Jacob Evan Shreve

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Experience

Research Assistant, Refraction Networking, Remote   **Summer 2020**
Refraction Networking is a series of censorship circumvention tools.

- Developed method to resume TLS 1.3 sessions on a proxy server with OpenSSL, C, and Rust.
- Updated Tapdance protocol spec and Golang client implementation to reflect TLS 1.3 changes.

Software Engineer, Wellopp, Remote   **Jan 2016-Aug 2019**
Wellopp is a healthcare startup dedicated to reducing uneccessary hospital readmissions.

- Developed SMS patient outreach product using Twilio API and Ruby on Rails.
- Containerized application and created CI/CD pipeline with CircleCI and Kubernetes.
- Started a documentation corpus for onboarding, deployment, and maintenance topics.

Education

B.S.E. in Computer Science   **Graduated August 2020**
University of Michigan, Ann Arbor

- *Course Work:* Cryptography, Computer Security, Computer Architecture, Operating Systems, Web Systems, Algorithms, Statistics
- Created UI for WolverineSoft Game Dev Club's Semester Studio Project with over 60 contributors

Projects

- *Roku:* Libraries in Go, Ruby, and Rust which find and control Roku devices on the network.
- *tui:* A Go library for building and efficiently rendering terminal user interface applications
- *sso:* Automatic multi-site SSO library in Go à la Stack Exchange.
- *Secret Sharing:* A Ruby library which implements Shamir's Secret Sharing.
- *Web Security:* SQL-injection, XSS, and CSRF expoits in CTF challenges.
- *Network File System:* A concurrent, remote over TCP, crash-safe file system interface.
- *MapReduce Server:* Hadoop-style master and worker for distributed computation with Python

Skills

- Golang, Ruby, C++, HTML/CSS/JS, SQL, Python, PHP. Learning Rust.
- PostgreSQL, SQLite3 database administration
- OS programming: concurrency, memory management, resource contention
- Networked programming: sockets, TCP/IP, TLS, DNS
- Deployment with Nginx, Docker, and Kubernetes. Experience with GCP, AWS, and Heroku.
- Mastery of shared version control with Git
- Debugging: I love finding the source of a bug by searching logs, gdb, or just reading the code