

Arunabh A. Sarkar

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EDUCATION

- Cornell University** | Bachelor of Science in Computing and Information Science Expected May 2024
- Minor: Business for Engineers
 - Relevant Coursework: Practical Tools for Operations Research, Machine Learning, and Data Science, Data Mining and Machine Learning, Data Structures and Algorithms, Discrete Mathematics, Probability Models and Inference, Applied Statistics, Applied Data Science, Spreadsheet Modeling, Managerial Finance, Business Intelligence Systems, Unix Tools and Scripting
- The University of Utah** | Bachelor of Science in Computer Science Transferred June 2021
- Minor: Advanced Financial Analysis
 - Relevant Coursework: Object-Oriented Programming, Engineering Calculus, Engineering Physics, Microeconomics

EXPERIENCE

- Incoming Summer Analyst** June 2022 - Present
Galaxy Digital Holdings LP | New York, NY
- Research and Development Engineer** September 2021 - Present
Cornell Blockchain | Ithaca, NY
- Led a group of **30 members** in the Research and Investments Subteam to analyze multiple L1/L2 products and produce investment proposals for presentation to advisory, investment, and engineering teams.
 - Implemented a Bellman-Ford Algorithm to create and back-test a triangular arbitrage trading strategy on Uniswap and Sushiswap, resulting in a **~58 percent increase** in returns from the prior circular arbitrage strategy.
- Quantitative Research Intern** June 2021 - December 2021
Tribunal Capital LLC | San Francisco, CA
- Developed quantitative knowledge in tokenomics and NFT marketplaces, producing research results to achieve pure risk-managed alpha at a **150K USD+ AUM** hybrid quant/qualitative hedge fund transacting **>1,000,000 USD per week**.
 - Optimized a circular arbitrage trading strategy by minimizing slippage for Tribunal's Algorithmic Liquidity Fund, maximizing fund revenues by **~81 percent** outperforming the ETH market returns by **~47 percent** in Q3 of 2021.
- Adjunct Speech and Debate Instructor** July 2020 - September 2021
Rowland Hall-St. Marks School | Salt Lake City, UT
- Coached high school students on foreign and domestic policy topics, and led drills on public speaking, argumentation, and research practices, resulting in student placement among in **top 3 percent** of debaters in the world.
 - Assisted in the organization of tournaments including booking hotels, managing transportation, and hiring judges for competition.
- Operations Consultant and Debate Lecturer** May 2020 - August 2021
Delta Debate Academy LLC | Los Angeles, CA
- Presented lectures on advanced argumentative strategy, enhanced public speaking, and domestic and international policy-making to **over 200** high school and middle school students, ensuring successful competitive results.
 - Streamlined recruitment approach to expand operations to **over 25** states, resulting in net revenue of **~250,000 USD** in two sessions.

PROJECTS

- Breaking Down the Grandmaster's Strategy: An Analysis of the Game of Chess** March 2022 - Current
ORIE 3120: Practical Tools for Operations Research, Machine Learning, and Data Science | Python, SQL, Tableau
- Spearheaded a data science/machine learning-based research project by analyzing a dataset of **20,000 chess games** to identify relationships between W/L ratio, match length, matchmaking, opening strategy, defeat strategy, and player ratings.
 - Implemented logistic regression, linear regression, and time-series forecasting to make accurate predictions on chess strategy.
- Solve-Doku: Solving any Sudoku Puzzle with Backtracking** April 2022
Personal Project | Python
- Developed a recursive Sudoku solving algorithm in Python to solve **5x faster** than traditional brute force using backtracking.
 - Utilized a REST API and JSON scripting to randomly generate and solve puzzles of **3 distinct difficulties**.
- Gig Lock: The Next Generation of Bike Security** January 2022 - Current
NBA 3000: Designing New Ventures | Microsoft Office (Excel, PowerPoint)
- Collaborated with a team of **4 entrepreneurs** to conduct customer discovery through customer interviews, formulate a business thesis, identify customer segments, and develop a smart anti-rotation bike lock product for the e-bike industry.
 - Completed financial modeling for a dilution case, including; calculating share prices in a reverse vesting provision; sizing an option pool at the required percentage of the post-money share count; and calculating the purchasing power of a convertible note.

SKILLS AND HOBBIES

Java | Python | SQL | JavaScript/TypeScript | Solidity | R | HTML/CSS | Tableau | Microsoft Office | Public Speaking | Sudoku | Poker