, L., & Pan, Y. (2024) "A comparison of an Australian observational longitudinal Alzheimer's Disease cohort to Community-Based Australian data." *Journal of Alzheimer S Disease*. 1–13. DOI: 10.3233/JAD-240241

2. Lau, E. C., **Chen, W.**, Lu, C. Y., Hilmer, S. N., Jeon, Y., & Tan, E. C (2024) "Antidementia and psychotropic drug use in older people with dementia in Australia: a national data linkage study" *Journal of the American Medical Directors Association*. 25 (11), 105237. DOI: 10.1016/j.jamda.2024.105237
3. **Chen, W.**, Petoumenos, K., Somia, A., Edmiston, N., Chaiwarith, R., Woolley, I., Ross, J., Pujari, S., Boettiger, D. C. (2024) "Changes in atherosclerotic cardiovascular disease risk over time among people living with HIV" *Journal of Antimicrobial Chemotherapy*. 79(4), 897–902. DOI: 10.1093/jac/dkae049