

Aashish Khubchandani

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EDUCATION

Cornell University, Cornell Tech, New York, NY May 2025

Master of Engineering in Computer Science | GPA: 4.0

Relevant Coursework: Machine Learning Engineering, Applied Machine Learning, Statistical Principles for Data Science, Applied Causal Inference, ML Hardware and Systems, Computer Vision, Security & Privacy, Red Teaming, AI Law and Policy.

New York University, College of Arts and Sciences, New York, NY May 2022

Bachelor of Arts *magna cum laude* in Physics and Computer Science | GPA: 3.9

Honors & Awards: Dean's Award for Leadership recipient, Sigma Pi Sigma (National Physics Honor Society) inductee, Phi Beta Kappa (Liberal Arts Honor Society) inductee; George Granger Brown Scholarship, Onassis Foundation Scholarship, Rae Dalven Prize awardee.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, MATLAB, Java, C++, C, SQL, SecDB/Slang
Other Tools: PyTorch, NumPy, Pandas, Scikit-learn, CUDA, Statsmodels, LaTeX

WORK EXPERIENCE

Goldman Sachs, Quantitative Software Developer, New York, NY Jul 2022 – Aug 2024

- Built and deployed quantitative portfolio management and stock selection tools as part of the Fundamental Equities Strategies team within Goldman Sachs Asset Management.
- Streamlined data pipelines and infrastructure, cutting processing times by 80% and improving platform stability for portfolio managers.
- Conducted large-scale factor backtesting to research innovative investment strategies, delivering trade recommendations and alerts based on a blend of company fundamentals, consensus estimates, and real-time market data.

New York University, Course Assistant, New York, NY Mar 2019 – May 2022

- Tutored over 300 students in introductory Computer Science over three years, teaching Object-Oriented Programming in Java for the Computer Science department;
- Appointed by the Physics Department to tutor 80+ General Physics students per semester for two years.
- Served as a Course Assistant for NYU Courant's Data Structures course, grading projects and exams for classes of 50+ students.
- Led office hours, providing guidance on programming assignments and technical concepts across all years of study.

RESEARCH EXPERIENCE & PROJECTS

Statistics and Causal Inference Research, Cornell Tech (Python, R) Dec 2024 – Present

Developing new matrix completion frameworks addressing high-dimensional confounding in causal inference.

- Leading development of an open-source Python package, N^2 , unifying and extending nearest neighbor estimators, including novel variants, for Machine Learning and causal inference applications.
- Built N^2 -Bench, a benchmark suite of real-world and synthetic datasets, including custom data generators, to evaluate nearest neighbor estimators and support scalable hyperparameter tuning.
- Authored a paper detailing the framework and benchmarking results across sparse datasets ([arXiv preprint](#), accepted to CODEML@ICML 2025); released the package on [PyPI](#).

MiniTorch, Cornell Tech (Python, CUDA) Aug 2024 – Dec 2024

Built a minimalist PyTorch-style deep-learning library from scratch in Python with CUDA acceleration.

- Implemented broadcast-aware tensor operations, auto-differentiation backpropagation, and neural network modules
- Wrote custom CUDA kernels for matmul, convolution, and element-wise ops, achieving $\sim 20\times$ speed-ups vs. NumPy baseline.

Applied Machine Learning Research, New York University (Python, Java) Aug 2019 – May 2022

Deployed real-world applications of machine learning and big data, with a focus on the impacts of COVID-19.

- Developed interpretability-oriented supervised learning models in collaboration with epidemiologists, aiding doctors in identifying key factors behind COVID-19 complications in NYU Langone hospitalized patients.
- Analyzed Google Trends data for feature selection in predicting regional COVID-19 spread; published insights in [Social Network Analysis and Mining](#).
- Collaborated with senior researchers to deploy a real-time high-volume sentiment analysis tool for vaccine hesitancy; published approach, finding, and results in [Clinical Infectious Diseases](#).