

Sriaditya Vedantam

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SUMMARY OF QUALIFICATIONS

Software Engineer with research engineering experience designing and optimizing data-driven systems, backend services, REST APIs, automation workflows, and scalable systems. Background in machine learning systems, cybersecurity, and research-driven development with a focus on operational efficiency, compliance, and cross-functional collaboration.

TECHNICAL SKILLS

Languages: Go, Python, Java, C, C++, C#, SQL, NodeJS, JavaScript, React, PowerShell, Bash

Systems & Infrastructure: Linux/Unix, Windows, macOS, Windows Server, System Configuration, Automation Workflows

DevOps & Automation: RESTful APIs, CI/CD Concepts, Selenium Automation, Shell Scripting, Infrastructure as Code,

Data & ML Systems: PyTorch, TensorFlow, OpenCV, Scikit-learn, Natural Language Processing, Deep Learning

Databases: PostgreSQL, MySQL, SQL Server, Oracle, MongoDB

Security & Networking: CompTIA Security+ (2021), Network Fundamentals, Secure Systems Practices, Cloud Platforms

Tools: Git, AWS, Azure, Version Control, Jupyter, MATLAB

WORK EXPERIENCE

Small Satellite Research Laboratory – Data Science Team Lead Researcher August 2024 - Present

- Designed and optimized ML/data pipelines for satellite imaging systems
- Led a team of 12 engineers, defining technical milestones and coordinating cross-functional system development
- Implemented and tuned neural network systems (NeRF, computer vision pipelines) with focus on scalability and computational efficiency
- Supported heterogeneous computing environments (GPU/CPU systems) for model training and deployment
- Translated research requirements into deployable systems while meeting contract deadlines with NASA and Air Force

University of Georgia – Parking Operations Representative March 2024 – Present

- Engineered an automation pipeline using Selenium to execute 40,000+ system tasks, eliminating a 6-month operational backlog
- Improved system reliability and reporting accuracy through repeatable workflow design
- Resolved system bottlenecks with 800% efficiency increase in operational and reporting processes
- Maintained compliance with financial and operational data handling standards
- Applied secure design principles when implementing systems and automation workflows

University of Georgia – Directed Reading Program Researcher January 2023 – Present

- Implemented elliptic curve cryptography (ECC) algorithms and evaluated vulnerabilities in modern cryptographic systems
- Studied post-quantum cryptographic approaches and analyzed system-level security implications
- Translated research into working programs utilizing publications while experimenting with alternative solutions

University of Georgia – Undergraduate Researcher (Mathematics & Cryptography) August 2024 – December 2025

- Applied algebraic and cryptographic theory to computational implementations supporting secure system design
- Analyzed mathematical structures underlying cryptographic algorithms and system security
- Produced research-backed implementations bridging theoretical models and practical computation

ImaginaryCTF – Board Member November 2020 – May 2023

- Designed and deployed cryptography-based security challenges based on real-world vulnerabilities
- Supported large-scale distributed competition infrastructure with 60,000+ participants
- Coordinated system reliability, deployment, and operational logistics across global users
- Collaborated with security researchers to simulate realistic attack scenarios

PROJECT EXPERIENCE

- Developed backend services and REST APIs in Go and Python with PostgreSQL and MongoDB for structured data storage and retrieval.
- Created automation and system integration code with Go, primarily for backend tooling, concurrent processing, and service development.
- Built full-stack applications with React and Node.js, including API design, database integration, and wireframe models.
- Built a Java route-mapping application that applied Dijkstra's algorithm and Eulerian circuit logic to model pathfinding and traversal behavior.

EDUCATION

University of Georgia – Bachelor of Science, Computer Science & Mathematics
Concentration, Theoretical Computer Science, Cybersecurity & Pure Mathematics

May 2026