Zakariyya Scavotto

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Education

Stevens Institute of Technology, Bachelor of Science in Computer Science (CS) | NJ Expected May 2026

GPA: 4.0 | Honors: Pinnacle Scholar, Upsilon Pi Epsilon Honor Society

Graduate Level Courses: Database Management Systems (DBMS) 2, Machine Learning Fundamentals

CS: Algorithms, Computer Architecture and Organization, DBMS 1, Data Structures, Discrete Structures, Principles of Programming Languages, Security Privacy and Society, Systems Programming, Theory of Computation

Other: Intermediate Statistics, Probability, Linear Algebra, Multivariable Calculus, Nonlinear Optimization, Macroeconomics, Microeconomics, Principles of Accounting, Computers and Society

Thomas Jefferson High School for Science and Technology, GPA: 4.0 June 2022

Work and Research Experience

Stevens Institute of Technology

Student Researcher (May 2023 - Present)

- Working under Professor Yue Ning on utilizing large language models (LLMs) to help predict stock prices using Meta's Llama LLM to process news data about stocks. Using an LSTM/GRU blended ensemble model coded with PyTorch for predictions, achieving an RMSE of 0.00724. Ran the Llama models on an AWS EC2 instance.
- Utilized random forests, multiple neural network variants (LSTM, GRU), and reversible instance normalization to forecast changes in U.S. inflation rates (CPI), under Professor Yue Ning, achieving an RMSE as low as 0.34. Writing a research paper to be submitted to a conference.

Algorithms Course Assistant (Sept. 2024 - Dec. 2024)

- Conducting 35 student lab sessions, grading student assignments, and holding office hours.

Data Structures Course Assistant (Jan. 2024 - May 2024)

- Conducted 30 student lab sessions, graded student assignments, and held office hours.

Intermediate Stats Class Assistant (Sept. 2023 - Dec. 2023)

- Aided students with questions about stats or their R programs during 40 student lectures.

Stevens Student Managed Investment Fund

Factor Model Analyst (Sept. 2023 - May 2024)

- Implemented and backtested a trading strategy based on the accruals anomaly; achieved 18% annualized return.
- Created a model to predict stock EPS from balance and income sheet metrics, achieving 0.4-0.8 R^2.

Factor Model Intern (Jan. 2023 - May 2023)

- Wrote an 8-page step-by-step guide to set up Ubuntu Virtual Machines with VirtualBox on Windows.
- Increased reporting efficiency by creating a Python script to generate a weekly factor model report.

George Mason University

Student Researcher (Jun. 2020 - Nov. 2022)

- Studied EEG-based emotion recognition in music under Dr. Nathalia Peixoto, where we used SVMs to classify emotional responses with 64.6% accuracy. Working paper: mars.gmu.edu/handle/1920/12993.

Skills

Programming Languages: Python, Java, Javascript, HTML, CSS, C++, C, SQL, R, OCaml

Software: GitHub, Google Drive Suite, Microsoft Office Suite, VS Code, VirtualBox, WSL

Certificates: Bloomberg Market Concepts (Dec. 2023), J.P. Morgan Software Engineering Job Simulation (Sep. 2023)

Extracurriculars

Music: Zakariyya Scavotto Music Resume, ZS Scriabin Prelude Op 11 No 22 in G Minor

Stevens: Computer Science Club (VP, Fall 2024), Association of Computing Machinery (President, 2024-Present)