# Sierra Martinez-Kratz

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## EDUCATION

**Master of Science in Biostatistics**                                       **Expected Graduation May 2027**

University of Michigan                                                              **Ann Arbor, MI**

GPA: 4.0/4.0

- Relevant Coursework: Statistical Computing, Applied Linear Regression, Probability and Distribution Theory
- Organizations: STATCOM (Statistics in the Community)

**Bachelor of Arts in 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 & Data Languages:** R, Python, SQL (MySQL), SAS, C++, Java, C

**Databases & Analytics Tools**:  Microsoft Excel, 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: Letterbox 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, Clinical Trials, Survival Analysis