

Vincent Song

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EDUCATION

University of Virginia, Charlottesville, VA

Master of Computer Science (M.C.S.), UVAccelerate Program

August 2024 – May 2026

Bachelor of Science (B.S.), Computer Science | Cumulative GPA: 3.796/4.0

August 2021 – May 2025

- **Relevant Coursework:** Data Structures & Algorithms 1 + 2, Computer Systems & Organization 1 + 2, Advanced Software Development Techniques, Internet Scale Applications, Database Systems, Machine Learning

WORK EXPERIENCE

Software Engineering Intern | ST Engineering iDirect | Herndon, VA

May 2024 – August 2024

- Worked with Agile NetDev engineering team for Intuition 1.0 and C++ codebase for Virtual Protocol Processor's PP_GSR component that requests and responds to terminal resource assignments over the TAF interface.
- Configured Chiefs network NMS and Resource Loading Tool template YAML files, validated data integrity using NMS GraphQL API queries/mutations utilizing JSON objects, database schemas, and HTTP response verification.
- Developed and executed Python scripts to automate NMS IGMP processes using Flexo framework for network and data layer (layer 2/3). Used Docker for containerization and Jenkins for continuous integration and deployment.
- Managed OpenShift cluster to setup NMS by obtaining Kubernetes client secrets from AWS EKS and accessing Pulse admin interface and protocol processor servers for network information in options files.

Software Engineer | theCourseForum | Charlottesville, VA

September 2023 – May 2024

- Developed features for theCourseForum website for 1,000+ users, with frontend and backend components, utilizing Python, Django, and Docker. Addressed website issues with GitHub and delivered impactful solutions via pull requests.
- Integrated new SIS API to retrieve course information for 1,500+ courses from all departments to enhance user experience and added proper documentation and testing.
- Participated in weekly meetings, fostering collaboration with the engineering team to compromise and resolve challenges.

Teaching Assistant | University of Virginia | Charlottesville, VA

January 2023 – December 2023

- Created recommendations for online queue system by discussing with professors on improvements and features for the UI to assist TAs in helping students during office hours to manage and clear the queue for busy office hours reaching 50+ capacity.
- Provided personalized feedback for over 500+ students on their Linux, x86 Assembly, and C/C++ assignments and projects, helping them improve their technical and problem-solving skills. Collaborated with faculty to create new approaches to teaching challenging concepts and led review sessions, labs, and office hours 6 hours per week to support student learning.

Engineer Intern | Vali Cyber | Charlottesville, VA

June 2023 – July 2023

- Developed an automated Quality Assurance system involving extensive automation of Linux machines via Bash scripting, networking principles, and service administration for over 100+ endpoint security tests.
- Organized the automation of creating/removing enterprise services in Docker and bare metal configurations on testing machines with different Linux versions, ensuring their accessibility to customers while operational.
- Automated administrative actions on Linux servers, emulating real-world business operations, and implemented a robust testing process that ensures services are up, responding as expected, and producing a report on the results, including any false positives, documented in 10+ reports for security improvements.

SKILLS

- **Languages:** Python, Java, C/C++, C#, JavaScript, TypeScript, SQL, PHP, HTML, CSS, Bash, YAML, MATLAB, R
- **Tools:** Git, VS Code, Linux, Docker, Kubernetes, OpenShift, Jenkins, PostgreSQL, AWS, Azure, Heroku, Bitbucket, Jira
- **Frameworks:** React, Django, Node.js, .NET Core, Flask, Ruby on Rails, GraphQL, JavaFX, Bootstrap, JUnit 5, Pytest

PROJECTS

UVA Tour Guide App

September 2023 – December 2023

- Implemented the Google Login & Google Maps API with Python and JavaScript to provide roughly 4,000 first year students with access to location information around grounds for different activities stored in PostgreSQL database, implementing the user interface for both regular users and admins.
- Developed a review system and review ranking algorithm for users to submit reviews and admin users to approve reviews providing separate home screens for both users and providing CRUD functionality and following REST principles.
- Served as scrum master for Agile team consisting of 5 members, guiding weekly sprints, and splitting up features into tasks through GitHub issues, deployed project to Heroku with GitHub Actions, and released the software under the MIT license.

CERTIFICATIONS

- **AWS Certified Developer – Associate**, Amazon Web Services (AWS) August 2024
- **Microsoft Certified: Azure Fundamentals**, Microsoft August 2022
- **AWS Certified Cloud Practitioner**, Amazon Web Services (AWS) June 2022