Bryce Bowles

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Summary

Data Scientist delivering multi-million-dollar impact through enterprise predictive modeling and applied machine learning. Specializes in building and maintaining scalable analytics solutions that reduce development cycles, improve decision accuracy, and translate complex data into strategic business outcomes.

Professional Experience

Data Science Specialist

NewMarket Corporation - Richmond, VA | *July 2022 - Present*

- Built, scaled, and maintained a portfolio of enterprise machine learning models informing formulation and R&D decisions, emphasizing accuracy, precision and statistical validity while reducing physical testing and delivering multi-million-dollar cost savings.
- Led end-to-end analytics initiatives from data collection to deployment and interpretation across R&D, engineering, manufacturing, commercial teams.
- Modernized modeling pipelines and validation workflows, reducing model testing time by ~90%.
- Led and mentored a small team of data scientists in developing and deploying multiple production models, improving accuracy by ~12% and strengthening data-driven R&D decision-making.

Senior Automated Systems Analyst

Virginia State Corporation Commission (SCC) - Richmond, VA | *June 2017 – July 2022*

- Managed multiple analytical and information systems projects, conducting statistical analysis and business intelligence to address complex business challenges.
- Implemented an automated email mailing system, reducing operational costs and saving hundreds of work hours annually.
- Recognized for exceptional performance in business intelligence and data analytics, progressing from Associate to Senior

Select Projects

Formulator Tool Kit Models | *NewMarket Corporation* | *2023-Present*

- Rebuilt and validated multiple predictive models, improving accuracy, repeatability, and reliability for engine oil, driveline, industrial and fuel formulations.
- Identified key operational drivers influencing test variability, enabling R&D teams to make more informed formulation decisions
- Mentored colleagues and interns on feature engineering, statistical analysis, and model validation, supporting adoption of predictive modeling tools.

Deep Learning for Batch Yield Prediction | *NewMarket Corporation* | *2025*

- Developed LSTM-based sequential models for step-level batch data, enabling predictive insights for near-real-time yield production and waste reduction.

Fuel Consumption Performance | *NewMarket Corporation* | *September 2024*

- Led statistical analysis (PCA, regression, least squares means), contributing to a 3% fuel efficiency improvement and supporting product launch decisions

Education

Master of Decision Analytics (M.D.A.), Virginia Commonwealth University – Richmond, VA
GPA: 4.0 | Phi Kappa Phi Honor Society
Graduated: December 2021

- Relevant coursework: ML, Statistical Modeling, Data Engineering, Decision & Risk Analytics

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

Technical Skills

- Machine Learning & Statistics: Regression, classification, clustering, feature engineering, PCA, survival analysis, time-series modeling
- Programming & Analytics: R, Python, SQL, JMP, Power BI, Tableau, R Shiny
- Data Engineering & Modeling Context: High-dimensional, low-sample experimental data (small-n, wide-p) with demonstrated experience with medium-scale 20M+ row operational field trial datasets when required.

Awards & Extracurricular Activities

Volunteer - *NewMarket United Way Committee | 2023*
- Assisted in the planning and execution of NewMarket's United Way day, supporting philanthropic efforts.

Elected Member - *SCC IT Committee Working Groups | May 2019- July 2022*
- Contributed to Data Analytics and Communication working groups, improving internal analytics systems and communications.

Phi Kappa Phi (ΦΚΦ) Honor Society – VCU | Inducted November 2021