

Varun Srinivasarao Budati

Blacksburg, VA | varunsb@vt.edu | +1 (571)-830-0505 | varunbudati.github.io | linkedin.com/in/varun-budati

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

CORE SKILLS

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.

Spoken Languages: English, Hindi, Telugu, Sanskrit.

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 \$640 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

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.

Declared Winner of Brick Math Olympiad, Kuwait City, Kuwait

October 2020

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

November 2021

Courses & Certifications

Relevant Coursework: Machine Learning for Finance (Python), Data-Driven Decision Making, Statistical Simulation (Python)

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