Arun Dunna

Software Engineer

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Education

University of Massachusetts Amherst — Amherst, MA
M.S. Computer Science — *May 2018 – December 2020*
Focus: Networks, security, machine learning, and financial modeling

University of Massachusetts Amherst — Amherst, MA
B.S. Computer Science, Minor: Mathematics — *August 2016 – May 2018*

Experience

Meta Platforms, Inc. — Remote, USA
Security Engineer — *April 2022 – Current*

- Vulnerability research on internal and external software/hardware. Compiled reports including vulns, attack vectors, fixes/improvements, etc. and worked with PoCs to implement fixes. Filed relevant SEVs and CVEs.
- Lead security assessments involving internal and external PoCs, and managed other engineers on assessments.
- Built and maintained internal tooling (ex. assessment and artifact tracker, deep permission checker across Meta, & others), and improved documentation and workflows for Security organization and Offensive Security Group.
- Took ownership of and cleaned/maintained multiple security oncalls. Built internal process for mentorship between senior and junior engineers in security. Improved assessment prioritization framework.

Yext, Inc. — Washington, D.C.
Software Engineer — *January 2021 – April 2022*

- Built pipeline and UI for managing and deploying models used in search engine product "Answers". Handled roughly 800 models across 16 environments, with an average latency of ≈20ms per model query.
- Worked on Java services such as Query Suggest and Spell Check, reducing build times by over 90% and configuration read times from 160μs to 1.7μs. Contributed to new product features such as Query Reranking.
- Worked on migration tooling in Go for automating move from internal systems to HashiCorp products.
- Responded to incidents and vulnerabilities, such as the Log4j zero-day Log4Shell.

Facebook, Inc. — Remote, USA
Security Engineering Intern — *May 2020 – August 2020*

- Built Chrome extension for internal investigators to track malicious actors, ex. bad nation-states, across the web.
- Found and patched various bugs, such as memory leaks, reducing CPU usage in a widely-used security library.

IIJ Innovation Institute Research Lab — Tokyo, JP
Research Intern — *June 2019 – August 2019*

- Published paper *Sanitizing a View of Consumer Broadband in the United States* as the lead researcher, which won Best Open Dataset Award at TMA 2020.

University of Massachusetts Amherst — Amherst, MA
Research Assistant — *May 2017 – January 2021*

- Lead research projects and collaborated on others, resulting in 3 publications, 3 presentations, and 2 posters.
- Wrote and taught 4 courses for hundreds of undergraduates, such as *Digital Forensics* and *Intro to Unix*.

Publications

1. **Bringing Transparency to YouTube's Demonetization Algorithms** — *ACM CSCW, November 2022*
2. **Sanitizing a View of Consumer Broadband in the United States** — *TMA, June 2020*
3. **Characterizing the Deployment and Performance of Multi-CDNs** — *ACM IMC, October 2018*
4. **Analyzing China's Blocking of Unpublished Tor Bridges** — *USENIX FOCI, August 2018*

Skills

- **Languages:** C++, Hack, HTML + CSS, Java, JavaScript, Lua, PHP, Python, R, SQL
- **Platforms:** Android, Unix & Unix-like, Web, Windows
- **Specializations:** Censorship systems, cryptography, Internet policy, Internet measurement, machine learning, machine learning pipelines, networks, research, security, software engineering, Unix & Unix-like systems