Tyler Pollard

Statistician

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PROFESSIONAL SUMMARY

Experienced and self-motivated Mathematical Statistician with over five years of experience applying statistical methods reinforced by robust mathematical reasoning to effectively scope tests and analyze test data across various U.S. Army warfighting commodities while consistently exceeding established job performance metrics. I have demonstrated success collaborating with several agencies simultaneously to identify test constraints, develop action plans, and support data fluency through both oral and written communication.

SKILLS

Software

R | R Shiny | JMP | SAS | GitHub / GitLab | Stan | JAGS | SQL | Tableau

Technical

- Regression Modeling
- Bayesian Statistics
- Multilevel Modeling
- Multivariate Modeling
- Predictive Modeling
- Data Visualization
- Design of Experiments (DOE)
- Time Series Analysis

Security Clearance - *Active*
Top Secret / Sensitive Compartmented Information

WORK EXPERIENCE

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

- Promoted to lead of the assessments team to develop best practices and innovative solutions that ensure standardization of Military Information Support Operations assessments across the 11 combatant commands at a joint enterprise
- Apply Bayesian multilevel ordinal regression models for likert response survey data which quantify behavior change in target audiences over time to provide evidence for the effectiveness of influential campaigns
- Program and publish R Shiny apps on the Posit Connect cloud environment that enable data exploration, analysis, and reporting through newly standardized statistical methods and data visualizations to inform a Behavior Change Model
- Scoped and scaled multi-stage process that invovled prompt engineering a large language model (LLM) to output stance ratings for complex text content, validating the LLM output using human ratings and inter-rater reliablility methods, and fitting a hierarchical model using Markov Chain Monte Carlo simulations to predict a target audiences' attitude while quanitfying sources of uncertainty

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

- Awarded "Department of the Army Civilian Service Commendation Medal" for outstanding statistical analysis and insight in timely support of a top-priority system-of-systems operational test which ensured the success of the demonstration over a distributed test network while simultaneously transforming the Command's test infrastructure
- Selected as "AEC Employee of the Quarter, First Quarter, Fiscal Year 2024" for leading a working group to gain efficiencies and improve accuracies in the test design and analysis of a probabilistic modeling and simulation tool
- Served as lead statistician on 24 diverse, multi-disciplinary teams to scope test events through design of experiments, simulation, and other innovative statistical techniques, resulting in robust designs that successfully addressed critical evaluation metrics and reduced test resources by up to 67%
- Analyzed continuous, discrete, and survey test data using regression, mixed models, and other complex statistical methods to generate data visualizations that effectively communicated findings in results briefs and written reports which allowed evaluators and senior leaders to efficiently interpret data and reach important decisions
- Developed all steps of a modular evaluation workflow for all programs with multilevel probability response variables that outlined test design through Monte Carlo simulation, data cleaning processes, and data analysis using Beta-Binomial regression, kernel density estimation, and random effects models using automated R and JMP scripts

EDUCATION

Master of Statistics Jul 2024
North Carolina State University • Raleigh, NC GPA: 4.00/4.00

Bachelor of Science in Mechanical Engineering May 2018
Clemson University • Clemson, SC GPA: 3.53/4.00