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

Waco, Texas

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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 restults in clear and elementary manner for clients

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

* Teach suplimental instruction sessions for introduction to statistics
* Hold office hours for introcutory 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 Benfor's law in english words

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

* Worked directly with stakeholders at Denver Water to analyze effectivnes 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 class 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