Ryan Flatley

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Education

University of Nebraska-Lincoln **Aug. 2022 – May 2026**

Bachelor of Science in Mathematics & Data Science

- GPA: 3.95/4.00; Focus Area: Statistics & Data Science; Minor: Computer Science, Business
- Coursework: Machine Learning I/II, Data Structures and Algorithms, Deep Learning, Gen AI, Stochastic Processes

Experience

Baird **May 2024 – Current**

Data Science Intern *Milwaukee, WI*

- Created an automated web scraping tool with Selenium and Ollama to identify relationship networks between current and potential clients.
- Utilized NER LLM to parse 20k+ tokens per individual to extract entities and determine entity-entity relationships.
- Developed an automated process to retrieve and analyze factor exposure data for portfolio holdings, enabling early identification of securities with elevated risk levels.
- Developed a system to identify CUSIP identifiers for portfolio holdings by combining web scraping of municipal bonds with fuzzy-matching searches across internal databases and Bloomberg.
- Engineered an analytical dashboard for fixed income trading desk to identify pricing and performance discrepancies.

Bloomberg **Jun. 2025 – Aug. 2025**

Machine Learning Intern *Princeton, NJ*

- Deployed a pipeline to prioritize, extract, and classify bond documents at scale, enabling automated processing of 10k+ new bonds annually for over 375k Bloomberg Terminal users.
- Developed parsers using Py2PDF to extract bond data, transforming PDFs into structured features for ML pipelines.
- Performed text-based feature engineering using TF-IDF and chi-squared statistical selection to identify domain-specific key terms, improving model precision and interpretability by over 20%.
- Trained and optimized a LightGBM classifier to label bond types from extracted text, achieving 97% accuracy on test data after hyperparameter tuning.

UNL Yeutter Institute **Jan. 2024 – Aug. 2024**

Undergraduate Researcher *Lincoln, NE*

- Developed gravity model to estimate US commodity trades, improving accuracy by 40% from original model.
- Utilized dynamic heatmaps using Plotly to effectively visualize state-by-state variations in model responses.

Fiserv **Jun. 2023 – Aug. 2023**

Software Development Intern *Omaha, NE*

- Developed a file reconciliation system to identify lost files sent between departments, reducing lost files by over 90%.
- Analyzed data from missing file reports using Pandas to visualize discrepancies in document sending process.
- Created a real-time file lineage search system using .NET and SQL for employees to access and track file history.

Involvement

University of Nebraska-Lincoln **Dec. 2024 – May 2025**

Machine Learning Teaching Assistant

- Developed course materials such as assignments, quizzes, and lectures, and was responsible for grading.
- Taught concepts including Naive Bayes, Decision Trees, KNN, K-Means, Gradient Descent, PCA, Neural Networks

University of Nebraska-Lincoln **Aug. 2024 – Dec. 2024**

Statistics Teaching Assistant

- Taught Applied Statistics to 40+ Raikes Honors students by hosting TA hours and assisting during lectures.
- Covered concepts such as Conditional Probability, Linear Regression, Bayesian Statistics, and Permutations and Combinations.

University of Nebraska-Lincoln **Sep. 2023 – May. 2024**

Mathematics Teaching Assistant

- Assisted 30+ applied calculus students during class by thoroughly explaining problem solutions and concepts.
- Conducted review sessions to reinforce concepts and provide extra practice in preparation for exams.

Technical Skills

Languages: Python, R, Java, Matlab, C#, SQL, HTML, CSS

Technologies / Libraries: PyTorch, TensorFlow, scikit-learn, Pandas, Hugging Face, Ollama, Selenium, NumPy, spaCy