

Thomas M. Burrell III (Trey)

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Active Secret Security Clearance

Portfolio: thomas-burrell.github.io | **GitHub:** github.com/Thomas-Burrell/Data_Projects

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Professional Summary

Data Scientist with a Master's in Data Science from the University of Virginia, specializing in machine learning, statistical modeling, and dashboard development. Proven ability to deliver actionable insights through technical innovation in fast-paced, collaborative environments. **Holds an Active Secret Security Clearance.**

Professional Experience

Project Pioneer | Dahlgren Naval Base, Dahlgren, VA

Data Scientist (Secret Clearance) | June 2024 - Present

- Designed and implemented interactive visualizations to enhance analysis of complex ML data, **increasing analysis speed by 4x** and reducing manual data processing.
- Conducted AI/ML configuration comparisons, producing **dynamic plots that enabled side-by-side evaluation of 2–6 models**, improving decision-making efficiency.
- Developed a user-friendly web interface for test harnesses, allowing users to **spend 50% less time on the command line** and focus more on visual data interpretation.
- Integrated 3D modeling to visualize live data, enabling **real-time plotting of hundreds of data points**, significantly enhancing monitoring capabilities.
- Implemented a scalable UX/UI framework for advanced metric visualization and data analysis, **supporting input of unlimited models** while optimizing runtime and computational load.
- Collaborated with AI consulting services to integrate responsible AI tools, **cutting validation time by 30%** and improving data governance workflows.
- Presented work to leadership and engaged with stakeholders for continuous feedback, ensuring **alignment with mission objectives and usability needs**.

PLAN-EO Capstone Initiative | University of Virginia, Charlottesville, VA

Data Scientist | Dec 2023 – May 2024

- Analyzed large-scale healthcare datasets using SQL, R, and Python to monitor pathogen prevalence across **20+ low-income countries**, improving epidemiological awareness.
- Engineered predictive models (GAMs, GLMs) to forecast pathogen spread using diverse datasets, supporting early intervention planning and resource allocation.

- Designed and maintained real-time dashboards using R Shiny, enabling **hundreds of concurrent healthcare professionals** to access and explore disease data, significantly increasing accessibility and transparency.
- Integrated a geographical visualization layer that **reduced data lookup time by over 50%** compared to traditional tabular methods, accelerating insights for field workers and analysts.
- Collaborated with interdisciplinary teams of data scientists, healthcare researchers, and developers to ensure model scalability and long-term system sustainability.

USS SECURE | Dahlgren Naval Base, Dahlgren, VA

Data Engineer Intern (Secret Clearance) | May 2021 - Aug 2021, June 2022 - Aug 2022

- Built and managed a database for real-time network configuration monitoring, enabling a team of **15+ engineers** to continuously access and track live network status, improving response times.
- Developed a Python-based file scraper to automate structured data extraction from logs and reports, **increasing data retrieval speed by 10x** and reducing manual workload.
- Conducted comprehensive cyber risk assessments and performed vulnerability testing across multiple naval systems, directly contributing to improved system hardening and overall cybersecurity posture.
- Modernized legacy websites using web development tools, resulting in **a more intuitive interface and faster load times**, which enhanced usability for technical and non-technical users.

Education

University of Virginia — Charlottesville, VA

Master of Science in Data Science

May 2024 | GPA: 3.9

Bachelor of Arts in Applied Statistics, Econometrics Concentration

May 2023 | GPA: 3.8

Minor: Data Science

Technical Skills

- Languages: Python, R, SQL, NoSQL, Databricks, AWS
- Tools: R Shiny, Power BI, Tableau, Git, Docker
- Methods: Dashboard Development, Machine Learning, Computer Vision, Statistical Modeling, Data Visualization, Agile Development

Certifications & Achievements

- Active Secret Security Clearance
- Science, Mathematics, and Research for Transformation (SMART) Scholarship Recipient
- UVA University Achievement Award (UAA)
- Proficient in Spanish