Varun Srinivasarao Budati

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EDUCATION

Virginia Tech, Blacksburg, Virginia — Aug 2023 – Present
B.S.in Computer Science + Minor in Mathematics & Finance — GPA: 3.47/4.0

CORE SKILLS

Programming languages: Python (4years), SQL (2years), Java, C/C++, JavaScript, HTML/CSS, x86 and Matlab.

Libraries: NumPy, Pandas, Matplotlib, Plotly, Sklearn, Seaborn, SciPy.

Languages: English, Hindi, Telugu, Sanskrit.

WORK EXPERIENCE

Quantitative Researcher, DLQF Lab - Virginia Tech, Blacksburg, Virginia — October 2024 – Present

- Currently developing expertise in machine learning applications for finance through structured coursework, focusing on regression models, classification, and algorithmic trading strategies
- Learning statistical simulation techniques including Monte Carlo methods and portfolio optimization using Python
- Conducting ongoing literature review on Order & Execution Optimization to understand market microstructure and trading algorithms
- Building foundational skills in financial time series analysis and quantitative methods through hands-on Python programming

Research Assistant, REACH Lab - Virginia Tech, Blacksburg, Virginia — March 2024 – Present

- Conducted an extensive literature review under the leadership of Dr. Ihudiya Finda Williams, on a focused project on Rural Computer Science Education.
- Synthesized over 50+ articles and papers across libraries in computing, education in reparation of $500,000 National Science Foundation grant.
- Trained 6 research assistants on different methods of searching through databases, provided tools, methodologies for prompt queries and Literature Reviews.

Web Developer, Intern, The Amricani Cultural Centre, Kuwait City, Kuwait — June 2021 – September 2021

- Designed and created 5 interactive web-pages for young museum visitors, featuring sequential exhibit zones with QR codes for historical information about Kuwait.
- Developed 8 puzzles and games using cardboard pieces and silhouettes.
- Designed 3 interactive tools like query boards/trivia questions to enhance children's learning of Kuwait and Al-Sabah exhibit history.

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 $510 (51x return) 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 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

AWARDS

Declared Winner of Brick Math Olympiad, Kuwait

Awarded Distinction in the National Math Olympiad, Kuwait