Ran Li

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Experience

Data Scientist — **Urban Health Collaborative** — **Feb 2023 - Present**

- Spearheaded the development of an integrated research infrastructure that streamlines data management, provenance tracking, and cross-core interoperability (administrative, research, training, and engagement)
- Leveraged interdisciplinary engineering expertise in web development to enhance visibility of complex data insights
- Developed R packages to strengthen research reproducibility and implemented modern data warehousing to optimize data pipeline efficiency

Analytics Engineer — **Urban Health Collaborative** — **Feb 2022 - Feb 2023**

- Designed and developed data warehousing systems and user interfaces for the SALURBAL and HCUP projects
- Served as direct supervisor for a web development team and led data/metadata standardization working groups
- Implemented scalable data infrastructure solutions for multi-core research operations

Data Analyst — **Urban Health Collaborative** — **Mar 2020 - Jan 2022**

- Developed data-driven web applications using R Shiny, React.js, and Next.js for COVID-19 data visualization
- Built ETL pipelines to process and transform large-scale health datasets
- Created interactive dashboards that enhanced data accessibility for research teams and stakeholders

Research Assistant — **Urban Health Collaborative** — **Nov 2018 - Mar 2020**

- Applied Mixed Models to analyze health outcome scaling across US Metropolitan Areas
- Conducted comprehensive data analysis, visualization, and manuscript preparation for peer-reviewed publications
- Collaborated with interdisciplinary research teams on urban health initiatives

Education

M.S. in Biostatistics — **Sep 2018 - Mar 2020**

Drexel University, Philadelphia, PA *Cumulative GPA: 4.0* *Thesis: Acknowledging Uncertainty in the Association Between PM2.5 and Life Expectancy*

B.S. in Biotechnology/Bioinformatics — **Sep 2013 - Dec 2015**

Rutgers University — New Brunswick, NJ — *Cumulative GPA: 3.4*

Skills

Programming Languages: R, Python, JavaScript / TypeScript, HTML / CSS
Data Science & Analytics: R Packages, Shiny, Quarto, DBT, DuckDB, Mixed Models, Statistical Analysis
Web Development: React.js, Next.js, Svelte.js, Node.js, Azure Functions
Tools and Platforms: Git, GitHub, Notion, Obsidian, Linux

Publications

P1 **findSVI: an R package to calculate the Social Vulnerability Index at multiple geographical levels**
Xu H, Ran Li, Bilal U
Journal of Open Source Software, 2024

P2 **Area-Level Social Vulnerability and Severe COVID-19: A Case-Control Study Using Electronic Health Records**
Mullachery PH, Bilal U, Ran Li, McClure L
Journal of Urban Health, 2024

P3 **Heterogeneity in Disparities in Life Expectancy Across US Metropolitan Areas**
Purtle J, Ran Li, Diez Roux A, Bilal U, Mullachery PH, Schnake-Mahl A
Epidemiology, 2022

P4 **Inequities in spatial accessibility to COVID-19 testing in 30 large US cities**
Mullachery PH, Ran Li, Melly S, Kolker J, Diez Roux A, Barber S, Bilal U
Social Science & Medicine, 2022

P5 **COVID-19 Outcomes Among the Hispanic Population of 27 Large US Cities, 2020–2021**
De Ramos IP, Lazo M, Schnake-Mahl A, Ran Li, Martinez-Donate A, Diez Roux A, Bilal U
American Journal of Public Health, 2022