Jacob Evan Shreve

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— Experience

Research Assistant, Refraction Networking, Remote   **Summer 2020**

Refraction Networking is a project which develops 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.
- References: Eric Wustrow, Jack Wampler, and J. Alex Halderman

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.
- References: Jon Wiedmann, Nicholas Gronow, and Andrew Stewart

Freelance Web Developer, Shreve Labs, Remote   **Aug 2014-Dec 2015**

Shreve Labs is the company I created for my freelance work and side projects.

- Developed and maintained Ruby and Ruby on Rails software for clients around the world.

Web Developer, Online Ventures, Howell, MI   **Apr 2012-May 2014**

Online Ventures is a consultancy that improves clients' business performance with software.

- Created specialized CMS software for several local businesses to complement their workflows.

— 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, Data Structures & Algorithms, Statistics, Video Game Development, Ethics
- Created UI for WolverineSoft Game Dev Club's Semester Studio Project with over 60 contributors

— Projects

- *MapReduce Server:* Hadoop-style master and worker for distributed computation with Python
- *Network File System:* A concurrent, remote over TCP, crash-safe file system interface
- *Web Security:* SQL-injection, XSS, and CSRF expoits in CTF challenges
- *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 single sign on library in Go à la Stack Exchange
- *Secret Sharing:* A Ruby library which implements Shamir's Secret Sharing

— Skills

- Golang, Ruby, Python, C, C++, HTML/CSS/JS, SQL, PHP, Unity3D/C#. Learning Rust.
- PostgreSQL, SQLite3 database administration
- DevOps with Docker and Kubernetes. Experience with GCP, AWS, and Heroku.
- OS programming: concurrency, memory management, resource contention
- Networked programming: sockets, TCP/IP, TLS, DNS
- 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