

Tristan Murray

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EDUCATION

University of Massachusetts Amherst

Amherst, MA

Isenberg School of Management

Master of Science in Business Analytics

Expected Graduation Date: May 2026

- *Relevant coursework:* AI Applications for Business, Data Science for Business, Machine Learning for Analytics, Database Management/Analytics, Data Management using Spreadsheets, Statistics for Business

Manning College of Information & Computer Science

Bachelor of Science in Informatics with Data Science Concentration

Graduation Date: May 2025

- *Relevant coursework:* Data Analysis with Python, Practice and Applications of Data Management, Data Structures and Algorithms, Methods of Applied Statistics

WORK EXPERIENCE

Uthereal.AI

Zurich, CH (Remote)

AI Analytics Developer

May 2025 - Present

- Build and maintain a 27-endpoint analytics API and tuned MongoDB/Redis for 15x throughput
- Operate a real-time ML dashboard (WebSockets) delivering 95% forecast accuracy for enterprise users
- Optimize a 5-GB/day pipeline, cutting latency 90% to date and resulting in enhanced analysis of 500k+ chats to guide decisions
- Ship and iterate on Python BI dashboards (scikit-learn, MongoDB, and Tableau) streaming KPIs regarding 50+ org units

Aspen Power

New York, NY

Solar Energy Analytics & Asset Management Intern

June - August 2025

- Translated complex data into clear dashboards and insights, guiding daily decisions for operations, finance, and leadership
- Monitored performance metrics for 25-megawatt distributed energy portfolio and issued work orders, reducing downtime
- Matched satellite sunlight estimates to ground sensors, boosting data accuracy to 98% and shaping investment choices
- Automated invoice inbox with a Python classifier and Power BI, saving ~15 hrs/week and boosting performance 5% YoY

University of Massachusetts Amherst Information Technology

Amherst, MA

IT Student Ambassador

January - May 2025

- Evaluated core IT services, such as SPIRE, and converted student feedback into actionable improvements
- Liaised between students and IT to surface issues, document fixes, and streamlined the student experience

PROJECTS

IBM WatsonX Hackathon - Spare Change Fraud Radar

- Build anomaly-detection pipeline (features, rules + Isolation Forest, UI); raise top-K precision 10+ pts
- Engineer burst/MCC-novelty/off-hour features; thresholds cut false positives 15–30% with early detection preserved
- Ship FastAPI/Streamlit reviewer (sub-second, <300 ms); enable triage; add drift/fairness monitoring with MLflow

Satellite Weather Validation & Analysis

- Engineered an ETL pipeline containing 32,000+ solar records from 3 databases into a query-ready data-mart in <3 min
- Measured satellite vs. sensor GTI (tilt-adjusted energy) at 16 sites for maintenance gaps and funding opportunities
- Automated ETL rules to drop blanks and negatives, streaming 100% clean data to Power BI dashboards

Pokemon Data Analytics & Tableau Dashboards

- Ingested over 1000 data points via automated ETL, loading a normalized 3-table SQLite warehouse in <5 min.
- Found a 0.78 attack vs speed correlation and a 47pt average stat gain from Gen 1-9 with focused SQL/Pandas analysis
- Cut data prep from ~12 min to <3 min via a 3-table SQLite mart, which allowed for 4x faster feature iteration and testing
- Published 5 interactive Tableau dashboards powered by LODs, parameters, and set actions

Martian Weather Analysis with Database Integration

- Built scikit-learn models on 300+ Martian sols with a Mean Squared Error of 0.508 and identified and analyzed seasonal trends
- Cleaned nested JSON data to structured tables in Python/Pandas and visualized trends to compare predicted vs observed ranges

SKILLS

Programming and Data: Python (Pandas, NumPy), R, SQL, Git/GitHub, Excel (PivotTables, XLookup), Jupyter

Analytics and Visualization: Power BI, Tableau (LODs, Parameters, Set Actions), Matplotlib, KPI design, Stakeholder Reporting

Machine Learning: Scikit-learn (regression, classification), Model Evaluation and Diagnostics, Anomaly Detection

Cloud: AWS, Snowflake, Azure, MongoDB Atlas

Data Engineering/ETL: Python ETL, SQL Data Modeling, Data Quality Checks, Refresh Automation, Fairness Checks

Databases: SQLite, PostgreSQL, MongoDB, Redis Performance Tuning, Query Optimization

Operational Analytics & MLOps: MLflow, Drift/Fairness, Thresholds, Alerts, SLA/SLO, Top-K Precision, TTFD