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

SOFTWARE ENGINEER - SRE (GOOGLE) *May 2022 - Present*
Tech Lead for an SRE team focusing on core cryptographic infrastructure.
- Led a 6-person SRE team, fostering a culture of constant learning and oncall readiness.
- Multi-year applied cryptography projects to improve Google's security posture.
- Reduced pager load by 50% through architectural changes and careful tweaks.
- Partnered with Offensive Security to profile infrastructure; scope enhancements.
- Developed a novel method for alerting on the absence of signals.

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.

Interests: Mathematics, linux, emacs, cryptography, working out, climbing.