Vincent Song

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https://aboutvincentsong.github.io | https://linkedin.com/in/vincentsong | https://github.com/vsong15

EDUCATION

University of Virginia, School of Engineering and Applied Science | Charlottesville, VA

Master of Computer Science (M.C.S.), UVAccelerate Program .... August 2025 – May 2026

Bachelor of Science (B.S.), Computer Science, Highest Distinction | Cumulative GPA: 3.835/4.0 ... August 2021 – May 2025

Relevant Coursework: Data Structures/Algorithms, Computer Systems/Organization, Operating Systems, Database Systems, Advanced Software Development Techniques, Internet Scale Applications, Machine Learning, Natural Language Processing

WORK EXPERIENCE

Software Engineer Graduate Intern (Interim DoD Secret Clearance) | MITRE Corporation | McLean, VA ..... May 2025 – Present

- Modernized cloud and software systems in an Agile team by designing a multi-tier API architecture, reviewing OpenAPI 3.0 specs, and implementing OAuth 2.0 for secure integration.
- Built and deployed RESTful APIs with AWS Gateway, Lambda, and EKS, converting legacy Oracle schemas into JSON payloads and supporting Dockerized CI/CD pipelines.
- Delivered an MVP web app with React, Node.js, and Material UI, including local storage handling, dynamic tables, dropdown filters, form validation, 508 Compliance, and SSO via AWS API Gateway.
- Contributed to an additional project using Angular, Django, and Docker for full-stack development and containerized deployments through Swagger API documentation and OSANO integration.

Software Engineering Intern | ST Engineering iDirect | Herndon, VA .... May 2024 – August 2024

- Contributed to Intuition 1.0 development and maintained C++ code for the Virtual Protocol Processor's PP_GSR component, managing terminal resource assignments over the TAF interface.
- Configured Chiefs Network NMS and Resource Loading Tool templates, validating data integrity via GraphQL API queries/mutations, JSON objects, database schemas, and HTTP responses.
- Automated NMS IGMP processes with Python and Flexo, leveraging Docker, Jenkins, and OpenShift for CI/CD pipelines and managing Kubernetes client secrets on AWS EC2.

Computer Systems/Organization 1 Teaching Assistant | University of Virginia | Charlottesville, VA ..... January 2023 – May 2024

- Developed and improved technical workflows for the course, including configuring Linux environments, assisting with x86 Assembly, Java, and C/C++ assignments, and optimizing grading and lab support processes.
- Provided detailed feedback to 500+ students on programming assignments, led 6 hours/week of review sessions, labs, and office hours, and collaborated with faculty to enhance teaching strategies and student learning outcomes.

SKILLS

- **Languages:** Python, Java, C, C++, C#, JavaScript, TypeScript, SQL, x86 Assembly, AArch64, HTML/CSS, Bash, YAML
- **Frameworks & Libraries**: React, Angular, Node.js, Django, ASP.NET Core, Spring Boot, GraphQL, Scikit-learn, TensorFlow, PyTorch, Pandas, OpenCV, Vite
- **Tools & Platforms:** Git, VS Code, Linux, Docker, Kubernetes, AWS, Azure, PostgreSQL, MongoDB, MSSQL, Neo4j, Postman, Heroku, Apache

PROJECTS

HoosVision: Smart Text Recognition for Busy UVA Students .... January 2025 – May 2025

- Developed a smart text recognition algorithm for UVA students to extract text from cluttered and distorted environments, including to-go orders, posters, and local signage, leveraging scene text models (ResNet50, EAST) and preprocessing techniques (HOG, image filtering) to enhance OCR accuracy for both English and Vietnamese text.

UVA Tour Guide App: Enhancing Student Navigation and Engagement .... September 2023 – December 2023

- Led an Agile team of 5 as Scrum Master to develop a web application for 4,000 first-year UVA students, implementing Google Login and Maps API with Python and JavaScript, designing user interfaces for regular users and admins, managing tasks via GitHub issues, and deploying the project to Heroku with GitHub Actions under the MIT license.

ACTIVITIES AND LEADERSHIP

Webmaster/Club Executive | UVA Google Developer Student Groups | Charlottesville, VA .... January 2024 – Present

- Developed and deployed the UVA GDG website using Next.js and React on Firebase, giving 250+ members access to resources and events, while collaborating with executives on planning and engagement.

Engineering Team Software Developer | theCourseForum | Charlottesville, VA .... September 2023 – May 2024

- Developed features for theCourseForum, serving 1,000+ users, with Python, Django, and Docker; integrated SIS API for 1,500+ courses, improving user experience through documentation and testing.

CERTIFICATIONS

- AWS Certified Cloud Practitioner (Jun 2022), Microsoft Certified: Azure Fundamentals (Aug 2022), AWS Certified Developer Associate (Aug 2024), Foundational C# with Microsoft (Jan 2024), Neo4j Certified Professional (Aug 2025)