

# Lily Campbell

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## EXPERIENCE

May 2022 –

Present

### Quantitative Analyst II - Analytics, Modeling & Insights, *Bank of America*

- Led end-to-end predictive modeling initiatives, from model design through production hand-off, and presented actionable findings to both technical and non-technical audiences
- Built an agentic AI system to conduct thematic analysis of call transcripts and report trends in client complaints - utilized parallel execution and LangGraph for agentic orchestration
- Trained regression and classification models, including XG-Boost, Random Forests, KNN, Graph Networks and Difference in Difference, to predict customer behavior
- Developed client segmentation schemas with various clustering techniques to inform marketing strategy
- Integrated data from distributed and relational databases to produce robust customer profiles for exploratory statistical analysis

July, 2021 –

May, 2022

### Automation Analyst, *Bank of America*

- Created SQL solutions enabling migration of manual Excel-based work into automated corporate auditing tools
- Mined fraudulent user activity from banking transaction data enabling mitigation of financial loss
- Performed rigorous testing of business control code to ensure efficacy and performance under changing regulatory requirements

October, 2020 – Research Assistant, *The Fletcher School of Law and Diplomacy*

May, 2021

- Supported research initiatives by testing analysis methodology, primarily optimization models and linear regression techniques
- Reviewed data analysis in academic papers and documented the efficacy of papers' statistical methods

September, 2019 – Program Analyst, *Tufts Office of Strategy and Program Development*

– August, 2020

- Analyzed potential academic programs and operational development for Tufts University to determine financial viability
- Conducted market research to develop strategic recommendations using data mining techniques

## EDUCATION

### M.S. Data Science - *University of Chicago, August 2025*

*Relevant Coursework:* Advanced Machine Learning & AI, Generative AI, Computer Vision, Big Data & Cloud Computing, Bayesian Statistics, Linear & Non-Linear Modeling

#### Key Projects:

- Developed an AI meeting preparation app with agentic AI techniques – runner-up for UChicago's Best Data Science Capstone
- Created and deployed a RAG based chatbot for the UChicago admissions website to assist prospective students with program specific questions
- Collaborated with Argonne National Laboratories to improve bird strike warning systems by developing a ViT solution, which improved performance over past CNN-based solutions
- Instruction-tuned LLMs with PEFT to improve the quality of responses to complex queries
- Programmed and trained Encoder-Decoder and Decoder-Only transformers
- Frequently used tools include PyTorch, TensorFlow, scikit-learn, LangGraph, and PySpark

### B.S. Mathematics and Quantitative Economics - *Tufts University, May 2021*

*Magna cum laude, Phi Beta Kappa National Honors Society*

*Relevant Coursework:* Real Analysis, Numerical Linear Algebra, Mathematical Modeling & Computation, Quantitative Econometrics