Ross Lauterbach

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EDUCATION

Hunter College, City University of New York **May 2025**
Master of Arts in Applied Mathematics and Statistics | Concentration in Statistics | Cumulative GPA: 3.97
Angeliki D. Cutchis Prize for Mathematics

Binghamton University, State University of New York **May 2023**
Bachelor of Arts in Mathematical Sciences | Minor in Digital and Data Studies
Helen P. Beard Award for Excellence in Undergraduate in Mathematics

TECHNICAL SKILLS

Programming: Python, R, SQL, SAS, C++, HTML
Python Libraries: NumPy, Pandas, Polars, Matplotlib, Seaborn, Statsmodels, PySpark, SciPy, Scikit-learn, TensorFlow
Statistics: Probability Theory, Generalized Linear Models, Fit Testing and Model Selection, Survival and Time Series Analysis
Tools: PowerBI, Tableau, Microsoft Office, AWS, Apache Spark, Microsoft Azure, Databricks

PROFESSIONAL EXPERIENCE

Private Prep LLC., Port Washington, NY **October 2023 – Present**
Mathematics and Test Prep Tutor

- Design and execute personalized tutoring plans for 8 students weekly in SAT/ACT and math subjects including Linear, Algebra, Calculus I/II/III, AP Calculus (AB/BC), AP Statistics, Pre-Calculus, Algebra, and Geometry, leading to an average test score improvement of 24% points captured across 500+ hours in all subject areas
- Develop and distribute custom mathematics worksheets and lesson summaries tailored to individual student needs, enhancing understanding of complex concepts and communication with parents

Department of Mathematics and Statistics, Hunter College, New York, NY **September 2024 – May 2025**
Research Assistant

- Conducted statistical research on "momentum" in the NBA under the guidance of Dr. Sylvan, applying multilevel regression, smoothing methods, and numerical optimization to analyze complex sports data
- Utilized R, Python, and SQL to develop data analysis script and manage relational databases for statistical modeling of NBA game dynamics. Presented findings on NBA momentum at MathSport 2025 and Hunter Research Symposium

U.S. Census Bureau, Washington, DC **June 2024 – August 2024**
Data Scientist (Coding it Forward Fellowship)

- Utilized Python and R to analyze, visualize, and join 200 million import and export transactions extracted using PostgreSQL, integrating AWS services and robust ETL processes to streamline data ingestion
- Engineered and deployed supervised machine learning models in Python, including XGBoost and Random Forest classifiers, to precisely infer the country of origin for trade data entries with missing identifiers, thereby improving data integrity and processing efficiency. Achieved an 80% match rate, far above the standard for survey response
- Partnered with survey statisticians and the Chief of the Trade Regulations Branch to develop advanced visualizations and analytical reports, effectively translating complex insights into actionable intelligence for strategic decision-making. Presented recommendation to Associate Director of Economic Programs based on findings

National Museum of Mathematics, New York, NY **July 2023 - October 2023**
Exponent Fellow

- Engaged 200-900 daily visitors of diverse ages and backgrounds by presenting advanced mathematical concepts through interactive exhibits, improving visitor understanding and engagement
- Led an initiative to enhance operational efficiency on the museum floor by leveraging forecasting in Python, data management in PostgreSQL, and visualization in Tableau to automate scheduling, analyze visitor data, and predict attendance for the upcoming school year
- Collaborated with esteemed visiting professors in mathematics and computer science to coordinate events covering diverse topics, attracting 500+ visitors in just two months

PricewaterhouseCoopers, New York, NY **June 2022 – August 2022**
Data and Analytics Consulting Intern

- Collaborated with associates to optimize a Fortune 500 company's transaction processing code base, leveraging Python and Databricks to review and implement decision trees. Ensured 100% classification accuracy through extensive testing and by applying firm-wide liquidity risk management expertise
- Contributed to the successful database migration and transaction testing for a regional bank, transitioning from SAS to Python. Utilized Databricks and SQL for data retrieval and integration with PowerBI, with the initiative projected to yield data storage savings exceeding one million dollars in FY23
- Delivered critical data analysis and insights to company stakeholders, effectively translating complex technical findings into clear, actionable recommendations