

Vincent Song

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EDUCATION

University of Virginia, School of Engineering and Applied Sciences – Charlottesville, VA

M.C.S., Computer Science | **GPA:** 4.0 / 4.0

August 2025 – May 2026

B.S., Computer Science | **GPA:** 3.835 / 4.0, **Honor:** Highest Distinction

August 2021 – May 2025

Relevant Coursework: Data Structures & Algorithms, Database Systems, OS, Internet-Scale Applications, Generative AI, NLP

PROFESSIONAL EXPERIENCE

Software Engineer Intern, [MITRE](#), McLean, VA

May 2025 – Present

- Built RESTful APIs with AWS API Gateway, Lambda, and EKS, converting Oracle schemas into optimized SQL tables and queries and generating JSON payloads for 2,500+ enterprise users.
- Migrated a legacy desktop application to a scalable web platform with OpenAPI 3.0 compliance and OAuth 2.0 SSO.
- Developed frontend in React/TypeScript with dynamic tables, filtering, form validation, accessibility compliance, and local storage.
- Maintained Angular/Django microservices with PostgreSQL integration and Dockerized deployments.

Software Engineer Intern, [ST Engineering iDirect](#), Herndon, VA

May 2024 – August 2024

- Maintained C++ components and GUI for Intuition, a cloud-based network management system, managing network resources with ~90% allocation efficiency.
- Validated backend APIs with GraphQL/REST across JSON payloads and database schemas.
- Automated testing/deployment with Python, Docker, Jenkins, Kubernetes, and AWS, reducing CI/CD failures by 20%.

Software Engineer, [theCourseForum](#), Charlottesville, VA

September 2023 – May 2024

- Built frontend/backend features for theCourseForum, a course review and grade analytics platform, serving 20,000+ students using Python, Django, PostgreSQL, Docker, and AWS.
- Integrated a SIS API for 1,500+ courses, eliminating manual data updates and significantly improving data freshness and reliability.

Engineer Intern, [Vali Cyber](#), Charlottesville, VA

June 2023 – July 2023

- Enhanced ZeroLock, an AI threat detection system, by automating Linux commands and network monitoring to detect threats using Python, Bash, and Linux.
- Automated deployment of enterprise services in Docker and bare-metal Linux environments, ensuring reliability across configurations.
- Built testing and reporting pipelines to validate system responses and generate actionable threat reports using Python and Linux tools.

PROJECTS

The Daily Bugle

- Built a scalable full-stack web application for authors and readers featuring full-text search, category discovery, image uploads, and CRUD workflows.
- Designed and implemented microservices for Authentication, Articles, and targeted Ads using Node.js, Express, and MongoDB.
- Deployed containerized services with Docker and Kubernetes behind Apache HTTP Server, enabling session tracking and personalized ad delivery.

UVA Tour Guide App

- Built and deployed a full-stack web application using Python, Django, and PostgreSQL to provide campus locations, user reviews, and ratings to 4,000+ first-year students.
- Enabled sorting and discovery of top-rated campus locations with interactive, map-based navigation using Google Maps API and Google Login for secure authentication.
- Designed end-to-end backend and frontend workflows to support real-time data access and persistent user sessions.

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, JavaScript/TypeScript, SQL, HTML5, CSS

Technologies: Node.js, Express, Django, Spring Boot, .NET, REST APIs, GraphQL, React, Angular, TensorFlow, PyTorch, Scikit-learn, PostgreSQL, MongoDB, MSSQL, Neo4j, AWS, Docker, Kubernetes, Git

CERTIFICATIONS

AWS Certified Developer – Associate, Amazon Web Services (AWS)

August 2024

Neo4j Certified Professional, GraphAcademy

August 2025