# Aditya Saligrama

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# **EDUCATION**

## Stanford University

Stanford, CA

M.S. in Computer Science, Computer and Network Security

Feb 2023 - Jun 2025

B.S. in Computer Science, Systems | GPA 3.92

Sep 2020 - Jun 2024

• Coursework includes Cryptography, Computer and Network Security, Modern Internet Infrastructure, Distributed Systems, Parallel Computing, Networks, Databases, Embedded Operating Systems, Compilers, Algorithms, Trust & Safety, ML, NLP, Blockchain

## **EXPERIENCE**

#### I. Work experience

# Software Engineering Intern at Cloudflare

Jun 2024 - Sep 2024 at Austin, TX

- Created RPC clients for debugging Cloudflare One routing services that establish L3 and L4 proxy tunnels and send test traffic
- · Significantly reduced time to resolve customer-escalation and internal issues across engineering and customer support teams

# Software Engineering Intern, Security and Privacy at Verkada

Jun 2023 - Sep 2023 at San Mateo, CA

- Established automated firmware & network security testing program and Linux hardening standards for physical security devices
- Test implementation and enforcement substantially reduced device attack surface and improved security and compliance posture

#### Software Engineering Intern at Lacework

Jun 2022 - Sep 2022 at San Jose, CA

- Engineered end-to-end virtualization of benchmarking system on Spark, reducing data import time by 20x vs. Snowflake
- · Contributed enhanced Snowflake and Spark parsing support to SQLGlot, an open-source SQL parser and transpiler; 3 PRs merged

#### **Engineering Intern at Uptycs**

Nov. 2020 - Apr. 2021 at Waltham, MA

- · Wrote and deployed production feature to Osquery monitoring software to inspect and detect malware in Java packages
- Code now open-source; functionality used to detect and patch client software with Log4Shell vulnerabilities (10.0 severity CVE)

#### Research Science Institute Intern at Akamai Technologies

Jun 2019 - Aug 2019 at Cambridge, MA

· Engineered Go realtime garbage collection monitoring system used for profiling and optimization across Akamai Labs codebase

# II. Teaching, leadership, and competition experience

# Instructor, CS 40 Cloud Infra. & Scalable Application Deployment at Stanford University Jan 2024 – Mar 2024 at Stanford, CA

- · Designed & taught Stanford's first intro cloud computing course. Created lectures, IaC assignments, and AWS course mgmt infra
- 50 students completed the course; course design paper accepted to SIGCSE 2025 Technical Symposium (33% acceptance rate)

# President, CCDC Linux & Cloud Lead, and CPTC Web Lead at Stanford Applied Cyber

Jan 2021 – Present at Stanford, CA

- Led Linux, AWS, web security defense & offense on 2023 National CCDC Champion team & 2024 Global CPTC 2nd place team
- Found & disclosed security vulnerabilities to 20+ startup apps, leading to data-protecting fixes; founded Stanford Security Clinic
- Directed workshops on vuln-finding (webapps, Firebase, Gradescope, GraphQL, AWS) and product security for entrepreneurs

# Teaching Assistant, Hack Lab (Alex Stamos & Riana Pfefferkorn) at Stanford University Sep 2022 – Dec 2022 at Stanford, CA

• Built course GCP infra at scale; created web & network security labs for 170-student intro cyber security, law, and policy course

# III. Research projects and experience

- Software patching dynamics (Stanford): Exploring how and when organizations patch vulnerable software on the internet
- Parallel, human-interpretable ML (*Harvard*): Achieved linear speedup on <u>CORELS</u> increasing tractability of 250k+ sample datasets; short paper featured at SysML 2018 (57% acceptance rate); implemented <u>R API</u> and Node.js web UI
- Rust concurrency evaluation (MIT): Developed fast, lock-free Rust concurrent hashmap with 150+ stars on GitHub
- **Political polarity detection** (*Independent*): Implemented novel two-step classification scheme for political bias increasing accuracy on long articles by 13%; paper published at AAAI 2020 student abstract program (48% acceptance rate)

## SKILLS

- Languages: C, C++, Python, Java, Go, Rust, JavaScript, HTML/CSS, SQL, ARM and x86 assembly, Bash, Markdown, LaTeX
- Frameworks: Django, FastAPI, SQLAlchemy, Node.js, React.js, Next.js, PyTorch, Tensorflow, Hugo, Bootstrap
- Technologies and Developer Tools: Git, Unix, Docker, Kubernetes, Temporal, Packer, Terraform, Osquery, AWS (incl. CDK), GCP
- Security Tools and Techniques: Burp Suite, Wireshark, Metasploit, Network Scanning, Security Research, Vulnerability Disclosure

#### **PUBLICATIONS**

- **A. Saligrama**, C. Ho, B. Tripp, M. Abbott, C. Kozyrakis. <u>Teaching Cloud Infrastructure and Scalable Application Deployment in an</u> Undergraduate Computer Science Program. *SIGCSE:TS*'25, 2025.
- A. Saligrama, G. Leclerc. Revisiting Ensembles in an Adversarial Context: Improving Natural Accuracy. ICLR:TML'20, 2020.
- A. Saligrama. KnowBias: Detecting Political Polarity in Long Text Content. AAAI:SAP'20, 2020.
- A. Saligrama. KnowBias: A Novel AI Method to Detect Polarity in Online Content. arXiv:1905.00724, 2019.
- A. Saligrama, A. Shen, J. Gjengset. A Practical Analysis of Rust's Concurrency Story. arXiv:1904.12210, 2019.
- N. Larus-Stone, E. Angelino, D. Alabi, M. Seltzer, V. Kaxiras, A. Saligrama, C. Rudin.
- Systems Optimizations for Learning Certifiably Optimal Rule Lists. SysML (now MLSys) Conference, 2018.