Rishabh M. Prabhu

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Education

Carnegie Mellon University **May 2028**
- *B.S.* ***Computational Finance + Computer Science (additional intd.)*** **GPA: 4.0/4.0 (Dean's List)** *Pittsburgh, PA*
- **Coursework:** Python, Data Structures & Algorithms, Matrix Theory, Discrete Math, Functional Programming, Putnam

Professional Experience

Incoming Quantitative Analyst Intern @ Magnetar Capital **May 2025 - Present**
- Will use probability and statistical methods to model future expected cash flows of diverse asset classes in Magnetar's portfolio
- Working with Quantitative Researchers and Project Managers to optimize hedge fund portfolio allocation. Evanston, IL.

Equity Research Analyst @ Tartan Student Fund **January 2025 - Present**
- Jane Street-sponsored fund with ~$100,000 AUM. Selected to class of ~15 out of 100+ applicants. Analyst in Energy Sector.
- Conduct equity research on industry trends, company fundamentals, and macroeconomic factors. Use DCF and valuation models.
- Present stock pitches with detailed investment theses, risks, and return potential, and maintain weekly coverage on the portfolio.

Machine Learning Engineer @ Caseflood.ai (YC W25)| *C#, MSFT Azure* **October 2024 - December 2024**
- Was a Founding ML Engineer at Caseflood, which was then accepted into the Y-Combinator Winter 2025 batch. ~Top 1%.
- Developed an AI-agent receptionist for law firms to handle large call volumes and retain clients. Worked directly with firms.
- Established KPIs for Spam Detection, Sentiment Analysis, Case Prioritization, etc. Leveraged APIs to upload data to firm CRMs.
- Increased interaction quality by 17% through optimizing/prompt engineering model behavior for empathy and user-friendliness.

Quantitative Analyst @ Aurelius (FinTech StartUp) | *Python* **May 2024 - August 2024**
- Implemented MACD, RSI, & Fibonacci Retracement Level models in Python on minute-by-minute equities data from polygon.
- Outperformed the market on 20 of the top 25 stocks (by MCAP) with a 4% alpha strategy using RSI/MACD models on backend.
- Backtested strategies incorporating technical indicators. Deployed model to Aurelius financial terminal for MVP & consumer use.

Machine Learning Research Intern @ Dartmouth Health E.D.I.T | *Python, HPC* **June 2023 - August 2023**
- Published in the F1000 and Zenodo Research journals (https://doi.org/10.5281/zenodo.10433067), presented to Cedars-Sinai.
- Constructed multimodal deep learning models to predict bladder cancer survival by analyzing structured (>123 million DNAm and HiTIMED) and unstructured data (>13 million Whole Slide Image patches) from large database —> Big Data Processing.
- Implemented and trained GCN on patch embeddings from WSIs. Deployed jobs on GPUs, HPC, and Cloud Computing Services.
- Presented at Stanford's Pacific Symposium on Biocomputing (PSB) 2024 and Dartmouth's EDIT ML 2023 final conference.

Projects & Competition Experience

Jane Street x Mathworks Math Modeling Challenge Champion | *Python, MATLAB* **March 2023 - April 2024**
- 2023 1st Overall Solution @ Jane Street, 2nd Technical Computing, Best Communication Skills; $22,500 scholarship (team of 5).
- Published solution paper in SIURO Journal Volume 16. DOI: 10.1137/23S1577213, siam.org/media/yzopwhsc/s157721r.pdf.
- Implemented ARIMA, Granger Causality, & Markov Chain models to quantify the impact of e-bike growth on industry/society.
- 2024 Runner-up + $15,000. Built Logistic Regression & VAR models to predict Seattle's housing supply and homelessness. Developed a 20-year housing plan to build 17,306 affordable houses, eliminating 90% of homelessness using 75% HUD budget.

PennApps XXIV: Best AI Hack | *Python, HTML5, CSS, JavaScript, React* **September 2023**
- Developed TheraSpeak, an AI-powered web app using reinforcement learning to provide real-time suggestions for suicide hotline responders. Built live transcription and automated counseling functionalities for fast, scalable support during peak traffic.

Awards & Honors

- **CMU MSCF x Quantbot Datathon Top 6** **March 2025**
- **Susquehanna (SIG) Discovery Day Program** **February 2025**
- **Goldman Sachs Engineering Possibilities Summit (Asset & Wealth Management)** **December 2024 - Present**
- **Microsoft x CMU Product Management Grand Prize Winner** **November 2024**
- **4x AIME Qualifier** | *Top 2.5%* **November 2020 - February 2024**
- **4x CyberPatriot Platinum Tier Qualifier→ 2024 National Semifinalist** **October 2020 - February 2024**
- **AP Macroeconomics Perfect Score |** *Top 35 out of 151,000 (top 0.02%)* **May 2023**

Skills

Software: Python, MATLAB, C, Java, C#, R, Azure, JavaScript, HTML, React, Flask, CSS, Linux, Bash, GitHub, Qiskit, HPC
Quantitative Skills: Discrete Math, Multivariable Calculus, Linear Algebra**,** Statistics, MACD, RSI, EMA, Probability Theory