

Arun Dunna

Software Engineer

September 17, 2022

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<https://adunna.me>

Education

University of Massachusetts Amherst

M.S. Computer Science

Focus: Networks, security, machine learning

Amherst, MA

May 2018 – December 2020

University of Massachusetts Amherst

B.S. Computer Science, Minor: Mathematics

Amherst, MA

August 2016 – May 2018

Experience

Meta Platforms, Inc.

Security Engineer

Washington, D.C. (Remote)

April 2022 – Current

Yext, Inc.

Software Engineer

Washington, D.C.

January 2021 – Current

- Built pipeline and React UI for managing and deploying models used in search engine product “Answers”. Handles roughly 800 models across 16 environments, with an average latency of $\approx 20\text{ms}$ 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 $160\mu\text{s}$ to $1.7\mu\text{s}$. 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.

Security Engineering Intern

Remote

May 2020 – August 2020

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

IJJ Innovation Institute Research Lab

Research Intern

Tokyo, JP

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

Research Assistant

Amherst, MA

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. **Sanitizing a View of Consumer Broadband in the United States** TMA, June 2020
2. **Characterizing the Deployment and Performance of Multi-CDNs** ACM IMC, October 2018
3. **Analyzing China’s Blocking of Unpublished Tor Bridges** USENIX FOCI, August 2018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, security, Unix & Unix-like systems

Projects

- **OverStat**, <https://overstat.us> December 2020 – Current
- **Text-Audio Synchronization Engine**, <https://github.com/adunna/tase> September 2018 – February 2019
- **sCTF**, <https://sctf.io> December 2014 – January 2018