

Lucas Yao

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EDUCATION

New York University, New York, NY

MS, Data Science

Expected May 2027

Coursework:

- Introduction to Data Science, Optimization and Computational Linear Algebra, Learning from Small, DataMachine Learning, Big Data, Advanced Python for Data Science

John Jay College of Criminal Justice, City University of New York (CUNY), New York, NY

BS, Computer Science & Information Security, Minor in Mathematics |

May 2025

Coursework:

- Object-Oriented Programming (C++), Data Structures & Algorithms, Probability & Statistics

PROJECTS

MathLABS | [StreamlitApp](#)

Sep 2025 – Dec 2025

- Collaborated in a team of 4 to construct MathLABS, a small-data benchmark comprising over 400 visual discrete mathematics problems (combining textbook-derived and AI-generated items) for stress-testing Multimodal Large Language Models (MLLMs).
- Engineered the data pipeline and unified JSON schema for all questions, storing question instances, metadata, and associated figures in MongoDB Atlas + HuggingFace Datasets, which support fine-grained analysis of MLLM performance.
- Engineered a hybrid evaluation framework (MathLabs Evaluator) utilizing the Gemini 2.5 Flash model for ground truth validation and an OpenAI-compatible API structure (OpenRouter and Hugging Face Routers) to benchmark a total of nine diverse Vision-Language Models (VLMs) on Math MCQs.

RateMyProfessor Analytics | **Faculty Performance Analysis** |

Sep 2025 - Dec 2025

- Conducted statistical hypothesis testing (Welch's t-test) on 18,000+ instructor ratings to evaluate gender bias in course difficulty, confirming a statistically non-significant difference ($p=0.94$) with negligible effect size.
- Engineered a Logistic Regression classifier to predict professor "hotness" (pepper status), utilizing AU(ROC) (0.80) as the primary evaluation metric to robustly assess model performance on class-imbalanced data.
- Identified key drivers of student evaluations by analyzing 26+ features, revealing that high numerical ratings are the strongest predictor of popularity, whereas gender and "heavy grading" tags serve as negative predictors.

PlantID Care Companion | [Streamlit app](#)

Mar 2025 - May 2025

- Collaborated in a team of 4 and built a full-stack plant identification tool using Python, Streamlit, and PlantNetAPI, enabling accurate species recognition from user-uploaded images.
- Engineered a fuzzy-matching system linking plant IDs to care guides with personality profiles and traits, enhancing instruction relevance by 65%.
- Integrated LLM-based chat, allowing users to "talk" to their plants through personalized, character-driven interactions.

EXPERIENCE

College Assistant | BMCC | New York, NY

Sep 2023 - Dec 2023

- Assisted Computer Science 101 professor with lectures and provided one-on-one tutoring for 20 students.

BMCC Technology Learning Community Intern | BMCC | New York, NY

May 2023 – Jul 2023

- Implemented key features such as a curriculum search function, live chat support, and data analysis visualizations, providing comprehensive resources for academic and career guidance and aiding in informed decision-making for ~1,500 students in the CIS department.

LEADERSHIP / ACTIVITIES

CodePath - Apprenticeship - 102 Web development, 102 Technical Interview Prep

Jun 2025 – Aug 2025

John Jay Computer Science Society Club - Web Developer, CSS [Website](#)

Sep 2024 – May 2025

CUNY Tech Prep Data Science Fellow

Jul 2024 – May 2025

CUNY Peer Leadership Program

Sep 2022 – May 2023

CERTIFICATIONS

- Google Data Analytics Certificate, Coursera, June 2024 - [Link](#)
- Databases for Data Scientists Specialization, Coursera, July 2024 - [Link](#)