

Zac Joffe

3B Software Engineering

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github.com/ZacJoffe

zacjoffe.com

SKILLS

Languages: C++ • C • Rust • Golang • Java • PHP • TypeScript • JavaScript • Python • Bash • SQL

Technologies: MongoDB • Redis • gRPC • Node.js • Express • Symfony • React • Vue.js

Infrastructure: Docker • Kubernetes • AWS • Azure • Jenkins • Terraform • Bazel • Datadog • Kibana

EXPERIENCE

Salesforce – Software Engineer Intern

May – Aug 2021

- Developed a **Symfony**-based backend framework for the **Pardot API** with modern code generation functionality, enabling quicker endpoint implementation and optimizing performance by **150%**
- Created new endpoints with the framework and minimized **MySQL** query times through combined indexes
- Authored **PHP** service to automate inclusion of API object attributes from their respective database tables

FreeBSD Foundation – Software Engineer Intern

Sep – Dec 2020

- Implemented a compiler-level security mitigation in FreeBSD's **LLVM** toolchain for the stack clash exploit
- Extended core functionality of the FreeBSD operating system through bug fixes and security enhancements

TextNow – Backend Engineer Intern

Jan – Apr 2020

- Spearheaded development of phone number reconciler service using **Golang** to keep internal inventory up-to-date, discovering over **2.1 million** unused numbers and saving the company **\$500,000**
- Deployed the reconciler using **Kubernetes**, provisioned **AWS** with **Terraform**, and analyzed metrics in **Datadog**
- Architected **Golang** service to determine cost markup for phone calls with a **200%** improvement in efficiency

Emailtopia – Full Stack Engineer Intern

Jan – Aug 2019

- Constructed subscription-based billing service in **Golang**, saving over **50** hours/week of accounting work
- Automated building, testing, and scaling of microservices using **Kubernetes** and CI/CD **Jenkins** pipelines
- Wrote framework to secure secrets in source code using **Azure Key Vault** and **Active Directory Pod Identities**

Segmenttech – Software Engineer Intern

May – Aug 2018

PROJECTS

NES Emulator

github.com/ZacJoffe/znes

- Built cross-platform, cycle-accurate emulator of the *Nintendo Entertainment System* using **Rust** and **SDL2**
- Accurately simulated the CPU, graphics, audio processors, and vendor-specific game cartridge hardware
- Extended support to over **1000** games published for both the *NES* and the Japanese *Famicom*

Text Editor

github.com/ZacJoffe/text-editor

- Implemented lightweight vim-like terminal-based text editor in **C** with syntax highlighting for **C** and **C++**

EDUCATION

Candidate for Bachelor of Software Engineering

University of Waterloo

3.7/4.0 CGPA (Dean's Honor List)

Sep 2018 - Apr 2023