NICKOLAS BARTLE

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DATA ANALYST

EDUCATION

Wake Forest University School of Business, Winston-Salem, NC — Master of Science in Business Analytics, *May 2026*
Honors & Activities: Wake Forest Baseball Team Graduate Analyst and Statistician, Management Consulting Club, Program Ambassador

University of Alabama, Tuscaloosa, AL — Bachelor of Science in Management Information Systems, *December 2024*
Honors & Activities: Alabama Information Management Society (AIMS), UA Data Analytics Club, Phi Sigma Kappa

AREAS OF EXPERTISE

Quantitative Analytics | Data Science | Predictive Modeling | Data Analysis | Statistical Analysis | Data Extraction | Software Development | Programming
Data Visualization | Automation | Data Modeling | Process Optimization | Leadership | Mathematic Analysis | Database Management | AI/ML Design
Data Pipelines | Systems Engineering | Database Architecture | Supervised/Unsupervised Learning | Model Deployment | Algorithms | Regularization

TECHNICAL SKILLS

Programming Languages: Python, SQL, R, C#, HTML, JavaScript, CSS, Dax, Node.js, .Net
Technical Tools: Power BI, Tableau, Plotly, Matlib, Ggplot2, Seaborn, Streamlit, Excel
Machine Learning: XGBoost, Bayesian, Random Forests, Ensembling, GAMs, Lasso-Ridge, Stacking, Time Series, Neural Networks, Monte Carlo, MCMC
Operating Environments: R Studio, VS Code, Jupyter, MySQL, SQLite, DBeaver, GitHub, Microsoft Office (All Apps)

PROFESSIONAL EXPERIENCE

GRADUATE CONSULTANT PRACTICUM TEAM LEAD, **PetSafe Brands** — *Sep 2025 – Present*
- Served as a team lead for client meetings, and helped lead efforts in project development
- Applied machine learning model techniques to identify optimal discount product depths for client market research
- Conducted market research for feature engineering, competitor strategies, and price volatility factors

GRADUATE BASEBALL DATA ANALYST / STATISTICIAN, **Wake Forest University Baseball** — *Jun 2025 – Present*
- Developed 3 comprehensive predictive machine learning pipelines from 195,000+ total fastball pitch event observations; whiff outcomes, groundball tendencies, and BABIP models using gradient boosting and created a pitcher stuff+ model for fastball data using gradient boosting and stacking
- Generated actionable insights through pitcher performance leaderboards, delta analysis identifying over/under-performers, and comprehensive visualization analysis including correlation matrices, histograms, scatterplots, and feature importance plots
- Built a Shiny App for each predictive model to allow real-time interactive metric calculators for pitchers on their raw ball flight characteristics

DATA ANALYST / INFORMATION SYSTEMS ENGINEER CO-OP, **Mercedes-Benz US** — *Aug 2023 – Sep 2024*
- Collaborated with manufacturing leadership, implementing data-driven optimization strategies and Python code that increased cart space efficiency by 15% which also reduced operating material costs, demonstrating commercial awareness
- Managed complex deployment of predictive scheduling optimization solutions coordinating cross-functional teams, while developing client-facing Power BI dashboards for operational decision-making and cost optimization using full SDLC

BASEBALL DATA ANALYST / STATISTICIAN, **University of Alabama Baseball Team** — *Sep 2022 – Apr 2023*
- Designed a Python codebase with Plotly and Matplot libraries to manipulate large amounts of data and visualize effectively
- Used shiny apps to construct detailed advanced scouting reports on for SEC play and other leagues when needed
- Reviewed SQL databases for data processing at conclusion of games ensuring proper storage and organization

ANALYTICAL PROJECT EXPERIENCE

Deacon Financial Services Fraud Detection Project:
- Performed data preparation and cleaning on a dataset of 900,000 observations through Python to prepare for modeling and learning phase
- Constructed multiple machine learning classification models (linear regression, logistic regression, weighted logistic, random forests, XGBoost) achieving 88% fraud detection rate and identifying key risk predictors through proper visualization and undersampling techniques
- Implemented a 3-tier system for dealing with fraud applications based on optimized threshold levels; high, medium, and low

Bayesian Pitcher Aging & Decline Detection Personal Project Model: *(In-Development)*
- Architecting hierarchical Bayesian framework using R to model individual pitcher aging trajectories for velocity, movement, and command metrics, processing 10+ years of Statcast data to establish decline patterns and individual risk assessments
- Implemented changepoint detection algorithms with real-time posterior updating to identify precise decline onset timing with uncertainty quantification, continuously refining probability estimates to distinguish natural aging from mechanical/injury-related degradation
- Creating an interactive dashboard visualization using Shiny Apps to translate complex Bayesian posterior distributions into actionable insights

Future On-Base Percentage Performance Prediction Project:
- Developed sophisticated ensemble machine learning model combining Ridge Regression, Gradient Boosting, and Random Forests to predict 2021 OBP's for 550+ MLB players using 5 years of historical performance data
- Created advanced features including weighted historical OBP with recency bias, age-based performance curves, and mean regression methodology, implementing uncertainty quantification with confidence intervals accounting for player experience levels to provide actionable risk assessments
- Delivered comprehensive documentation with feature importance rankings, model validation visualizations, and player-specific insights identifying high-confidence predictions versus regression candidates for roster construction applications

Senior Database Capstone Project:
- Leveraged full-stack development to update client's front-end functionality with new features including class registration forms, attendance records, and admin/student login systems, managing the entire deployment lifecycle while considering engineering process standards and optimized client systems and SQL databases service records

LEADERSHIP EXPERIENCE

Eagle Scout: Led a cross-functional team of 30 volunteers as a project manager, designing and building the local K9 agility course reconstruction that improved police department training efficiency and demonstrated ambition for community service excellence
Apex Outreach Service Project: Volunteering for the local church to help rebuild homes in surrounding communities annually