

# Aaron Shim

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## Summary

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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

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

- Pioneering AI-assisted secure development through cross-Google collaborations spanning DeepMind and product teams—partnering with Angular to launch an open-source eval framework for assessing complex frontend code generation, while leading security metrics integration to establish quality standards for AI-generated code
- 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**
- Scaled Google's security innovations to Angular ecosystem, leading the partnership and implementing custom HTML parser that ships auto-generated Content Security Policy in Angular v19 to **3M+ weekly downloads**
- Established Google's W3C Secure Web Application Guidelines Community Group participation, 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 thought leaders, developing **4 first-time authors** and **5 speakers**, positioning Google Security Engineering as a driver of 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

## Talks

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**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

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

## Education

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

2012 – 2016