ADITYA SALIGRAMA

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EDUCATION

Stanford University Stanford, CA

M.S. in Computer Science, Computer and Network Security | GPA 4.02 *Feb 2023 – Dec 2024*

B.S. in Computer Science, Systems *Sep 2020 – Dec 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

Senior Software Engineer (Tech Lead) at **Formal** Jan 2025 – Present | *San Francisco, CA*

- Empowering security teams to enforce least-privilege access to production resources via a novel reverse proxy approach

Software Engineering Intern at **Cloudflare** Jun 2024 – Sep 2024 | *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 | *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 | *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 | *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 | *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 | *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 | *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 | *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 CORELS increasing tractability of 250k+ sample datasets; short paper featured at SysML 2018 (57% acceptance rate); implemented R API 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. Teaching Cloud Infrastructure and Scalable Application Deployment in an 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.