Sierra Martinez-Kratz

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EDUCATION

Master of Science, Biostatistics **Expected Graduation June 2027**
University of Michigan, School of Public Health **Ann Arbor, MI**
Relevant Coursework: Statistical Computing, Applied Linear Regression Theory, Probability and Distribution Theory
Organizations: STATCOM (Statistics in the Community)

Bachelor of Arts, Applied Mathematics and Computer Science **September 2021 – May 2025**
Columbia University in the City of New York **New York, NY**
GPA: 3.7/4.0
Relevant Coursework: Databases, Data Science and Health Equity, Data Structures, Analysis and Optimization, Computer Science Theory, Advanced Programming in C
Organizations: Columbia Association for Women in Mathematics, Community Impact: America Reads

SKILLS

Programming Languages: R, Python, SQL, SAS, Java, CSS, HTML, C
Data & Software Tools: Microsoft Office Suite, Git, Alteryx, Tableau, MongoDB, Apache Superset

PROFESSIONAL EXPERIENCE

Data Analytics & Automation Intern **May – August 2024**
United Wholesale Mortgage **Pontiac, MI**
Planned, designed, built, tested, and monitored an automated financial reporting system, freeing nearly 500 hours in data processing and analysis, saving $20,000 annually.

PROJECTS

Data Analytics: Ann Arbor Hands-On Museum **October 2025 - Present**
Developing an interactive donor profiling dashboard in Apache Superset to visualize professional data and support fundraising efforts through STATCOM.

Applied Machine Learning: Letterboxd Recommendation System **September – December 2024**
Completed a semester-long project developing a movie recommendation system for Letterboxd, implementing three machine learning algorithms (SVD, NMF, and BPR). Collected and processed data for over 4,000 users, evaluated system performance with ranking metrics (Precision@k and NDCG), compared algorithms' strengths and limitations, and presented results visually and accessibly in a seminar.

Epidemiological Data Analysis **December 2024**
Developed two epidemiological data briefs in my Data Science and Health Equity course by formulating research questions, conducting background research, performing data analysis, and writing a concise conclusion to effectively present findings.

Research Interests: Computational Statistics, AI/ML, Bayesian Statistics, Big Data Health Analytics