

Sashvad Satishkumar

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EDUCATION

University of Maryland

Bachelor of Science in Computer Science and Mathematics, Minor in Data Science

Expected - May 2027

College Park, MD

- Academic Distinctions: Dean's List [All Semesters], President Scholarship, Perplexity Campus Partner — **GPA:** 3.84

- Relevant Coursework: Algorithms, Advanced Data Structures, Android Development, Compilers, Data Science, Organization of Prog. Languages, Computer Systems, Discrete Structures, Linear Algebra, Human-Computer Interaction

Thomas Jefferson High School for Science and Technology

2019–2023

SKILLS/CERTIFICATIONS

Languages: Python, TypeScript, Go, Rust, Java, C/C++, C#, SQL, Bash, JavaScript, HTML, CSS

Certifications: AWS Certified Cloud Practitioner, AWS Certified Solutions Architect, AWS Certified Developer

Frameworks & Libraries: React, Next.js, Node.js, Flask, FastAPI, LangChain, PyTorch, Hugging Face, Scikit-learn

Developer Tools: Docker, Kubernetes, Git, GitHub, VSCode, Postman, Jupyter, Nginx, Firebase, CI/CD, Terraform

Platforms & Cloud: AWS, GCP, Azure, Supabase, Pinecone, Redis, PostgreSQL, MongoDB, MySQL, NoSQL

EXPERIENCE

Capital One

McLean, VA

Software Engineering Intern

Aug 2025 – Present

- Architected a FastAPI gateway routing LLM traffic across providers, cutting latency **55%** (to **90ms**) via connection pools
- Implemented REST APIs with auth, configs, and feature flags so product teams could safely roll out new model routes
- Built a distributed Redis cache with LRU eviction, cutting redundant calls by **40%** and saving **\$2.1M** in annual cloud costs
- Hardened system reliability by writing Pytest suites, defining OpenAPI specs, and configuring Grafana alerts for prod.

AnaVation LLC

Chantilly, VA

Software Engineering Intern

May 2025 – Aug 2025

- Engineered a satellite analysis platform (Flask, React) to query and filter feeds, rendering live map data **2.2x** faster.
- Deployed serverless microservices on AWS Lambda to serve vision models (YOLOv5), handling a 5x spike in daily traffic.
- Enabled GPT-4o vision search with LangChain, Pinecone so analysts query **10k+** mission scenes using natural language
- Orchestrated CI/CD pipelines via GitHub Actions and Docker, automating testing to ensure zero-downtime production builds

Sentinel Capital

Philadelphia, PA

Quantitative Software Engineer/Developer

Mar 2024 – May 2025

- Engineered signal generator (LLaMA+Pandas) yielding **22%** net alpha across **1.2k+** MT5-executed trades via NLP logic
- Added ZeroMQ, scikit-learn streaming with Python backtests so PMs and risk teams shipped **3.2s→730ms** latency strategies

George Mason University - Department of Geospatial Information Sciences

Fairfax, VA

Software Engineering Intern

Mar 2022 – Nov 2023

- Built GeoPandas, PySAL data pipelines 25% faster on 50+ regions, raising clustering accuracy from **78.3%** to **91.2%**
- Refactored lab scripts into modular Python packages with configs, tests, Git, onboarding graduate researchers to use them

PROJECTS

AI Recruiter Agent: Automated Candidate Intelligence Platform | FastAPI, Docker, spaCy, OpenAI GPT-4

- Built FastAPI and Docker microservices with async PostgreSQL and Redis to aggregate GitHub, LinkedIn, and resume data
- Used spaCy NLP, PyGithub, and SerpAPI to extract skills + social signals, cutting manual screening by **95%** for **200+** leads
- Integrated GPT-4 prompt engineering to merge web, resume data into structured candidate profiles for recruiter dashboards

ProTechXion: Real-Time Shooter Detection & Evacuation System | React Native, Swift, YOLOv11, Firebase

- Developed iOS app in React Native/Swift that detects shooter events and surfaces evacuation routes in under **6s**
- Built visual pipeline using YOLOv11 + ByteTrack and audio spectrogram-CNN models for real-time threat detection
- Integrated Firebase and Google OAuth for role-based access and Twilio API for automated **911** calls and alerts

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

- Built 3D tumor margin reconstruction with OpenMVG + NeuralRecon; improved scan resolution by **68%** on avg dataset
- Dockerized segmentation pipeline via OpenCV, increasing image throughput **2.5x** and reducing manual labeling by **50%**

PUBLICATIONS/AWARDS

Human Mobility-Based Synthetic Social Network Generation — ACM SIGSPATIAL 

TACS: Highway Surveillance Dataset for Traffic Analysis — IEEE BigMM 

2nd Place, AI & Sustainability Track — Johns Hopkins AI Policy Hackathon 