ADITYA SALIGRAMA

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EDUCATION

Stanford University   Stanford, CA
M.S. Candidate in Computer Science   *Feb 2023 – Jun 2025*
B.S. Candidate in Computer Science | GPA 3.9   *Sep 2020 – Jun 2024*
- Coursework includes Cryptography, Computer and Network Security, Modern Internet Infrastructure, Parallel Computing, Networks, Databases, Embedded Operating Systems, Compilers, Algorithms, Trust & Safety, Machine Learning, NLP, Blockchain

EXPERIENCE

I. Work experience

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

Head of Infrastructure and Security at **Medeloop**   Jun 2022 – Jun 2023 at *Palo Alto, CA*
- Led client & API deployment on AWS and organizational security posture for rare disease data platform startup

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

Principal Instructor, CS 40 Cloud Application Deployment at **Stanford University**   Jan 2024 – Mar 2024 at *Stanford, CA*
- Creating and teaching Stanford's first hands-on intro cloud computing course. Course site at infracourse.cloud

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

President and CCDC Linux & Cloud Lead at **Stanford Applied Cybersecurity**   Jan 2021 – Present at *Stanford, CA*
- Led Linux and AWS security and network defense against external red team on 2023 National CCDC Champion (1st place) team
- Found and disclosed security vulnerabilities to startup apps, leading to data-protecting fixes; founded Stanford Security Clinic
- Directed workshops on vuln-finding (webapps, Firebase, Gradescope, GraphQL), and on security engineering for entrepreneurs

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
- **Adversarial machine learning** *(MIT)*: Designed ensemble schemes that increase accuracy but preserves adversarial robustness
- **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)
- **Customer support assistants** *(Stanford)*: Created virtual assistant pipeline to classify support requests with GPT-3 augmentation

SKILLS

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

PUBLICATIONS

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.

SELECTED AWARDS AND HONORS

- 1st place (National Champion) National CCDC (2023), 3rd place NCCDC (2022), 1st place Western Regional CCDC (2022, 2023)