AASHISH KHUBCHANDANI

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EDUCATION

Cornell University, *Cornell Tech* *August 2024 – May 2025*
Master of Engineering in Computer Science, *GPA: 4.0*

New York University, *College of Arts and Sciences* *September 2018 – May 2022*
Bachelor of Arts in Physics and Computer Science, *magna cum laude, GPA: 3.9*

RESEARCH INTERESTS

Causal fairness under distribution shift; statistical certification methods for ML fairness guarantees; algorithmic solutions for regulatory compliance.

RESEARCH EXPERIENCE

Statistics and Causal Inference Research, *Cornell Tech* *December 2024 – July 2025*

- Designed a new matrix completion framework to benchmark against problems in causal inference.
- Led the development of N^2, an open source Python package that unifies and extends nearest-neighbor estimators (with novel variants) for ML and counterfactual inference.
- Built N^2-Bench, a benchmark suite spanning synthetic and real high-missingness datasets from healthcare, public policy, and LLM evaluation, with scalable tools for estimator comparison and hyperparameter tuning.
- Tooling and benchmarking results [1] presented at CODEML@ICML 2025, package released on PyPI.

Computational Epidemiology Research, *New York University* *Fall 2019 – May 2022*

- Developed and validated computational models in collaboration with epidemiologists at NYU Grossman Medical School and Weill Cornell Medicine to forecast COVID-19 spread using alternative data sources.
- Designed, deployed, and maintained a high-throughput NLP pipeline for real-time monitoring of vaccine-related misinformation and sentiment online; co-authored peer-reviewed publication [2].
- Built automated pipelines to scrape and analyze Google Trends data, evaluating their predictive power as features in disease spread modeling; findings published in [3].
- Trained and fine-tuned random forest models on clinical datasets, constructing explainability-driven tools to assess the risk of complications among hospitalized patients with COVID-19.

PUBLICATIONS

[1] **N^2: A Unified Python Package and Test Bench for Nearest Neighbor-Based Matrix Completion** *June 2025*
Chin, C., Khubchandani, A., Maskara, H., Choi, K., Feitelberg, J., Gong, A., Paul, M., Sadhukhan, T., Agarwal, A., & Dwivedi, R. (2025). *arXiv preprint* arXiv:2506.04166. https://arxiv.org/abs/2506.04166.
Presented at **CODEML@ICML 2025** and **AITD@EurIPS 2025**.

[2] **Exploring COVID-19 Vaccine Hesitancy on Twitter Using Sentiment Analysis and NLP Algorithms** *May 2022*
Bari, A., Heymann, M., Cohen, R. J., Zhao, R., Szabo, L., Vasandani, S. A., Khubchandani, A., DiLorenzo, M., & Coffee, M. (2022). *Clinical Infectious Diseases*, 74(Supplement 3), e4–e9. Oxford University Press. https://doi.org/10.1093/cid/ciac141.

[3] **COVID-19 Early-Alert Signals Using Human Behavior Alternative Data** *December 2021*
Bari, A., Khubchandani, A., Wang, J., Heymann, M., & Coffee, M. (2021). *Social Network Analysis and Mining*, 11(1), 18. Springer. https://doi.org/10.1007/s13278-021-00723-5.

TEACHING AND GRADING

Department Tutor & Grader, *NYU Department of Computer Science* *Mar 2019 – May 2022*

- Held weekly tutoring sessions, with over 300 students in introductory Computer Science over seven semesters.
- Led grading efforts for homework assignments, projects, and exams for Data Structures courses over six semesters, with frequent office hours to provide individualized support to students.

Department Tutor & Course Assistant, *NYU Department of Physics* *Aug 2020 – May 2022*

- Organized office hours to tutor pre-med students for General Physics I and II courses over four semesters.
- Assisted in grading and proctoring of various homework assignments and midterm examinations.

INDUSTRY EXPERIENCE

Quantitative Developer, *Millennium Management* *October 2025 – Present*

- Constructing and maintaining efficient pipelines that analyze trading decisions to aggregate and decompose quantitative strategies' returns in near-real time.
- Optimizing large-scale computational workflows on a high-performance computing cluster.

Quantitative Software Engineer, *Goldman Sachs Asset Management* *August 2022 – August 2024*

- Developed and deployed data-driven tools for portfolio management and stock selection within a large-scale investment platform.
- Designed and executed large-scale backtesting experiments, analyzing complex datasets to evaluate predictive models and algorithmic strategies.
- Researched new stock selection strategies using large-scale datasets, presented findings to portfolio managers.

HONORS AND AWARDS

Sigma Xi Inductee *September 2025*
Dean's Award for Leadership *May 2022*
Phi Beta Kappa Inductee *April 2022*
George Granger Brown Scholarship *May 2021*
Rae Dalven Prize *January 2021*
Onassis Foundation Scholarship *December 2020*
Dean's Undergraduate Research Fund Grant *December 2020*
Sigma Pi Sigma Inductee *May 2020*

SKILLS

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