Varun Srinivasarao Budati

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EDUCATION

Virginia Tech, Blacksburg, Virginia   Aug 2023 – May 2027
B.S. in Computer Science   GPA: 3.51/4.0
Minor in Mathematics & Finance   In-Major GPA: 3.65/4.0

SKILLS & COURSEWORK

Programming Languages: Python (5 years), MySQL (2years), 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
- Implementing various execution algorithms and optimization methods in Python to understand market impact and transaction costs
- Conducting comprehensive literature review on market making strategies and optimal execution techniques
- Developing quantitative models to analyze trade execution efficiency and market dynamics using statistical methods and Python

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
- 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.

Winner of Brick Math Olympiad, Kuwait City, Kuwait   October 2020
Awarded Distinction in the National Math Olympiad, Kuwait City, Kuwait   November 2021