WINNIE MEI

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EDUCATION

University of Washington Expected March 2024
Master of Science in Biostatistics, Data Science Pathway *Seattle, WA*

Boston University Sep 2018 - May 2022
Bachelor of Arts in Statistics, Minor in Computer Science and Visual Arts *Boston, MA*

SKILLS

Statistical Programming R, Python, SAS, SQL, Excel; Basic skills in MATLAB, STATA, Tableau
Other Programming Language Java, HTML, CSS; Basic skills in C, JavaScript

WORK EXPERIENCE

Biostatistics Intern Jun 2023 - Aug 2023
USC Keck School of Medicine Alzheimer's Therapeutic Research Institute *San Diego, CA*

- Developed interactive web report for summarizing and visualizing ADNI4 data (Alzheimer's Disease Neuroimaging Initiative 4) and IMPACT-AD data (a training program in ADRD) using R Flexdashboard, resulting in improved program/study management and oversight
- Implemented data standardization by constructing an R package capable of consolidating data from multiple sources, which enhanced efficiency in subsequent data analyses

Graduate Teaching Assistant Sep 2022 - Dec 2022
University of Washington *Seattle, WA*

- Graded homework assignments and exams, facilitated discussions, and held weekly office hours to support students with understanding class materials for undergraduate-level biostatistics course

Biostatistics Intern Jun 2022 - Sep 2022
Pfizer, Inc. *Cambridge, MA*

- Identified the potential factors affecting measurements of accelerometer endpoints, analyzed clinical trial data using visualization tools and inferential methods in R to improve the clinical trial design process of wearable devices for detecting early symptoms of Parkinson's disease
- Tested algorithms developed in-house and applied to the accelerometers using comparative statistical methods, including Bland Altman, hypothesis testing, and mixed-effect models for repeated measures

Research Assistant Oct 2021 - May 2022
Boston University School of Public Health *Boston, MA*
PI, Laura Forsberg White, Department of Biostatistics

- Investigated the impact of imperfect contact tracing in the SARS-CoV-2 outbreak on the reproductive number and overdispersion behavior of the secondary infection distribution
- Conducted statistical analyses, modeling, and simulation with R and Python to estimate the transmission dynamics and measure the incompleteness of real-life contact tracing scenarios

Clinical Research Intern - Biostatistics Jun 2021 - Aug 2021
CorEvitas, LLC. *Waltham, MA*

- Replicated the functionalities of STATA on adjusted prediction and marginal effect to enable marginal analysis using mixed-effect models in R by implementing codes for delta-method calculation in R
- Catalogued the marginal analysis capabilities of R and STATA in mini manuals for clients with no statistical background

PROJECT

Prediction of Cognitive Impairment in Outpatients Clinical Visits (MS Capstone Project) Sep 2023 - present
UW Institute for Medical Data Science *Seattle, WA*

- Implement a machine learning-based phenotype algorithm on Electronic Health Record (EHR) data to predict mild cognitive impairment before dementia diagnosis, aims to enhance patient outcomes by enabling early detection of dementia
- Generate synthetic data using Generative Adversarial Networks (GANs) to increase the diversity and quantity of the training data, which can be used by researchers to develop more accurate and generalized machine learning models