

Experience

Meta (*fka Facebook*) | Staff Software Engineer

Remote (*Raleigh NC*), USA

Tech Lead (*Software Engineer*), Youth

May 2024 – Current

- Lead cross-Meta, multidisciplinary (security & privacy engineering, software engineering, UXR, ...) team of more than 10 staff+ ICs to de-risk teen products across highly technical regulatory compliance, security, privacy, and integrity problems at scale. Built and scaled from 0 → 1 (staffing, mission, roadmaps, etc.).
- Define responses for high severity compliance and reputational incidents, including long-term recovery, media response, product direction, and technical solutions. Resolved > \$1B in risk exposure to Meta (*e.g.* fines).
- Scope X-Meta Youth products, infrastructure, & regulatory responses on Facebook, Instagram, and GenAI.
- Define Meta’s research and technical strategy for “unruly teens” on social media. Define security strategy for Youth.

Tech Lead (*Software Engineer*), Nonprofits Integrity

Sep 2023 – May 2024

- Led Nonprofits integrity & security (product abuse & financial fraud), saving Meta > \$11M/yr and reducing donation fraud by ~80%. Built X-company (Meta & PayPal) fraud & abuse prevention systems and ops flows.
- Designed & built donation processing fee coverage feature, saving Meta > \$10.3M/yr.
- Led compliance responses for Nonprofits, including DMA compliance and FB Payments restructuring.

Security Engineer, Offensive Security Group

Apr 2022 – Sep 2023

- Vulnerability research on internal and external software/hardware. Wrote reports (*e.g.* vulnerabilities, attack vectors, and fixes/improvements) and scoped solutions across Meta.
- Designed and built systems to integrate hierarchical security surface tracking with internal tooling, used across Meta as primary vulnerability management infrastructure.
- Built vulnerability assessment/artifact tracking infrastructure & deep ACL screener across Meta.

Yext, Inc. | Software Engineer

Washington, D.C. | Jan 2021 – Apr 2022

- Built pipeline and React UI for managing and deploying models used in search engine product “Answers”. Served 800 models across 16 environments, with an average latency of ≈20ms per model query.
- Owned optimizations for Query Suggest and Spell Check, reducing build opex by 90% and query latency by 98%.
- Built and deployed Query Reranking product feature, drastically improving search result CTR.
- Responded to incidents and vulnerabilities, including product outages and zero-days (*e.g.* Log4j Log4Shell).

UMass Amherst | Lecturer (*Digital Forensics, Intro to Unix*)

Amherst, MA | Jan 2019 – Dec 2020

Facebook, Inc. | Security Engineering Intern

Remote, USA | May 2020 – Aug 2020

IIJ Innovation Institute Research Lab | Research Intern

Tokyo, JP | Jun 2019 – Aug 2019

University of Massachusetts Amherst | Research Assistant

Amherst, MA | May 2017 – Dec 2020

Education

University of Massachusetts Amherst

Amherst, MA

M.S. Computer Science

Dec 2020

B.S. Computer Science, *Minor: Mathematics*

May 2018

Skills

- **Specialties:** Policy/regulatory & product intersections, building and scaling teams/products, XFN partnerships, risk management, Youth, GenAI, full-stack engineering, networks, research, security, reverse engineering
- **Languages:** Python, PHP/Hack, HTML/CSS/JS, C++, GraphQL, Java, Lua, R, SQL

Publications

1. Bringing Transparency to YouTube’s Demonetization Algorithms
- ACM CSCW, Nov 2022
2. Sanitizing a View of Consumer Broadband in the United States
- TMA, Jun 2020
3. Characterizing the Deployment and Performance of Multi-CDNs
- ACM IMC, Oct 2018
4. Analyzing China’s Blocking of Unpublished Tor Bridges
- USENIX FOCI, Aug 2018