Terrance Luangrath

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Summary

Data analyst with 1+ year of experience processing 1TB+ of sensitive data daily with 99%+ accuracy. Proficient in Python, SQL, and R with expertise in data quality validation, ETL processes, and translating business needs into technical solutions.

Education

University of Virginia — Charlottesville, VA
Master of Science in Data Science; GPA: 4.0 — *Expected Aug. 2026*

James Madison University — Harrisonburg, VA
Bachelor of Science in Applied Mathematics, Minor in Data Analytics — *May 2024*

Experience

Graduate Student Researcher — Mar. 2025 – Present
University of Virginia DART Lab — *Charlottesville, VA*

- Conduct research applying large language models to Security Operations Center workflows, performing qualitative and quantitative analysis of security alert data to extract patterns and identify workflow inefficiencies
- Collaborate with external research teams to gather requirements and refine research methodologies, enhancing the consistency and reliability of each study

Junior Data Analyst — Jun. 2024 – May 2025
ACTFORE — *Reston, VA*

- Analyzed and processed sensitive data, ensuring compliance with privacy regulations (PII, PHI, FERPA, GDPR) while maintaining data accuracy and confidentiality
- Collaborated with cross-functional teams to ensure consistent and accurate record-keeping of sensitive data, while optimizing incident response strategies through advanced data analytics
- Utilized Excel for data analysis, data entry, and reporting, ensuring consistent and accurate records for large datasets (over 1TB of data processed daily)

Projects

Pandas vs Polars Performance Benchmark | *Python, Pandas, Polars* — Nov. 2025 – Dec. 2025

- Conducted comprehensive performance analysis comparing Pandas and Polars using 50K NYC taxi records, benchmarking CSV loading, data cleaning, and feature engineering over 100 runs per operation
- Identified Polars' 15× speedup in I/O operations and 10% memory efficiency improvement, providing evidence-based guidance for library selection in data science projects

Fraud Detection Analytics Pipeline | *Python, scikit-learn, Pandas* — Aug. 2025 – Sept. 2025

- Engineered production-ready data pipeline to process 6.3M+ financial transaction records, performing comprehensive data profiling and quality validation to identify data imbalances and anomalies
- Implemented data validation checks and quality assurance processes throughout the ETL workflow, achieving 95% recall on fraud detection while maintaining 95% overall accuracy

Technical Skills

Programming Languages: Python (Pandas, NumPy, scikit-learn, Matplotlib), R (tidyverse, ggplot2), SQL (joins, aggregations, subqueries, window functions), SAS
Machine Learning & AI: Supervised Learning (Logistic Regression, Random Forests, SVM, KNN), Deep Learning, Bayesian Machine Learning, Feature Engineering, Model Evaluation
Data Science Techniques: Big Data Analysis, Data Wrangling, Statistical Analysis, EDA, Data Visualization, Hypothesis Testing, Time Series Analysis
Tools & Platforms: Excel (Advanced), Git, Jupyter Notebooks, IBM SPSS, Azure (Certified 2022)