

Nathen Byford | Resume

Statistical Consultant

Status: Statistical Consultant for Statistical Consulting Center, Baylor University
Field: Data Science, Statistical Analysis
Techs: R, bash, Python, Regression, Machine Learning

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Summary

Ph.D. student at Baylor University working on projects in spatial statistics, anomaly detection, bayesian modeling, and computational statistics. In addition to working on research I also work for the statistical consulting center helping clients from a wide range of fields from social work to geosciences. Experienced in data manipulation, visualization, and multiple modeling techniques.

Experience

Statistical Consultant - Statistical Consulting Center, Baylor University Sep. 2023 - Present

- * Perform statistical analysis for diverse range of clients and projects
- * Analyses of large scale and unstructured data sets with R and Bash
- * Present results in clear and elementary manner for clients

Graduate Teaching Assistant - Baylor University Aug. 2022 - Aug. 2024

- * Teach supplemental instruction sessions for introduction to statistics
- * Hold office hours for introductory statistics and statistical methods
- * Grade homework, quizzes, and exams

Undergraduate Researcher - Oregon State University June 2021 - Aug. 2021

- * Developing new methods to test for Benford's law
- * Implementing methods in R
- * Compared tests for greatest power and error rate
- * Also looked into Benford's law in english words

Data Science Fellow - Baylor University June 2020 - Aug. 2020

- * Worked directly with stakeholders at Denver Water to analyze effectiveness and efficiency of water filtration
- * Produce statistical analysis and interpret results

Education

Ph.D. in Statistical Science - Waco, Texas Aug. 2022 - Aug. 2026
(Present)

- * Project: Correcting under-reporting in over-dispersed spatial count data
- * Developing and implementing Bayesian method to model under-reported and over-dispersed spatial counts

Master of Science in Statistical Science - Waco, Texas Aug. 2022 - Dec. 2023

- * Project: Anomaly Detection in Time Series Data
- * Focus on Statistical Methods, Mathematical Statistics, and Computational Statistics.

Projects

Spatial Under-Reporting of COVID-19 - Spatial Statistics final project

May 2024

- * Project: Correcting under-reporting in over-dispersed spatial count data
- * Developing and implementing Bayesian method to model under-reported and over-dispersed spatial counts

Anomaly Detection in Time Series Data - Baylor University

Dec. 2023

- * Anomaly detection using data driven methods
- * Methods include; regression leverage points, STL, neural network, and isolation forest

Capstone project (Planarian Growth) - Baylor University

May 2022

- * Worked with freshmen in BIO 1406 as statistical consultant
- * Analyzed the growth of planarian based on light exposure
- * Guided students from experimental design through to presentation of results

Football Analytics Blitz - Syracuse University

Feb. 2022

- * Competed with a team of Baylor sports analytics club members
- * Presented a defensive scheme against the 2021 Kansas City Chiefs offense to panel of experts
- * Utilized statistical analysis to build defensive plan