Shichen Zhou

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Personal Profile

A Research Assistant at the University of Hong Kong currently, with a master's degree in Health Data Science from the University of Manchester. Dedicated to clinical data analysis and biostatistics, having one or more years of academic expertise, and specialising in survival analysis, cross-sectional study, cohort study, randomized controlled trial, causal inference, Mendelian Randomization, omics data analysis, and machine learning.

Education

University of Manchester *GPA: Merit*

MSc in Health Data Science *Sept 2022 - Nov 2023*

- Dissertation title: "Explore response to disease modifying anti-rheumatic drugs in people living with rheumatoid arthritis"
- **Main Courses:** Machine Learning and Advanced Data Methods, Statistical Modelling and Inference for Health, Modern Information Engineering

Shanxi University of Finance and Economics *GPA: 83.88 / 100*

BSc in Financial Mathematics *Sept 2018 - June 2022*

- Dissertation title: "An in-depth study on factors contributing to opioid abuse based on US Census Bureau data"
- **Main Courses:** Mathematical Statistics, Time Series Analysis, Applied Stochastic Processes and Matlab Programme

Professional Experiences

University of Hong Kong *LKS Faculty of Medicine, Hong Kong*

Research Assistant *Jan 2024 - May 2025*

- Undertake clinical trial coordination and operations, including but not limited to research protocol design and management, trial volunteer recruitment and screening, statistical support and advanced data analysis.
- In-depth exploration of data from a range of public databases such as UKBioBank, NHANES, ELSA and GBD, using different statistical analysis methods to conduct disease association analyses, checking risk factors or causal inference.
- Prepare scientific publications, grant proposals and reports.

MobTech Technology Co.Ltd *Shanghai*

Big Data Analyst Internship *Oct 2021 - Apr 2022*

- Participate in the complete cleaning, organizing, analysis, mining and modelling work.
- Learn data mining algorithms and their principles and have a good understanding of common clustering analysis algorithms - GMM, GBDT, LR and XGBoost.
- Learn to use Python, and SQL, and understand common Python packages such as Sklear, and Pandas; and understand big data platforms Spark, and Hadoop.

Academic Experiences

Factors associated with long-term opioid use and dependence in patients with rheumatoid arthritis *Faculty of Biology, Medicine and Health, UK*

University of Manchester *Apr 2023 - Aug 2023*

- Evaluate factors associated with increased risk of long-term opioid use and dependence in patients with rheumatoid arthritis by analysing Clinical Practice Research Datalink (primary care electronic health records) data between 2006-2021.
- Undertake the statistical analysis task for the project, applying random forest regression and multi-factor logistic regression to identify the rank of factors of opioid-related dependence.

Causal effects between the risk of frailty and aging, lifespan and longevity: a bi-directional two-sample Mendelian randomization study *LKS Faculty of Medicine, HK*

University of Hong Kong *March 2024 - Dec 2024*

- Design this study as a two-way, two-sample Mendelian Randomization (MR) analysis, ensuring that the instrumental variables (SNPs) meet the three fundamental assumptions required for valid causal inference in MR.
- Source frailty-associated SNPs from a large GWAS meta-analysis of European participants, specifically from the UK Biobank and TwinGene, while obtaining age-related SNPs from three GWAS studies conducted with data from the UK Biobank and the FinnGen database.
- Conduct MR analysis primarily using the inverse variance-weighted (IVW) method, with additional comparison to robust, horizontally pleiotropy-resistant methods, including MR-Egger, weighted median, and MR-PRESSO, to ensure result consistency with the IVW method.

Randomized double-blind placebo-controlled clinical trial based on the theory of "Body constitution of Chinese Medicine" and "combination of prescription and syndrome" to improve the complex body constitution with "Qi deficiency + Yang deficiency or Yin deficiency" in Hong Kong

LKS Faculty of Medicine, HK

University of Hong Kong *Dec 2023 - Jan 2025*

- Prepare informed consent forms and publish recruitment advertisements for study participants.
- Conduct double-blind experiments with randomized assignment of real drugs and placebos.
- Upload collected data into the database and ensured accurate data entry.
- Perform preliminary data cleaning and statistical analyses for quality assurance.

A randomized, waitlist-controlled clinical study on the efficacy and safety of Lingzhi-containing dietary supplement CP003 on chronic fatigue and post-COVID fatigue

LKS Faculty of Medicine, HK

University of Hong Kong *Feb 2025 - Current*

- Configure and Maintain Redcap: Develop user-friendly forms aligned with the study protocol, define workflows for data entry, and build automated checks or alerts to ensure complete, high-quality data.
- Coordinate Patient Recruitment: Work closely with clinical staff to track participant enrollment, screening, and randomization in Redcap, ensuring accurate eligibility data is captured.
- Aggregate and Analyze Data: Regularly extract, clean, and consolidate data for interim reviews, final analysis, and reporting; run statistical tests for primary and secondary outcomes; and liaise with the broader research team to interpret results and guide study decisions.
- Provide evidence supporting CP003's safety and efficacy in easing fatigue and improving overall well-being.

Publications List

Journal Articles

Joint association between physical exercise, caffeine intake, and biological ageing: a cross-sectional analysis of population-based study

- **Journal:** PLOS ONE (IF: 2.9)
- **Co-first Author:** Guang Chen, Shichen Zhou, Yibin Feng et al.
- **Manuscript number:** PONE-D-24-53542 (Revision Under Review)

Comparative efficacy of first-line exercise interventions for cancer survivors with cancer-related fatigue: A system review and network meta-analysis of randomized controlled trials

- **Journal:** Cancer Medicine (IF: 2.9)
- **First Author:** Shichen Zhou, Guang Chen, Xiaoyu Xu et al.
- **Manuscript number:** CAM4-2024-07-3823 (Waiting Accepted)

Joint association of frailty index and biological aging with all-cause and cause-specific mortality: a population-based longitudinal cohort study

- **Journal:** Archives of Gerontology and Geriatrics (IF: 3.5)
- **First Author:** Shichen Zhou, Guang Chen, Yibin Feng et al.
- **Manuscript number:** AGG-D-24-02988 (Under Review)

Global, regional, and national estimates of burden and risk factors of female cancers in child-bearing age: A systematic analysis for Global Burden of Disease Study and Bayesian projection to 2030

- **Journal:** International Journal of Surgery (IF: 12.5)
- **Co-first Author:** Guang Chen, Shichen Zhou et al.
- **Manuscript number:** IJS-D-24-06719 (Revision Under Review)

Skills

Quantitative analysis Proficient in using statistical software programming Python (Pandas, PyTorch, NumPy, SK-learn), R, Stata, and MySQL.

Literature retrieval Good command in conducting literature searches through databases such as Pubmed, Cochrane and Web of Science.

Typesetting Familiar with using LaTeX for typesetting documents and reports.

Self characteristics Strong autonomy, including completing tasks independently and completing tasks on time.

Collaboration Good interpersonal skills and have good communication and interaction with colleagues and students.

Languages

English IELTS 6.5 (24HK505151ZHOS027A)

Japanese N2