Jack H. Roberts

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EDUCATION

Furman University - *Greenville, SC* **Aug. 2021 – May 2025**
Bachelor of Science in Computer Science *(Minor in Data Analytics)* 3.6/4.0 GPA
Bachelor of Science in Applied Mathematics
Bachelor of Arts in Business Administration
Bachelor of Science in Information Technology
Winner of DataFest (Apr. 2025), Winner of Data Mania (Nov. 2024), Finalist in DataFest (Apr. 2024)
3x Furman Engaged Presenter, 3x Dean's List

EXPERIENCE

Shoals Technologies Group (Portland, TN) | *Financial Planning and Analysis Intern* **Apr. 2024 – Aug. 2025**

- Consolidated and cleaned 5 internal and 2 external datasets with SQL and Python (Pandas) to analyze market share and forecast revenue through 2027 using pipeline project data
- Built Tableau dashboards and visualized the consolidated data with Matplotlib for use in the Q3 earnings report, Investor Day, and an individual presentation to the executive team
- Discovered an additional 30% in addressable markets by comparing quoted projects to a national database, equating to potential revenues of $100M per year
- Developed SQL-integrated Excel tools to more accurately assign labor costs for made-to-order products, improving pricing competitiveness and project quoting

BMW Group (Plant Spartanburg, SC) | *Data Quality and Assembly Line Researcher* **Aug. 2024 – May 2025**

- Uncovered discrepancies between 2 internal defect reporting datasets using statistical tests, revealing potential reporting gaps and quality differences in assembly line sections for stakeholder review
- Launched a Flask-based website featuring an algorithm for forecasting assembly line bottlenecks in real-time, assisting managers in reallocating resources to minimize downtime during line disruptions

The Walt Disney Company (Orlando, FL) | *Attraction Efficiency Researcher* **May 2024**

- Collected 1100 data points on party sizes and seat utilization of Hollywood Studios' Tower of Terror to model and evaluate 7 seating strategies aimed at minimizing unfilled seats and line wait time
- Presented a human-implementable strategy to Disney cast members that reduced unfilled seats and wait time by 5%, translating to 480 additional riders per day, or $20.8M per year in ticket sales

PROJECTS

Chess Match Analysis (Remote) | *Independent Study* **Sept. 2024**

- Engineered 40 features from 3500 games of personal match history sourced via the Chess.com API to predict outcomes (win/loss/draw) using XGBoost with leave-one-out cross-validation in Python
- Identified and adjusted for loss-prone patterns (e.g., consecutive defeats, late-night play), achieving a 15% increase in win percentage and month-over-month increases in Elo, the chess ranking system

Maternal Health Risk Prediction (Furman University) | *Statistics in R Final Project* **Oct. 2023 – Dec. 2023**

- Conducted an exploratory data analysis on a Kaggle dataset of 1200 pregnant women with R's Tidyverse by standardizing variables and verifying statistical assumptions for 8 regression models, including Ridge and LASSO, to predict patients' systolic blood pressure, an indicator of cardiovascular health
- Co-authored a 40-page LaTeX report (R Sweave, GGPlot2, xTable), delivered a 30-minute presentation, and wrote 800+ lines of R code, presenting findings to technical and non-technical audiences

SKILLS

Languages: Python, Java, R, SQL, Bash, JavaScript, HTML, CSS, LaTeX
Software: Tableau, Excel, Github, VS Code, R Studio
Libraries: TensorFlow, Scikit-Learn, SciPy, Pandas, Matplotlib, Flask, XGBoost, Tidyverse, GGPlot2
Experience with: REST APIs, exploratory analysis, data pipelining, feature selection, model selection and evaluation, statistical tests, model deployment, data visualization, multi-threading, web development