

Harrison Brown

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Skills

Languages: Go, Python, C, Rust, Java, Typescript, C++

Technologies: PostgreSQL, gRPC, Kubernetes, AWS, git, linux, React

Experience

Software Engineer - Authentication

Nov 2021 - Present

JumpCloud

- Created and maintained gRPC microservices for authentication with passwords, TOTP, X.509 certificates, mobile push notifications, and OpenID Connect.
- Project lead for passwordless authentication features in globally distributed RADIUS service.
- Held meetings with product leaders and engineers to ship new features and document old ones.
- Gave talks describing code, architecture, and customer impact of services and features.
- Personally increased the lines of documentation by 15% across all the Authentication Teams.
- Decreased production debugging time by ~50% using distributed tracing middleware.

Software Engineering Intern

Oct 2020 - May 2021

University of California, Merced

- Developed and maintained a real time monitoring system for routers and switches to catch potentially nefarious devices on the university research network using Oracle Database 19c.
- Helped users obtain actionable insights from my monitoring system by writing internal tools that aided data visibility and data management.
- Worked closely with the security and I.T. teams to understand the network and the threat model

Education

University of California Merced

Aug 2017 - Aug 2021

Computer Science and Engineering, B.S.

Personal Projects

remora

- Built a distributed web crawler and search engine using Go, RabbitMQ, Redis, and PostgreSQL
- Created custom vector search algorithms using TF-IDF and page rank.
- Achieved a crawl speed of 8 million web pages every 24 hours (on old hardware) by using distributed caching and scaling horizontally.

mercedtime.com - (<https://github.com/mercedtime>)

- Achieved near-real-time synchronization by periodically parsing UCM's catalog web page and storing the changes in PostgreSQL for consumption by a RESTful API and GraphQL API

apizza - (<https://github.com/harrybrwn/apizza>)

Open Source command line tool for ordering pizza from Dominos.

- Managed my project by writing unit tests, tracking test coverage, and using CI/CD tools
- Utilized packet analyzers, browser dev tools, and computer networking knowledge in order to reverse engineer Dominos' RESTful API.

Activities/Leadership

ACM (Association for Computing Machinery)

Sep 2018 - May 2021

General member

- Led and contributed to club projects such as the club website and a discord bot.