Sashvad (Sachin) Satishkumar

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Education

University of Maryland (College Park) Expected Graduation Date: May 2026

Bachelor of Science in Computer Science and Mathematics, Minor in Data Science *College Park, MD*

- **GPA:** 3.83/4.0, Dean's List, President's Scholarship Recipient
- **Related Coursework:** Computer Systems, Discrete Mathematics, Linear Algebra, Object-Oriented Programming I, Object-Oriented Programming II (Data Structures & Algorithms)
- **Activities:** AWS Club, Apex Fund, BigTh!nk AI, Bitcamp, Google Developer Student Club, XFoundry@UMD

Experience

Sentinel Capital Philadelphia, PA

AI Quant Developer *Mar 2024 – Present*

- Engineered an Expert Advisor (EA) in MQL4/MQL5, integrating the A-Gimat Reversal (AGR) indicator to enhance automated forex trading decisions, improving entry and exit timing, reducing execution latency by 35%
- Developed a Python-MetaTrader 5 pipeline using ZeroMQ, leveraging machine learning models and the Buy Sell Magic (BSM) indicator to confirm trend reversals, achieving a 30% increase in trade prediction accuracy

University of Maryland - Apex Fund College Park, MD

Junior Quantitative Analyst *Jan 2024 – Present*

- Pioneered an automated system that harnessed NLP models (BERT, GPT-4, Llama 3) to extract and analyze quantitative strategies from research papers, resulting in a 92% relevance scoring accuracy
- Streamlined the trading analysts' workflow by implementing optimized preprocessing techniques and harnessing Python-based AI frameworks, cutting analysis time by 70%

George Mason University - Department of Geospatial Information Sciences Fairfax, VA

Geospatial Science Research Intern *Mar 2022 – Nov 2023*

- Spearheaded the enhancement of agent-based geospatial data processing by developing advanced Python frameworks, leading to a 25% boost in operational efficiency and a 30% improvement in prediction accuracy
- Analyzed 1.1 million SafeGraph data points using empirical analysis, integrating large-scale mobility datasets with synthetic social network generation, which reduced processing time by 40%

Dartmouth Health - Emerging Diagnostic and Investigative Technologies Hanover, NH

Bioinformatics/Pathology Research Intern *Mar 2021 – Aug 2023*

- Utilized Python, R, and MATLAB to advance tumor identification techniques by developing and implementing novel algorithms, leading to a 30% increase in diagnostic accuracy
- Leveraged TensorFlow/PyTorch frameworks to analyze 12+ terabytes of data with advanced AI/ML methodologies, creating automated systems that reduced processing time by 40%

Projects/Publications

Omics Deep Ordinal Regression Staging Models | *Python, Tensorflow, Keras*

- Achieved an 86% accuracy rate in cancer stage prediction by implementing advanced ordinal regression modeling across multiple cancer subtypes, utilizing sparse neural network layers for efficient predictor constraint
- Increased efficiency by 75% and diagnostic precision to 89% by leveraging convolutional neural networks to model intricate disease pathways, outperforming traditional methods in accuracy and time-efficiency

ArcticAI: Development of MOHS 3D Laboratory Automation | *Python, OpenMVG*

- Improved real-time surgical resection of tumor tissue, increasing standard-of-care efficiency by 150%; used cloud/3D construction libraries (OpenMVG and Neural Recon), implementing image segmentation and web development

Human Mobility-Based Synthetic Social Network Generation | *Python, Pandas, NetworkX*

- Engineered agent-based mobility simulations that integrated dynamically evolving social networks, enabling realistic modeling of complex human interactions/mobility patterns and increasing simulation accuracy by 60%

Technical Skills

Languages: C, C#, C++, CSS, Java, Julia, LaTeX, MATLAB, HTML, Python, R, RStudio, Swift, SQL
Frameworks/Libraries: Flask, Keras, Node.js, NumPy, Pandas, PyTorch, React.js, Scikit-Learn, TensorFlow
Developer Tools/Technologies: AWS, Lambda, Git, Ubuntu, Unix, Sagemaker, VS Code,