

Varun Srinivasarao Budati

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EDUCATION

Virginia Tech, Blacksburg, Virginia	Aug 2023 – May 2027
B.S. in Computer Science	GPA: 3.59/4.0
Minor in Mathematics & Finance	In-Major GPA: 3.76/4.0
CFA Level 1 Candidate	

SKILLS & COURSEWORK

Programming Languages: Python (5 years), MySQL (2 years), Java, C/C++, JavaScript, HTML/CSS, x86, Matlab

Frameworks & Libraries: NumPy, Pandas, Matplotlib, Plotly, Sklearn, Seaborn, SciPy, React, Node.js, Flask

Developer Tools & OS: Git, Docker, AWS, Linux/Unix

Coursework: Machine Learning for Finance, Data-Driven Decision Making, Statistical Simulation, Data Structures & Algorithms

Certifications: Financial Analysis (Power BI), Akuna Capital Options 201 (ID: 92400251)

WORK EXPERIENCE

Quantitative Researcher, Dataism Lab for Quantitative Finance - Virginia Tech, Blacksburg, Virginia October 2024 – Present

- Collaborating with two researchers on Order Execution & Optimization research, focusing on market microstructure analysis and implementation of trading strategies.
- Constructed execution algorithms in Python, including VWAP (Volume Weighted Average Price) and TWAP (Time Weighted Average Price), to analyze market impact and transaction costs.
- Applied reinforcement learning methods (e.g., PPO, DDQN) using Python libraries to optimize trading strategy execution.
- Modeling quantitative performance using statistical methods and Python (NumPy, Pandas, SciPy) to analyze trade execution efficiency and market dynamics.

PROJECT WORK

Sports Betting Algorithm & Analytics System August 2024 – Present

- Created a Python-based sports prediction algorithm using NumPy and Pandas for data analysis, achieving exceptional ROI by turning \$10 into \$850 through systematic execution and statistical edge identification
- Implemented real-time data processing pipeline using commercial sports APIs and Requests library, leveraging Pandas DataFrames for efficient player statistics management and SciPy/statsmodels for probability calculations
- Developed performance tracking dashboard using Matplotlib/Seaborn for visual analysis of ROI trends and player metrics, while implementing an automated risk management system for optimal bankroll allocation

Momentum Trading Strategy Development May 2024 - August 2024

- Developed a momentum trading strategy using Python, fetching historical stock data, and implementing technical indicators (MACD, RSI) to generate buy and sell signals
- Backtested the strategy on historical data, utilizing Pandas for data manipulation and Matplotlib for visualization
- Performance comparison between strategy returns and buy-and-hold returns Candlestick charting with overlaid technical indicators and trade signals Portfolio value tracking based on simulated trades

EXTRACURRICULAR

IMC Prosperity 3 | Top 0.005% April 2025

- Placed 15th in the US out of 12,600 teams in IMC's Prosperity 3 trading competition, designing strategies for multi-asset markets
- Optimized trade execution under latency constraints by engineering fair value estimators (using VWAP, EMA, stochastic modeling) and implementing dynamic bid shading.
- Designed signal-driven market-making strategies by analyzing mean-reversion patterns and synthetic mispricing via EDA (rolling z-scores, spread compression, correlation clustering)

Group Lead, FinTech Club, Virginia Tech, Blacksburg, Virginia October 2024 - Present

- Led a project under Dr. Daniel Rodriguez replicating Evans & Archer (1968) via Python simulation, analyzing portfolio diversification and risk reduction.
- Utilized Pandas, NumPy, and SciPy on historical stock data to model risk (std dev log returns) vs. portfolio size, quantifying diversification benefits.
- Presented findings confirming that most unsystematic risk is mitigated with 10-20 assets, aligning with the foundational study

Winner of Brick Math Olympiad, Kuwait City, Kuwait October 2020

Awarded Distinction in the National Math Olympiad, Kuwait City, Kuwait November 2021