

Ben Brennan

benbrennan93@msn.com ❖ (505) 681-1471

WORK EXPERIENCE

Henry Ford Health

Apr 2024 – Present

Biostatistician II

Detroit, MI

- Applied dimensionality reduction and machine learning algorithms including PCA and Neural Networks, to develop predictive models for EQ5D scores in SKLearn, decreasing prediction loss by 7.2% and contributing to cost reduction strategies for the Michigan Spine Surgery Improvement Collaborative (MSSIC) network.
- Designed and published open-source R packages for data management, enhancing collaborative research and streamlining data analysis for cross-functional team members.
- Collaborated with physicians, residents, and external partners on multiple clinical studies, providing expertise in research design, data management, statistical analysis, and manuscript development

Illumina

May 2023 – Aug 2023

Biostatistics Intern

Remote

- Developed an R Shiny application for power calculations and sample size estimation, ensuring statistical rigor, communicability, and interpretability in multi-site device trials.
- Conducted reproducibility analysis across trial data and contributed to the preparation of protocols and statistical reports for FDA submissions.

University of Michigan

Sep. 2017 – Aug. 2023

Research Assistant

Ann Arbor, MI

- Leveraged advanced causal inference techniques - high-dimensional propensity score regression - to analyze terabytes of longitudinal health insurance data, uncovering insights and aiding clinical decision making on physician prescribing patterns for optic neuritis.
- Analyzed VCF files from 60,215 patients in the Michigan Genomics Initiative, applying recently published statistical methods for data integration and novel predictive methods for variant selection. Used a combination of Bash scripting and Julia to reduce runtime by ~200% compared to R scripting.

Statistics in the Community

Aug 2020 – May 2023

President

Ann Arbor, MI

- Collaborated with 20+ local community-based organizations and non-profits to design and implement data collection, analysis, and interpretation strategies, driving informed decision-making and program improvements.
- Led a team of 6 leaders and supported a broader membership of 50+ students, overseeing initiatives that aligned with organizational goals and fostered community engagement.

EDUCATION

University of Michigan – Ann Arbor

May 2020

M.S. Biostatistics

Ann Arbor, MI

- **GPA: 3.8/4.0**

College of Charleston

May 2016

B.S., Applied Mathematics & Economics

Charleston, SC

- **GPA: 3.9/4.0**

SKILLS & INTERESTS

- **Skills** Statistical Modeling, Big Data Analytics, Machine Learning, Predictive Modeling, Statistical Programming (R, Python, Julia), Data Integration & Interpretation, Cross-Team Communication & Coordination, Scientific Writing
- **Interests:** Soccer; Snowboarding; Scuba Diving; Traveling

