

Dylan J. Curran

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EDUCATION

Georgia Institute of Technology

B.S Mathematics (Concentration: Data Science) | Minor: Computational Data Analytics

Atlanta, GA

May 2027

- 4.0 GPA, College of Sciences Dean's Scholarship, Novartis Corporate Scholarship

EXPERIENCE

WHOOOP

Performance Science Co-Op

Boston, MA

Jan 2026 - Jun 2026

- Queried and analyzed physiological data (1–2M users) using SQL, Python, and R to generate product insights
- Produced data-driven analyses for 20+ social campaigns, translating behavioral trends into user-facing content
- Led statistical analyses (t-tests, ANOVA, regression) for research, with 2 first-author and 1 co-authored papers

Willis Towers Watson

Actuarial Consulting Intern

Philadelphia, PA

May 2025 - Aug 2025

- Led preparation of PBGC filings, AFN, benefit calculations, and year-end planning for a \$1.3B+ pension plan
- Analyzed and validated participant data across 100,000+ records for active, deferred, and retired members, ensuring accurate present value calculations using Excel and WTW proprietary software (Quantify)
- Delivered results from two intensive client simulations involving actuarial forecasting, liability amortization, secure client communication, and plan funding metrics, mirroring real-world valuation cycles

Brown Lab @ Georgia Tech

Undergraduate Research in Data Science

Atlanta, GA

Aug 2025 - Dec 2025

- Built an end-to-end Python pipeline to deconvolve ~200 TCGA breast cancer RNA-seq samples into 20+ immune cell fractions from UCSC Xena expression and clinical data (LM22, TumorDecon/DeconRNASeq)
- Established a reproducible analysis workflow with gene-level scaling, QC metrics (marker–fraction correlations, CYT scores), and PAM50 subtype comparisons to quantify tumor immune infiltration
- Designed and started a second-generation framework using tumor single-cell–derived signatures and multiple deconvolution engines, with cross-method robustness checks and reporting for collaborators

PROJECTS

Machine Learning for Formula One

Data Science/Machine Learning Project

Philadelphia, PA

May 2025 - Aug 2025

- Built a leakage-safe dataset spanning 70+ seasons of Formula One, resolving duplicates and engineering 70+ rolling features on driver and constructor form (points, podium rates, grid performance)
- Developed and compared XGBoost, Logistic Regression, and calibrated probability models, nearly doubling PR-AUC vs. baseline (0.41 → 0.74) and halving Brier loss (0.133 → 0.069) on unseen 2021–2023 races
- Produced per-season and per-circuit reports with calibration plots and feature importances, highlighting model insights, driver performance trends, and probability reliability

Machine Learning for Big-Pharma Stock

Data Science/Machine Learning Project

Atlanta, GA

Jan 2025 - May 2025

- Built a machine learning pipeline integrating financial and sentiment datasets from Fortune 500 companies
- Engineered 15+ technical and sentiment features (SMA, RSI, MACD, OBV, ATR, ADX, Bollinger Bands, VADER Sentiment Analysis) with time-shifting validation and correlation checks to prevent data leakage
- Developed and tuned Logistic Regression, Random Forest, and a custom MLP, improving accuracy by 10% over baseline, and summarized results in an academic-style paper with a focus on clear, decision-ready insights

LEADERSHIP

Georgia Institute of Technology

Undergraduate Teaching Assistant

Atlanta, GA

Aug 2024 - Present

- Led 2 weekly class sessions on Linear Algebra, reviewing content and administering practice problems
- Managed communication for 1,000+ students, graded homework and exams, and held weekly office hours
- Earned a 4.91/5 average rating across 15 teaching areas, including preparedness, approachability and expertise
- Created 27 high-quality lecture notes (~135 pages) in LaTeX, combining rigorous proofs, annotated examples, and custom visuals; relied on by 80% of students as their primary study resource

SKILLS

Machine Learning & Analytics: Classification, Regression, Time Series, Attention Mechanisms, Large Language Models, Feature Engineering, Cross-Validation, Interpretability, Random Forest, Deep Learning (MLP, CNN, RNN)

Tools & Platforms: Python (NumPy, Pandas, scikit-learn, XGBoost, PyTorch), R, SQL, Jupyter, GitHub, VS Code

Data Science Workflow: EDA, Data Wrangling, Statistical Analysis, Predictive Modeling, Pipeline Development