

APRIL KING

(SHE/HER)

<https://grayduck.mn>

april@grayduck.mn

github.com/april

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Saint Paul, MN, 55104

PROFILE

Information security engineer who is passionate about making the internet a safer place. Strong experience in TLS and PKI, as well as web security standards and single sign-on systems. Rarely updates her résumé.

EXPERIENCE

Staff Security Engineer, Twitter — 2020-Present

- Lead engineer on the Information Security Consulting team, providing leadership and mentoring across organization
- Directly responsible for all security review across Twitter Spaces, Twitter Blue, and Twitter Communities features
- Rewrote and redesigned Twitter security intake process

Sr. Staff Security Engineer, Mozilla Corporation — 2015-2020

- Developed the Mozilla Observatory, a site security testing tool with over 3,000,000 users and 20,000,000 website scans
- Wrote Mozilla's widely referenced [Server Side TLS Guidelines](#), and the corresponding [SSL Configuration Generator](#)
- Redesigned and expanded Firefox's legacy certificate viewer
- Rewrote Mozilla web security guidelines, and [corresponding tooling](#)
- Coordinated the deprecation of the RC4 cipher
- Speaker at multiple conferences, including USENIX Security and the EFF
- Ongoing development of intentionally broken websites such as [badssl.com](#) and [misbehaving.site](#)
- Operated Mozilla's web bounty program
- Designed Mozilla's AWS single sign-on solution ([maws](#))

Sr. Information Security Engineer, Wells Fargo — 2002-2015

- Technical team lead for single sign-on (Siteminder) system containing over 100+ servers, 400+ applications, 15+ user directories, and 3000+ web servers, serving over 350,000 users and handling over 6,000,000 authentications and 15,000,000 authorizations per day
- Project and technical lead for bank branch server encryption project, successfully deploying full disk encryption to over 12,000 existing servers across over 6,000 bank branches spread across the US
- Penetration testing of Siteminder agents and policy servers, Vormetric key servers, and Equifax Anakam TFA. Discovered multiple CVEs.

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EDUCATION

- University of Minnesota, Twin Cities — BA, Psychology
- SANS GIAC Penetration Tester

SKILLS

- **Security:** transport layer security (TLS), public key infrastructure (PKI), cryptography, HTTPS, web security (content security policy, subresource integrity, etc.) and mail security (DMARC, DKIM, SPF, etc.)
- **Development languages:** Python 2.x and 3.x and JavaScript
- **Server software:** Apache, nginx, PostgreSQL, OpenSSL, CA SiteMinder, Vormetric
- **Operating systems:** Windows (client and server), macOS, Debian, Ubuntu, CentOS
- **Cloud platforms:** AWS (S3, DynamoDB, EC2, CloudFront)
- **Miscellaneous:** WebExtensions, CA SiteMinder, Vormetric, Webpack, Bootstrap, Mustache

PUBLIC SPEAKING

- USENIX Security Symposium: Measuring HTTPS Adoption on the web
- Paris Web: History of Web Security
- nginx.conf: The Rise of Let's Encrypt
- University of Minnesota, Tech People Present: Subresource Integrity
- Shop Talk Show: Web Security
- EFF Privacy Lab & CONNECT: Introduction to Let's Encrypt
- PubConf Minneapolis: 20 Acronyms that Keep you Safe

ACTIVITIES

- scryfall.com: world's most popular Magic The Gathering search engine
- badssl.com & misbehaving.site: bad TLS, certificate, and site configurations
- [PicoCA](https://picoCA.com): miniature certificate authority, intended for small systems and educational purposes