Ajay Kristipati

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Education

North Carolina State University, Raleigh, NC **08/2021 - 12/2023**

Masters in Computer Science

University of Washington, Seattle, WA **09/2018 - 06/2021**

Bachelor of Science in Computer Science, Minor in Mathematics

Work Experience

Cisco, Software Engineer **08/2021 - Present**

- Developed and integrated features in Cisco products to achieve federal security certifications including **FIPS** and IPv6 in order to increase public-sector sales revenue by 20%
- Improved security for Department of Defense applications by implementing **Post-Quantum Cryptography** in **AnyConnect VPN**, improving alignment with federal standards
- Integrated IPv86 support into the Identity **Services Engine (ISE)** to broaden network protocol capabilities
- Established a comprehensive testing environment for **Linux Kernel** Modules across diverse system configurations
- Streamlined company-wide security efforts by packaging cryptographic utilities across Cisco offerings like **Cisco Unified CallManager (CUCM)** and **Integrated Service Router (ISR)** to meet FIPS standards
- Backported changes to **RSA** from **OpenSSL** 3.x to **OpenSSL** 1.1.x in order to maintain FIPS Compliance
- Maintained internal versions of **OpenSSL** and **OpenSSH**, and Python for use across Cisco products across business units

IBM, Full-Stack Development Intern **06/2019 - 08/2019**

- Member of IBM Product Development team, focusing on Talent Management and Virtual Training systems for global employees.
- Created educational software integrating **Docker** and **RHEL** into training modules, improving in course completion rates by 30%.

Projects

2026 CKC Badge github.com/lockfale/cackalackybadgy2026-dev/

- Member of the team that developed the official conference badge for the CKC Security Conference in Raleigh, NC
- Used **C** to write firmware for **ESP32**-based badges, in order to handle WiFi connectivity and communication with the backend servers using **GRPC** and **MQTT**
- Used **Kubernetes** to run backend servers for the event, and protecting system integrity from adversarial attacks

PGP2OpenSSH github.com/kasi-kothimira/pgp2openssh

- A **Rust** Utility to convert **PGP** keys to **OpenSSH** format, enhancing interoperability between encryption systems

Mirafetch github.com/ArgentumCation/mirafetch

- Created a high-performance cross-platform system monitoring tool in **Rust**, achieving an 8000% performance boost over similar tools through optimized multithreading.

Homelab

- Built a high-availability container and VM infrastructure using **Kubernetes** and **Proxmox**, achieving fault tolerance and efficient resource distribution with reproducible **Nix** configurations
- Implemented a distributed storage system using **Longhorn**, to ensure data redundancy and high availability across multiple nodes

Music Queuing Application github.com/kasi-kothimira/MusiQueue

- Developed a Web application to allow groups of people to collaborate on creating playlists at social gatherings
- Created **React**-based frontend, with **Firebase** backend for real-time updates and data storage

Technical Skills

Programming Languages: C, C++ C#, Go, Java, JavaScript, TypeScript, Python, Rust, Swift

Technologies: Agile, Bash, Ceph, Docker, Flask, Jenkins, Kubernetes, Linux, Nix, Proxmox, React