Siyuan Li

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Education

Shanghai Jiao Tong University School of Medicine 2020/09 - Expected 2025/06

Double major in Preventive Medicine & Administrative Management, GPA 3.65/4.0 Shanghai, China

- A/A+ Courses: Calculus, C Programming, Bioinformatics, Fuzzy Mathematics and its Application, Causal Inference, Internal Medicine, Pediatrics, Obstetrics and Gynecology, Infectious Diseases, Dermatology Practice, etc.
- Ad-hoc teaching assistant for C Programming (Fall 2020): Invited by the Professor to provide course assistance, answer fellow students' questions and lead a Q&A session during finals week.

Publications

- Ying K, Paulson S, Eames A, Tyshkovskiy A, **Li S**, Perez-Guevara M, et al. A Unified Framework for Systematic Curation and Evaluation of Aging Biomarkers. bioRxiv. 2024:2023.12.02.569722. (Submitted for Journal Review)
- Han L, Zhao S, **Li S**, Gu S, Deng X, Yang L, et al. Excess cardiovascular mortality across multiple COVID-19 waves in the United States from March 2020 to March 2022. **Nature Cardiovascular Research**. 2023 2023/03/01;2(3):322-33.
- **Li S**, Han L, Shi H, Chong MKC, Zhao S, Ran J. Excess deaths from Alzheimer's disease and Parkinson's disease during the COVID-19 pandemic in the USA. **Age and Ageing**. 2022 2022 DEC 5;51(12).

Research Experience

Single-Cell Aging from a Large Language Model Perspective, Co-Investigator 2024/05 - Present

- Collected data, performed preprocessing, and fine-tuned models using Python Under development
- Evaluated model performance using various metrics

A New Machine Learning Method for Disease Prediction based on Epigenetics, Co-Investigator 2024/02 - Present

- Gathered datasets and performed experiments using Python Under development
- Reproduced over a dozen classic disease prediction models for comparison with new methods

A Unified Framework for Systematic Evaluation of Aging Biomarkers, Co-Investigator 2023/12 - Present

- Collected dataset and reproduced models from multiple multiple landmark papers using Python Submitted
- Contributed to partial functions in the Biolearn Python library for aging clock algorithms

Environmental exposure to Benzene and new-onset Alzheimer's disease, Principal Investigator 2023/06 - Present

- Conducted survival analyses, mixed linear regression analyses and sensitivity analysis using R Under Revision
- Interpreted and organized results, compiled tables and summarized key findings informatively
- Visualized Alzheimer's-related brain atrophy under Benzene exposure using BrainNet Viewer
- Authored all supplementary materials and created Graphical abstracts

Metastatic renal cell carcinoma and its immune microenvironment, Co-Investigator 2023/03 - 2024/04

- Drafted the project proposal of College Students' Innovative Training Program (CSITP) Completed
- Conducted unsupervised hierarchical clustering analysis on gene expression data using R

Excess deaths of Alzheimer's disease and Parkinson disease, Principal Investigator 2022/06 - 2022/12

- Conducted Poisson regression to estimate counterfacts using R Published
- Performed data visualization using R
- Authored the entire manuscript and part of supplementary materials

Excess cardiovascular mortality across multiple COVID-19 waves, Co-Investigator 2022/03 - 2022/11

- Curated the data for analysis Published
- Conducted data visualization in temporal and spatial patterns using R

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Honors

- 2024 Abbott Medical Scholarship, First-Class (Top 0.1%)
- 2024 Simpleway Private Equity Fund Scholarship, First-Class (Top 0.1%)
- 2023 National College Student Academic Science and Technology Competition, Third Prize
- 2019 National Mathematical Olympiad, Second Prize
- 2019 Merit Student Leader of the Year in Jiangsu Province

Additional Information

Computer: Proficient in R and Python, Familiar with C, C++, MATLAB and SPSS

Language: Mandarin (Native), English (Fluent)

Last Updated in July 2024