Tyler Pollard
Statistician

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PROFESSIONAL SUMMARY

Statistician with 6+ years of experience in predictive modeling, advanced statistical analysis, and delivering actionable insights. Passionate about sports analytics, with personal projects modeling NFL data to predict scores, spreads, and outcomes using R and Stan. Skilled in developing dynamic R Shiny applications and scalable workflows, combining technical excellence with a commitment to innovation and data-driven decision-making.

SKILLS

Programming & Tools

R · R Shiny · ggplot2 · plotly · Stan · JAGS · SQL · JMP · SAS · GitHub · GitLab · Tableau

Statistical Expertise

Predictive Modeling

Regression Modeling

Bayesian Statistics

Multilevel Modeling

Multivariate Modeling

Time Series Analysis

Machine Learning

Design of Experiments (DOE)

Data Visualization

Security Clearance

Active Top Secret / Sensitive Compartmented Information

WORK EXPERIENCE

Operations Research Analyst   Apr 2024 - Current
U.S. Special Operations Command | Tampa, FL

- Developed Bayesian multilevel ordinal regression models to analyze Likert survey data, enabling iterative updates to improve model accuracy. Delivered actionable insights that informed strategic decision-making and enhanced the evaluation of behavior change.
- Designed and implemented a stance detection framework combining large language models with Bayesian hierarchical modeling. Scaled analysis from 43 text items to tens of thousands, achieving a 32% improvement in prediction accuracy while quantifying uncertainty for more informed decision-making.
- Conducted survival analysis on social media time-to-event data using semi-parametric joint models with time-varying predictors. Identified critical time thresholds that shaped strategic adjustments in planning and execution.
- Programmed and deployed R Shiny applications on the Posit Connect cloud platform, enabling over 50 assessment team members to perform standardized statistical analyses. Improved workflows for data visualization and reporting.
- Promoted to lead a 6-person assessments team, overseeing the development of standardized evaluation frameworks and innovative solutions to assess Military Information Support Operations across 11 combatant commands.

Mathematical Statistician   Sep 2018 - Apr 2024
U.S. Army Evaluation Center | Aberdeen Proving Ground, MD

- Collaborated with 24 multi-disciplinary teams to develop statistical models, applying DOE, simulations, and advanced techniques. Delivered test designs that addressed critical evaluation metrics and reduced resource requirements by up to 67%.
- Designed and automated modular workflows for analyzing multilevel probability response variables. Used R and JMP scripts to integrate Monte Carlo simulations, Beta-Binomial regression, and kernel density estimation, enabling scalable and iterative analyses.
- Performed extensive analyses on continuous, discrete, and survey datasets using regression, mixed models, and Bayesian methods. Delivered actionable reports and visualizations that supported data-driven decision-making by senior leadership.
- Applied advanced statistical techniques to ensure the success of a top-priority operational test and transform test infrastructure, earning the "Department of the Army Civilian Service Commendation Medal."
- Enhanced probabilistic modeling tools, improving the accuracy and efficiency of test design processes. Recognized as the "AEC Employee of the Quarter" for these contributions.

EDUCATION

Master of Statistics   Jul 2024
North Carolina State University | Raleigh, NC   *GPA: 4.00*
B.S. in Mechanical Engineering   May 2018
Clemson University | Clemson, SC   *GPA: 3.53*