John Brown

Data professional with experience in statistical analysis using R and Python. Proficient in data manipulation using SQL, scientific presentations, data governance, and problem-solving.

EDUCATION

Master of Science in Analytics May 2024
Institute for Advanced Analytics, NC State University, Raleigh, NC

Bachelor of Science in Biology, Minor in Chemistry August 2020
University of North Carolina at Chapel Hill, Chapel Hill, NC

WORK EXPERIENCE

United States Department of Veterans Affairs Durham, NC
Statistician (medicine) October 2024—Present

Construct patient cohorts and provide statistical support for research projects using **R** and **SQL**. Manage **large healthcare datasets**, ensure **data integrity**, and develop **statistical analysis plans**. Provide technical guidance on database structure, project feasibility, and research protocols to VA researchers and physicians.

- Develop analysis plans with study teams for projects evaluating PTSD evidence-based psychotherapies, using **SQL** to build large-scale retrospective datasets of millions of Veterans.
- Collaborate with statisticians and study teams to set up clinical trials in **REDCap**, proactively preparing for recruitment of Veteran care-partner dyads.
- Support study startup activities by contributing to ethics review submissions and identifying key data sources for a national diabetes study.

University of North Carolina at Chapel Hill School of Medicine Chapel Hill, NC
Research Technician - Journey August 2020—January 2023

Designed and executed experiments and communicated results. Collaborated with lab members and UNC faculty members, kept meticulous documentation, stayed informed about relevant research, created presentations and posters, wrote manuscripts, and conducted statistical analyses.

- Designed bioinformatics experiments and processed **high-dimensional RNA-seq data** using UNC's **Linux-based computing cluster**.
- Performed statistical analysis using **generalized linear models** in **R**, on **800 million+ data points**.
- Authored 3 publications and delivered 5 scientific conference presentations.

Colorado State University Fort Collins, CO
Research Fellow June 2019—August 2019
National Science Foundation (NSF) sponsored research internship. Conducted research on the regulatory role of long noncoding RNAs in pluripotency (stem cells).

- Wrote a detailed research report and created a scientific poster to present at a CSU conference.
- Won the People's Choice award for the best poster.
- Employed cell culture, protein analysis, and molecular cloning to investigate research questions.
- Validated discoveries using two-sample t-tests.

MASTER'S PRACTICUM PROJECT

United States Department of Education Washington, D.C.
Technical Lead August 2023—May 2024

- Implemented **KNN** techniques to construct social networks based on FAFSA data
- Delivered well-documented **Python code**, used to create network data for 45 million+ students.
- Estimated the effect of one's social network on 5 long-term student outcomes using **logistic regression**, **extreme gradient boosting**, and **neural networks**.

PUBLICATIONS

- **John C. Brown**, Benjamin D. McMichael, Vasudha Vandadi, et al., *Lysine-36 of Drosophila histone H3.3 supports adult longevity*, G3 Genes|Genomes|Genetics, (2024).
- Harmony R. Salzler, Vasudha Vandadi, Benjamin D. McMichael, **John C. Brown**, et al., *Distinct roles for canonical and variant histone H3 lysine-36 in Polycomb silencing,* Science Advances, (2023).
- Casey A. Schmidt, Lucy Y. Min, Michelle H. McVay, Joseph D. Giusto, **John C. Brown**, Harmony R. Salzler, A. Gregory Matera. *Mutations in Drosophila tRNA processing factors cause phenotypes similar to Pontocerebellar Hypoplasia,* Biology Open (2022).