

## Cathy J. Fitzpatrick

Portfolio: [cathyjf.com](http://cathyjf.com) | Email: [cathy@cathyjf.com](mailto:cathy@cathyjf.com)

Residence: Redwood City, CA (SF Peninsula)

### Experience

Security & Privacy Engineer, [Google](#), Aug 2016 – present

- Member of the central Security & Privacy team for all of Google

Security Production Engineer, [Facebook](#), Sept 2014 – Jul 2016

- Implemented automated remediation system in Python for patching vulnerable packages on hosts
- Discovered various privilege escalation vectors in Facebook's production network
- Tightened access control lists for tiers and objects to better implement [least privilege principle](#)
- Provided real-time support in mitigating critical system-level vulnerabilities, such as [CVE-2015-7547](#)

Engineer, [WordPress.com](#) ([Automattic](#)), Sept 2013 – Aug 2014 (PHP, JavaScript, jQuery)

- Identified and fixed vulnerabilities in [WordPress.com](#) website and in WordPress.com plugins
- Created secure automation tool for deployment and cloud synchronisation of [Jetpack plugin](#)
- Implemented mechanism for users to “[like](#)” comments on WordPress.com blogs

Engineer, [Pokémon Showdown](#), 2013 (JavaScript, node.js, jQuery, SockJS)

- Identified and fixed many security issues, including: XSS; CSRF; authentication token replay; privilege escalations; password hashing weaknesses; game logic circumvention; etc.
- Introduced optimisations allowing user load to scale from ~1200 to over 4200 concurrent users
- Performed forensics, handled recovery, and [published article](#) after a security breach

Engineer, [Codes and Standards Training Institute](#), Summers 2010–2012 (Ruby on Rails, PHP, MySQL)

- Trained coworkers in best practices for account management and web application security
- Securely deployed version control systems for managing content changes with audit trail
- Implemented mandatory TLS on all company webpages

Founder and Project Co-Lead, [Pokémon Lab & Shoddy Battle](#), 2006–2010 (Java, C++, JavaScript)

- Most popular Pokémon fan game from 2007–2010
- Designed and implemented framework from ground up, including authentication, networking protocol, user management, game mechanics, database schema, player skill rating system, etc.

Project Co-Lead, [RPG Toolkit](#), 2004–2006 (C++, YACC, Bison, DirectX, VB6)

- Created compiler and virtual machine for scripting language

### Education

BSc (Hons) in Computing Science, 2012, University of Alberta, 3.7/4.0 GPA, First Class Honours

- Sample school project: "[The accuracy of the Black-Scholes equation for some Apple call options](#)"

### Other Activities

- (2014) Identified [serious vulnerability](#) in popular two-factor authentication module used by blogs
- (2013) Published several [articles](#) on security, including “[Local servers can get you compromised](#)”
- (2012) Spoke on cryptography at the [CIPS Women in Technology](#) conference
- (2009–2013) Administered and optimised several large websites, increasing revenue by 300%
- (2009) Wrote web application to study the [effect of capitalisation on reading speed](#)
- (2008–2009) Researched and wrote [two papers](#) on the physics of *Super Smash Bros. Brawl*