Bryce E. Bowles

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Sample Work
bryce-bowles.github.io

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Summary

Data Scientist with a proven track record of developing predictive models using Machine Learning (ML) techniques in R. Experienced in enhancing precision and accuracy in product formulation through ML and statistical methods.

Education

Masters of Decision Analytics (M.D.A.), GPA: 4.0   *December 2021*
Virginia Commonwealth University, Richmond, VA
- Machine Learning, Statistical Analysis, Optimization, Decision and Risk Analytics
- Phi Kappa Phi Honor Society (ΦΚΦ) member

B.S. in Business Administration (B.S.B.A), Management   *May 2017*
East Carolina University, Greenville, NC

Skills

		Tools
• Machine Learning Concepts	• Data Preprocessing	• R (caret, dplyr, ggplot2, etc.)
• Statistical Analysis & Modeling	• Model Validation	• Python (Pandas, Scikit Learn etc.)
• Exploratory Data Analysis	• Decision and Risk Analysis	• SQL, SAP Crystal, KNIME
• Predictive & Optimization Modeling	• Data Visualization	• MS Power BI, Tableau

Work Experience

Data Science Specialist   *July 2022 - Present*
NewMarket Corporation   Richmond, VA
- Develop predictive modeling solutions using ML and statistical methods, enhancing precision and fluid formulation accuracy, resulting in significant cost savings and resource optimization.
- Innovate key inference techniques and modeling processes, driving discoveries and advancements for predictive modeling.
- Assume leadership while in the absence of management, guiding team members across multiple projects through training and mentorship, ensuring project excellence, and encouraging professional growth.
- Manage full project scope from data collection to model deployment. Collaborate with cross-functional teams to understand business requirements, gather and preprocess data, select appropriate machine learning algorithms and interpret insights for the business.

Virginia State Corporation Commission (SCC)   Richmond, VA
Senior Automated Systems Analyst (SCC)   *February 2022 – July 2022*
- Managed and directed multiple projects involving information systems and analytical tasks.
- Conduct descriptive, statistical and business intelligence analyses to solve business problems.
- Reduced cost and hundreds of work hours per year by implementing emailing API system.

Automated Systems Analyst (SCC)   *June 2018 - February 2022*
- Administer new system implementation and lead critical projects.
- Improved the security of over 360K insurance agents' exam and fingerprint process by delivering BI dashboard analysis for key projects, resulting in increased protection for the consumer across the insurance industry.

Associate Automated Systems Analyst (SCC)   *June 2017 - June 2018*
- Supported computer-based systems and system-related projects within the Bureau of Insurance.

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Professional Experience (Sample Work - bryce-bowles.github.io)

NewMarket Corporation Data Science Mentor   *May – August 2023*
- Mentored and developed Data Operations' inaugural intern, enhancing their skills, while bolstering the company's reputation for nurturing talent and fostering growth
- Successfully integrated the intern's contributions into a larger project where they delivered and presented a model, expressing its potential impact on company operations.

Project Name: Oxidation Characteristics of Inhibited Mineral Oils   *April 2023*
- Developed a quantile regression forest predictive model, including 80% prediction intervals, for Afton's R&D CTS section. Trained and deployed a final model into a robust production RShiny application, enabling end users/formulators to predict outcomes and assess formula accuracy and precision. Validated the (ASTM D943) model under multiple scenarios, comparing with GLM, Gaussian Process models, Principal Component regression, and Lasso regression.

Project Name: FZG A10/16.6R/90 Scuffing Failure Load Stage Model   *November 2022*
- Developed a precise and accurate Random Forest predictive model to predict a driveline test (FZG Scuffing Failure Load Stage). Achieved a 26.22% increase in prediction accuracy above the No Information Rate (NIR) and improved precision (RMSE). Deployed the model to Afton's Formulator Tool Kit, enhancing product development for the "Driveline" business unit.

Awards, Certifications and Extracurricular Activities

Volunteer: NewMarket United Way Committee   *May 2023-Present*
- Collaboratively assisted in the planning and execution of NewMarket's United Way day, contributing to the organization's philanthropic efforts, leveraging skills in advertising, event decoration, and strategic coordination. Actively participated in committee meetings, demonstrating commitment to promoting donations and fostering community support for the United Way organization.

SCC Information Technology Committee Working Groups, Elected member of   *May 2019-Present*
- Data Analytics – Work as a team to improve analytics systems within the BOI
- Communication – Assist, produce and write articles for the technology newsletters

Data Camp Certifications
- Data Scientist Professional Certification   *December 2021-Present*

The Honor Society of Phi Kappa Phi (ΦΚΦ)   VCU - Richmond, VA
Member   *November 2021-Present*
- Elected to be a member of the nation's oldest, most selective, and most prestigious all-discipline honor society. The extremely high election standards consist of class standing, GPA and good character. Membership is by invitation only to VCU's top 10 percent of graduate students.