

Arunabh A. Sarkar

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EDUCATION

- Cornell University** | Master of Engineering in Systems Engineering Expected May 2024
- Incoming Coursework: Manufacturing Systems Design, Systems Analysis and Optimization, Managerial Finance, Project Management
- Cornell University** | Bachelor of Science in Computing and Information Science Expected December 2023
- GPA: 3.3 | Relevant Coursework: Practical Tools for Operations Research, Machine Learning, and Data Science, Data Mining and ML, Object-Oriented Programming and Data Structures, Discrete Math, Probability and Inference, Intelligence Systems, Accounting

EXPERIENCE

- Incoming Summer Analyst** Summer 2023
Citi | New York, NY
- NLP and Computer Vision Research Assistant** August 2022 - Present
Cornell Dyson School of Applied Economics and Management | Ithaca, NY
- Research listing quality of **1MM+ e-commerce products** using using PyTorch, TensorFlow, and image classification on embeddings.
- Data Science Teaching Assistant** January 2023 - Present
Cornell Bowers College of Computing and Information Science | Ithaca, NY
- Assist professors in teaching **100+ students** about statistics and data science by leading recitation, grading, and holding office hours.
- Venture Advisor** September 2021 - Present
Cornell Blockchain | Ithaca, NY
- Launched a web3 accelerator, assembling an executive board of **12 industry leaders** and investing **100,000 USD+** in crypto ventures.
- Summer Analyst** June 2022 - August 2022
Galaxy Digital Holdings Ltd. | New York, NY
- Built an analytics application in Python for Galaxy Trading, identifying **13 metrics**, including arbitrage profits, transaction loss, etc.
 - Wrote **3 technical reports** for Galaxy Research investigating; the evolution of derivatives in DeFi and theoretical derivatives products, **4 activation risks** associated with the Ethereum Merge, and the mathematics underlying Zero-Knowledge Proofs (ZKPs).
- Adjunct Blockchain Bootcamp Instructor** July 2022 - August 2022
New York City College of Technology | Brooklyn, NY
- Taught a 6-week bootcamp on the fundamentals of blockchain technology, decentralized finance, cryptography, etc. to **50+ students**.
- Trading Infrastructure Engineer Intern** June 2021 - December 2021
Tribunal Capital LLC | San Francisco, CA
- Optimized an arbitrage strategy by using a Bellman-Ford Algorithm and SPFA upgrade, maximizing fund returns by **~20 percent**.
- Adjunct Speech and Debate Instructor** July 2020 - September 2021
Rowland Hall-St. Marks School | Salt Lake City, UT
- Coached students on public speaking and argumentation resulting in placement amongst the **top 3 percent** of debaters in the world.

PROJECTS

- Sentiment Analysis: Predicting Financial Indicators in Digital Asset Markets** September 2022 - December 2022
INFO 2950: Introduction to Data Science | Python, SQL, Microsoft Office (Excel)
- Predicted **3 financial indicators** including; digital asset implied volatility, text phrases for profitable investment opportunities, and directionality of price movement using Twitter data, machine learning, and the TF-IDF vectorizer with statistically significant results.
- Mine and Wine: Predicting Wine Quality from Physical and Chemical Properties** November 2022 - December 2022
STSCI 4740: Data Mining and Machine Learning | R, Microsoft Office (Excel)
- Predicted white and red wine quality with **~90% accuracy** using local regression, KNN, LOESS, decision trees, and PCA/PCR.
- Hospital for Animals: Urgent Care Dimensional Model** October 2022 - December 2022
INFO 4555: Business Intelligence Systems | SQL, Wherescape, Tableau, PowerBI, Microsoft Office (Powerpoint)
- Built a dimensional data model to generate and visualize **15+ indicators**, including staffing stress points, invoice forecasting, surge case timing, and demographic data helping the Cornell College of Veterinary Medicine create a new urgent care division.
- Breaking Down the Grandmaster's Strategy: An Analysis of the Game of Chess** March 2022 - May 2022
ORIE 3120: Practical Tools for Operations Research, Machine Learning, and Data Science | Python, SQL, Tableau
- Predicted chess match length by analyzing a dataset of **20,000 chess games** using regression techniques with **~70% accuracy**.
- aroMap: Smell Anytime, Anywhere** April 2022 - May 2022
INFO 1998: Trends in Web Development | Typescript, Javascript, HTML/CSS, NextJS, Firebase
- Developed a NextJS web application allowing users to register using Firebase authentication and locate **20,000 smells** in any area.

SKILLS AND HOBBIES

Python | Java | SQL | JavaScript/TypeScript | R | HTML/CSS | MatLab | Tableau | Microsoft Office | PowerBI | Public Speech | DJing