Mihir Joshi

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Education

Columbia University **Expected: May 2027**
B.S. in Computer Science, Major GPA: 3.9/4.0 (Dean's List) *New York, NY*

Relevant Coursework

(for Graduate Level)*

- Operating Systems*
- Comp Architecture (TA)
- C++ Fundamentals
- Advanced Databases
- High-Performance ML*
- Systems Programming
- Discrete Math
- Linear Algebra

Awards

Accolades: HRT AlgoArena (*1st Place*), Columbia Poker Tournament (*20th Place*), IMC Prosperity 3 (*Peak Rank: 17th*), DIPP Stock Pitch Competition (*4th Place*), BAM Stock Pitch Competition (*Semi-finalist*)
Events Attended: Susquehanna Discovery Day, Chicago Trading Company 360 Discovery Day, Morgan Stanley Technology Insights

Work Experience

Quant Intern **June 2025 – August 2025**
Alta Fox Capital Management *Fort Worth, TX*

- Implemented custom AXIOMA risk-factor model via Goldman Sachs quant API, freeing 1% of capital for factor hedging on a $500M long/short book; backtested strategy increased idiosyncratic returns by 13%.
- Built a penalty-weighted position-sizing tool that cut portfolio risk by 30% while keeping market exposure steady during large-scale back-tests.
- Currently creating automated short-basket tool to run main book as market-neutral.

Software Engineering Intern **February 2024 – August 2024**
reAlpha, Inc *New York, NY*

- Spearheaded Python/SQL ETL & Streamlit dashboards for M&A pipeline; cut target-screen latency 10× and accelerated deal cycle 35%, closing 5 extra acquisitions.
- Co-built Python/scikit-learn recommendation system (k-nearest neighbors) matching 25-question buyer profiles to 9,000 listings; boosted inquiry click-through rate 38%.

Machine Learning Researcher **June 2018 – August 2024**
Oregon State University Socio-Environmental Analysis Lab *Corvallis, OR*

- Developed predictive models using Support Vector Machines and Random Forests to forecast the likelihood and seasonality of harmful algal blooms with up to 96% confidence; yielded Nash–Sutcliffe efficiency of 0.86.
- Awards: TEDx Speaker: Fish Out of Water: Predicting the Movement of Marine Protected Areas, Keynote Speaker at Institute of Continued Learning at Willamette University, 2022 Yale Young Global Scholar, Mu Alpha Theta Society Winner.

Co-Founder/CTO **June 2020 – August 2025**
Code With Me, LLC *Salem, OR*

- Founded and operated a coding education company teaching 300+ students how to code through virtual lessons involving Python, Scratch, and C, grossing $5,000 in its first year of operations.

Projects

(WIP) TradeLink: Networked Orderbook | *C++20, CMake, Linux Sockets API* | GitHub Repository **January 2025**

- Designed and implemented a basic orderbook matching engine capable of managing dynamic bid-ask prices and executing trades efficiently, tailored to financial market standards.
- Implemented a modular and extensible architecture, enabling support for additional order types (e.g., Good-Till-Cancel, Fill-Or-Kill) and customizable matching strategies for scalability

In-Kernel ML for OS | *eBPF, C++, PyTorch, Linux, LinnOS* **August 2025**

- Conducting research on autotuning hyperparameters for kernel schedulers—CFS, Round-Robin, FIFO—and analyzing resulting latency on process systems in Dr. Kostis Kaffes' lab

Skills

Languages: Python, C/C++, Java, R *(Professionally Certified)*, MongoDB, SQL, Vimscript, Lua, VBA
Developer Tools: CMake, Vi(m), Spark, Golang, Docker, Flask, LaTeX
Technologies/Frameworks: Pandas, PyTorch, Polars, Linux/UNIX, Git, GitHub, JUnit, SKLearn, NumPy
Other Skills: CFO of Lion Fund Capital Management (student-run hedge fund at Columbia University), Poker, Speedcubing, Puzzle Solving, Chess, Bhangra, Cello