Brendan Premo

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PROFESSIONAL SUMMARY

Analytical and mission-driven data science graduate student with a strong foundation in mathematics and experience in applied machine learning, predictive modeling, and statistical analysis. Proven ability to communicate complex technical findings clearly and collaborate effectively on interdisciplinary teams. Seeking to apply technical skills, research mindset, and curiosity to promote health equity and improve outcomes through thoughtful data insights and innovation.

TECHNICAL SKILLS

Programming & Tools: Python, Scikit-Learn, PyTorch, Pandas, LaTeX, SQL, R, Java, GitHub, Tableau
Machine Learning & Analysis: Convolutional Neural Networks (CNN), Natural Language Processing (NLP), Machine Vision, Time Series Regression, Classification, Deep Learning, Model Analysis, Markov Chains, Monte Carlo Simulations,
Statistical Modeling: Predictive Modeling pipelines, Feature Engineering, Big Data cleaning and processing
Communication & Collaboration: Technical writing and presentations, remote teamwork, independent project execution

EDUCATION

M.S. Data Science – University at Albany, SUNY – *Spring 2025*
M.S. Mathematics – University at Albany, SUNY – *Spring 2025*
B.S. Applied Mathematics – Rensselaer Polytechnic Institute – *2020*

SELECT PROJECTS & RESEARCH

Capstone: Biomechanics via Topological Data Analysis
• Transformed grayscale video data of athletes into numerical format using Python
• Applied Persistent Homology to identify movement quality patterns and inform analysis

Housing Price Prediction
• Developed preprocessing, cleaning, and modeling pipeline using AutoGluon and TabularPredictor
• Achieved 0.07 RMSE; emphasized data quality and interpretability

Recommendation System: Multi-Source Modeling
• Designed and implemented collaborative filtering algorithms from scratch
• Compared ALS, SGD, and other optimization methods to deliver genre-prioritized media recommendations

Thesis: Riemann Spectrum & Analytic Continuation
• Delivered graduate-level lecture series on the Riemann Hypothesis, emphasizing clarity and rigor

PROFESSIONAL EXPERIENCE

Farm Assistant — K&R Premo Enterprises, 2019–Present
• Led day-to-day independent work managing livestock and firewood processing
• Demonstrated accountability and problem-solving in a self-directed setting

Bartender — Adirondack Hotel, Long Lake, NY, 2020–2021
• Provided service in a high-volume hospitality environment
• Collaborated on event logistics and maintained professional communication under pressure

Intern — GE Healthcare, North Greenbush, NY, 2017 & 2018
• Created “bad pixel map” for digital x-ray detectors
• Conducted tensile strength testing of glass and supported imaging hardware development