

# Adarsh Pandey

ap2459@cornell.edu

New York, NY | [LinkedIn](#) | [Github](#)

cell: 607.697.4819

## EDUCATION

**Cornell University**, College of Engineering, Ithaca, NY  
Master of Engineering in Financial Engineering, *GPA: 4.1/4.0*

**Expected Dec. 2025**

**Indian Institute of Technology**, Dhanbad, India  
Bachelor of Technology in Mining Engineering, *GPA: 8.1/10*

**June 2022**

*Relevant Coursework:* Machine Learning, Stochastic Calculus, Big Data, Operations Research Tools in Finance, Fixed Income and Interest Rate Options, Portfolio Management, Market Microstructure, Monte Carlo Simulations, Volatility Surface Trading

## SKILLS

*Technical:* Python, R, SQL, Excel, C++, Git, Bash (SSH/Linux)

*Certifications:* **CFA Level III Candidate**, Bloomberg Market Concepts, Akuna Options 201

*Other Tools:* Bloomberg Terminal, Trading Technologies (TT), Stellar, Refinitiv Eikon

## EXPERIENCE

**Portfolio Associate Intern**, *Simplify Asset Management*, New York, NY **May 2025 to Present**

- Supported active trading across four high-profile strategies ~\$2B AUM (SVOL, BUCK, AGGH, SPUC), with exposure to VIX, rates, and equity derivatives, including swaptions, options, and futures. Monitored portfolio Greeks, leverage, and NAV in real-time to ensure alignment with risk constraints; proactively coordinated intraday portfolio adjustments.
- Collaborated with the quantitative research team to develop and refine in-house models for swaption pricing, scenario analysis, and QIS strategy replication based on proprietary backtesting frameworks and the official rule book; automated critical workflows to streamline trading operations, hedge and enhance efficiency.

**Senior Market Analyst [Rates Trader]**, *Axxela Research and Analytics*, Bengaluru, India **July 2022 to Mar. 2024**

- Traded a proprietary book of U.S., Australian, Canadian fixed income derivatives with a focus on short-term interest rate futures (SOFR, IR, BAX), managing up to 1000-lot positions, overseeing a margin account exceeding \$3 million.
- Collaborated closely with senior traders to optimize trade execution, manage portfolio risk, and enhance desk PnL.
- Executed yield curve, inter-market, and arbitrage strategies around key catalysts like FOMC, NFP, CPI, and Fed commentary; used quantitative models to identify profitable trades in futures spreads and butterflies.

**Research Assistant**, *SC Johnson School of Business*, Cornell University, NY **Dec. 2024 to Jun. 2025**

- Collaborating with Professor Mao Ye on market microstructure research; currently contributing to a working paper on "Repurchase Smoothing", leveraging LLMs and RAG to extract and analyze data from SEC 10-K and 10-Q filings.
- Wrote and deployed code on cloud-based server infrastructure for processing over 500GB of data with LLMs.

## PROJECTS

**Regime Shifts and Multi-Asset Forecasting**, *Vanguard Asset Management* **May 2025 to Present**

- Engineering a regime-switching model using macroeconomic and market data (e.g., GDP, inflation, equity/FX returns) to forecast asset class performance across identified macro regimes, leveraging Python and machine learning.
- Partnering with Vanguard's Investment Strategy Group to design dynamic asset allocation strategies, developing regime-based signals and optimal asset exposures for implementation-ready multi-asset portfolios.

**Dynamic Portfolio Allocation Using Deep RL**, *Cornell University* (🔒) **Jan. 2025 to May 2025**

- Engineered and evaluated a DRL-based portfolio optimization strategy that outperformed or matched traditional MVO benchmarks across diverse market regimes, incorporating realistic transaction costs and rebalancing constraints.
- Built a backtesting pipeline with rolling-window evaluation, volatility features and key risk metrics including Sharpe ratio, VaR; leading to deep insights on DRL's adaptability and performance trade-offs in varying financial regimes.

## LEADERSHIP EXPERIENCE

**Vice Captain (Tennis) and Creative Head**, *Sports Council, IIT Dhanbad* **Aug. 2019 to May 2022**

- Led the university lawn tennis team of eight as the Vice Captain at various inter college tournaments.
- Designed the official team jersey and banners; organized PARAKRAM, one of the largest sports fests in Eastern India.

## INTERESTS

Filmmaking, Poker, Photography, Lawn Tennis, Guitar