

# Ajay Kristipati

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## Education

### North Carolina State University - Raleigh, NC

08/2021 - 12/2023

Masters in Computer Science with Concentration in Cybersecurity

### University of Washington - Seattle, WA

09/2018 - 06/2021

Bachelor of Science in Computer Science

## 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 **IPv6** support into the **Identity Services Engine (ISE)** to broaden network protocol capabilities
- Implemented an **automated regression testing framework** for out-of-tree **Linux kernel modules** across diverse platform configurations and kernel ABIs
- 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 50+ teams

### 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 course completion rates by 30%.

## Projects

### 2026 CKC Badge

Dec 2025 - May 2026

- 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

Nov 2025

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

### Mirafetch

Jul 2023 - Present

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

### Homelab

Jan 2021 - Present

- 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

## 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