

David Briggs

Software Engineer

Contact

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Education

University of Waterloo
B. Computer Science
2015-2020

Website

dpbriggs.ca

GitHub

github.com/dpbriggs

LinkedIn

linkedin.com/in/dpbriggs

Skills Summary

Technologies:

- Git
- React
- Redis
- Docker
- GRPC
- Protobuf
- CGroups
- Unix & Shell tools
- Axum

Proficient in:

- Rust
- Python
- C/C++
- Bash
- Shell Tools
- Emacs & Vim

Work Experience

SENIOR SOFTWARE ENGINEER - SRE (GOOGLE)

May 2022 - Present

Tech Lead for an SRE team working on core cryptographic infrastructure.

- Led multi-year root key rotation program improving cryptographic hygiene at scale.
- Drove KMS development and secrets management across core cryptographic systems.
- Reduced pager load by 50% through architectural changes and targeted optimizations.
- Built site-wide cryptographic expertise by founding a cross-team training program and delivering dozens of internal talks.
- Partnered with Offensive Security to profile cryptographic infrastructure and prioritize hardening efforts.

SOFTWARE ENGINEER (SPLUNK PHANTOM)

Sept 2019 - Dec 2019; Aug 2020 - May 2022

Security lead on a popular Python/C++ SOAR playbook execution engine.

- Parallelized core C++ daemons, increasing inherent parallelism and performance by 5x.
- Personally identified over a dozen security vulnerabilities in the product and patched them. Fielded external security findings and patched them.
- Added Python3 playbook execution support in addition to Python2.

SOFTWARE DEVELOPER (ZENREACH)

Jan 2019 - Apr 2019

Helped engineer and deliver Google Ads integration for their Ads product.

- Spearheaded the Google Ads and Campaign Abstraction microservices, using Scala, GRPC, Postgres, and Redis.
- Wrote detailed design documents for Databasing, Caching, Google Ads API usage, and Audience Generation.

R&D SOFTWARE ENGINEER (OPENTEXT)

May 2018 - Aug 2018

Researched enterprise grade container solutions (Docker & Kubernetes).

- Developed a service discovery abstraction service in Python/Bash, used to increase flexibility of offerings and lower maintenance costs.

SOFTWARE ENGINEER (TRANQUANT)

Sept 2017 - Dec 2017

Designed and developed systems for software and container deployment.

- Developed a graph-based container framework with a React frontend.
- Significant Dev-Ops work with AWS; ECS, EC2, and more.

APPLICATION DEVELOPER (DOCTORCARE)

Jan 2017 - Apr 2017

Designed and Developed a medical digest report pipeline and website.

- Created a report-making pipeline to automatically collect, parse, and store medical finance information. Automated my original job away.
- Developed a Django website to create PDF finance reports, using Print CSS, Postgres, Redis, Weasyprint, Django templating & ORM.

Projects / Contracting

REDIS-OXIDE

March 2019 - Present

Protocol-compatible, multi-threaded implementation of Redis in safe Rust. Written with Rust, Tokio, and Serde. <https://github.com/dpbriggs/redis-oxide>

R&D SOFTWARE ENGINEER CONTRACTOR (OPENTEXT)

Sept 2018 - Dec 2018

Technically reviewed issues and projects to speed up development. Developed Kubernetes solutions further. Assisted new members with git, code review tools, and linux knowledge.

SYSTEMS CONTRACTOR (DOCTORCARE)

May 2017 - Aug 2017

Technically reviewed major projects and issues, saving up to 50% on development time. Assisted with co-op hiring process to ensure good technical fit.