Yutong Jin

319-855-3312
Seattle, WA
jinyutong0303@gmail.com

Profile
github.com/JinYuTong03
linkedin.com/in/yutong-jin-b3666a1b7/

Detail-oriented statistician with a strong mathematical foundation and expertise in R, Python, and SAS for healthcare data analysis and reporting. Skilled in supporting multidisciplinary teams, managing large datasets, and preparing detailed research documentation. Experienced in healthcare research and driven to contribute to advancing clinical outcomes and data-driven decision-making.

SKILLS

Software: R, R Markdown, SAS, SQL, Python, Microsoft Excel, Microsoft Word, Power BI, Google Analytics
Technical capabilities: Data analysis and reporting, Data visualization, Statistical modeling, Longitudinal data management, Survival analysis, Machine learning techniques, Protocol development
Language: Chinese (Native Speaker), English (Fluent Speaker)

PROFESSIONAL EXPERIENCE

Fred Hutch Cancer Center, Paul T. Edlefsen Group, Seattle, WA
Research Assistant, Multi-Omics Integration Analysis   Jan 2024 - Present

- Lead linear analyses of multi-transcriptomics datasets, applying Tilted Canonical Correlation Analysis (Tilted-CCA) to integrate Single-cell RNA sequencing in collaboration with a multidisciplinary team of five.

- Conduct data alignment and preprocessing, ensuring accurate integration of sample names and metadata across **multi-omics** datasets.

- Perform **exploratory data analysis (EDA)** and **cross-omics correlation analysis** to identify biologically significant patterns.

ACADEMIC RESEARCH PROJECTS

Kaiser Permanente Washington Health Research Institute, Yu-Ru Su's Group, Seattle, WA
Research Assistant, Evaluating Machine Learning Models for Selection Bias Adjustment in ACT Study   July 2024 - Present

- Design and implement three machine learning models (**Lasso Regression, Random Forest, XGBoost**) to predict participant selection for autopsy, evaluating model performance with metrics like calibration, AUC, and Brier score.

- Conduct simulation studies and apply **inverse probability weighting (IPW)** techniques to address selection bias in the association analysis between neuropathology measures and Dementia, Alzheimer's disease.

- Analyze the impact of model discrimination and calibration on estimating associations, providing insights into the effectiveness of bias adjustment methods.

Department of Biostatistics, University of Washington, Seattle, WA
Biostatistics Capstones Master Project, A Retrospective Cohort Study of Combined Pharmacist and Primary Care Interventions for Type 2 Diabetes Management   Sept 2024 - Mar 2025

- Collaborated with Valley View Health Center to evaluate the effectiveness of pharmacist- and physician-led interventions in the management of type 2 diabetes using a retrospective cohort study.

- Designed and implemented a **statistical analysis plan (SAP)** that incorporates **generalized estimation equations (GEE), linear regression models, and Cox proportional hazards** regression to assess longitudinal changes in A1C, blood pressure, and weight.

- Identified that pharmacist-led interventions were more effective for patients with baseline A1C $<8\%$, while primary care alone achieved faster A1C reduction in patients with baseline A1C $\geq 8\%$. Time-to-event analysis revealed slower A1C normalization in the pharmacist-led group compared to primary care alone.

- Developed **data visualizations**, including **spaghetti plots, Kaplan-Meier survival curves, regression model outputs, and summary tables**, to communicate key results effectively.

WiDS Datathon: ADHD Diagnosis Prediction   Jan 2025 – Present
Kaggle Competition Team Leader

- Developed ensemble model (XGBoost + Logistic Regression by Python) integrating fMRI connectome matrices with socio-demographic data, achieving **0.82 AUC** in cross-validation.

- Implemented **Inverse Probability Weighting (IPW) in Python** to address selection bias and class imbalance, improving model sensitivity by **15%** for female ADHD detection.

319-855-3312
Seattle, WA
jinyutong0303@gmail.com

Yutong Jin

Profile
github.com/JinYuTong03
linkedin.com/in/yutong-jin-b3666a1b7/

- Engineered **feature extraction pipeline using Python** for fMRI data with graph theory metrics (e.g., node degree, clustering coefficient), reducing dimensionality from **10k+ to 300 critical features**.

University of Washington, Seattle, WA

A Study of Integrated Primary Care in Assertive Community Treatment Services (ACT)   Mar 2024 - Jun 2024

- Authored **protocol** for a phase 3 multi-center randomized controlled trial (n=444) to evaluate integrated primary care impact on health outcomes for adults with serious mental illness (SMI).

- Developed comprehensive statistical analysis plans for randomized controlled trials, including **randomization strategies, sample size calculations, and primary outcome analyses** using the SF-36 health survey, ensuring methodological rigor and adherence to research standards.

EDUCATION

University of Washington, Seattle, WA
MS Biostatistics   Sept 2023 - Mar 2025
University of Iowa, Iowa City, IA
BA Mathematics, BS Statistics (Mathematical Statistics)   Jan 2020 - May 2023