

HILARY PRESENT

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

M.S. in Analytics, Computational Data Science Track

August 2023 – August 2024

- Graduated 18-month program in 12 months while working part-time at ML polymer research and AI-fintech firms
- 1 of 10 STEM students statewide nominated and selected for the Georgia Research Alliance Student Scholar program
- *Coursework and Extracurriculars:* Data and Visual Analytics, Statistical Modeling and Machine Learning, Information Security, Computer Vision, Simulation, Regression, Business Analytics, Energy Club, Business Analytics Club

UNIVERSITY OF VIRGINIA

Charlottesville, VA

Dual B.A. in Cognitive Science and Media Studies, Computer Science Track

August 2017 – May 2021

- *Work:* Covered personal expenses by working at local restaurant all four years; promoted to manager after 2 years

EXPERIENCE

HERCTECH

Wilmington, DE

AI- and Machine Learning-focused Fintech transforming active investment management

Data Analyst

December 2020 – Present

- Developed models to extract high-impact mutual fund portfolios using simulated annealing, generating an annual average of 8.18% in excess returns in backtests
- Created custom datasets using feature engineering and data sampling to extract crucial fund performance data
- Analyzed 500+ million data points and developed insights and visualizations for firm's flagship 2023 White Paper

MATMERIZE

Atlanta, GA

Pioneering company accelerating materials design by integrating polymer expertise with advanced data science techniques

Technical Lead in Data Analytics

January 2024 – August 2024

- Trained and optimized 400+ models to predict 24 polymer properties; improved mean R^2 105.6% and mean MAE 59.4%
- Led backend integration on Matmerize platform, leveraging Git and AWS to deploy predictive models
- Increased client engagement by 22% and conversion rate by 12% through market research and client acquisition strategies

RESEARCH & PROJECTS

RAMPRASAD RESEARCH GROUP

Atlanta, GA

Georgia Tech lab leveraging Machine Learning to accelerate the discovery of novel materials

Research Assistant

October 2023 – Present

- Optimized model performance with GridSearchCV and LassoCV, achieving an 88.7% improvement in accuracy using advanced feature engineering and RDKit
- Implemented robust model validation using bootstrapping with XGBoost, reducing mean absolute error (MAE) and increasing R^2 by normalizing the distribution of transmission values
- Built neural networks in PyTorch to predict polymer/solvent mixture solubility on 16,000+ combinations of concentrations and temperatures

ATLytiCS DATA FOR HOPE™ COMPETITION

Atlanta, GA

Result: Team Won Second Place; Received Prize of \$2000

August 2023 – September 2023

- Investigated year-over-year discrepancies in Atlanta's homeless population using NumPy, Pandas, and Tableau

SAMPLE OF PORTFOLIO PROJECTS

- **Generative AI with LLMs:** Implemented LLM lifecycle, fine-tuned models, and optimized performance using Python, PyTorch, and AWS for deployment
- **House Price Prediction:** Developed ML algorithms with Python, Scikit learn, and AWS for deployment
- **Air Quality Visualization:** D3.js for data visualization, HTML/CSS for frontend, and JavaScript for interactive features

FUN FACTS

Built and camped in an igloo for 2 weeks

Biked across the country in 6 weeks

Achieved TikTok fame for fun, then deleted the app