# Aaron Shim

aaron.k.shim@gmail.com  |  (203) 745-7089  |  aaronshim.github.io  |  linkedin.com/in/aaron-shim

## Summary

Passionate about democratizing secure software development by building tools and methodologies that make the right way the easy way for all developers—human and AI alike.

## Experience

**Software Engineer (Information Security Engineering)**, Google – New York, NY          Jan 2020 – present

- Led organization-wide Trusted Types rollout across Google's web ecosystem of 600+ domains and 900+ applications serving 1 trillion+ requests—**earning two Google-wide awards**—mentoring 5 engineers through framework re-architecture that eliminated DOM Cross-Site Scripting (XSS) in enforced applications, part of the broader XSS vulnerability class that comprised **50%+ of web bug bounty reports**
- Identified opportunity to scale Google's security innovations to Angular ecosystem, leading the partnership and implementing custom HTML parser that ships auto-generated Content Security Policy defenses in Angular v19 to **3M+ weekly downloads**, establishing new industry security standard
- Established Google's participation in W3C Secure Web Application Guidelines Community Group after identifying influence gap, translating Google methodologies into security guidelines adopted across the industry
- Architected open-source strategy translating Google's security learnings into public methodologies and tools with **500k+ weekly NPM downloads**, establishing industry standards for secure-by-default development (blogpost)
- Built advocacy pipeline transforming team from internal-only to external-facing thought leaders, developing **4 first-time authors** (example blogpost) and **5 speakers** (example talk), positioning Google Security Engineering as an accessible leader driving secure-by-default adoption

**Software Engineer (Google Cloud Platform & Workspace)**, Google – New York, NY          Dec 2017 – Jan 2020

- Launched Access Transparency for Google Workspace, delivering enterprise data access visibility while owning product quality metrics critical to launch readiness, protecting billions of users
- Deployed Strict Content Security Policy across Workspace products and designed validation framework spanning dozens of products, mitigating XSS vectors and preventing critical production failures
- Led security reviews, threat modeling, and multi-team incident response for new features across Workspace and Cloud products, while guiding intern's end-to-end delivery of customer-facing UI feature from design to production

**Software Development Engineer (DevDiv)**, Microsoft – Redmond, WA, USA          Sept 2016 – Dec 2017

- Developed features for the new visual debugger in Visual Studio 2017 for Universal Windows Platform apps

## Talks

**Securing Frontends at Scale: Paving our Way to the Post XSS World**          Aug 2024

Safe Coding principles for secure-by-default JavaScript/TypeScript development at Google scale, preventing XSS through API design that makes security the path of least resistance

AppSec Village @ DEFCON33 (2024), BSides Seattle (2025), BSidesLV (2025)

**Trusted Types: DOM XSS at Scale**          July 2023

Trusted Types adoption strategies for eliminating DOM XSS as an entire vulnerability class, with deployment lessons from hundreds of production applications serving billions of users

LeHack (2023), LibertyJS (2023), Frontrunners DC (2024)

## Skills

**Programming Languages:** Proficient with JS/TS, Java, Ruby, SQL; working knowledge of Python, Rust, Haskell, C#

## Education

**Yale University**, BS in Computer Science and Mathematics – New Haven, CT, USA          2012 – 2016