

# Naman Sood

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## SKILLS

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**Languages** JavaScript, Go, Rust, C++, C, Scala, HTML5, CSS3, Shell, Python, Racket, Haskell  
**Technologies** Linux, Git, Docker, TCP/IP, AWS, gRPC, React, SQL, MongoDB, Firebase

## EXPERIENCE

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### Tailscale

Jan 2021 – Apr 2021

*Software Engineering Intern*

- Boosted compatibility with LXC containers by providing in-process TCP/IP and link-layer emulation, using Google gVisor.
- Enabled simple, standard communication for programs over Tailscale network by creating a SOCKS5 proxy server in Go.
- Simplified deployment of Tailscale in cloud environments by creating single-session authentication keys with auto-cleanup.
- Secured continuous integration and deployment pipelines by creating GitHub Action to allow workflows to use Tailscale.
- Expanded outreach with technical community by writing long-form content for corporate blog and knowledge base.

### University of Waterloo

May 2020 – Aug 2020

*Research Associate, Sirius Blockchain Research Group*

- Hardened security by enforcing BLS signature verification for Byzantine fault tolerant distributed consensus system in Go.
- Streamlined deployment of project, using Docker images to generate repeatable builds across diverse environments.
- Unified similar codebases by migrating components to a single project to reduce code duplication, using C++.
- Assisted distributed systems research by conducting experiments on AWS and analyzing performance data using gnuplot.

### Creesync Software

May 2019 – Aug 2019

*Software Engineering Intern*

- Simplified professional photography, by building native apps to deliver photos to clients, using Electron and React Native.
- Designed and deployed API to upload and preview photos in low-bandwidth situations, using Node.js and AWS S3.
- Reduced technical debt in React Native project by combining similar functionality into reusable components.

### The Girl Code

Mar 2018 – Apr 2020

*Full Stack Developer*

- Empowered school children by creating online platform to learn Python programming, using Node.js and MongoDB.
- Assisted research by tracking usage of learning platform to collect data for National University of Singapore study.

## PROJECTS

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### CHIP8-rust Rust

Emulator for CHIP-8 microprocessor. Simulated behavior of machine instructions with Rust, created graphics in framebuffer.

### Prose Go

Markdown-powered blog. Developed custom HTTP server with hooks for web request logging, routing and error handling.

### Turtle Shell C, POSIX APIs

Shell for Unix operating systems in C. Learned memory management, process management, and usage of POSIX interfaces.

### cmdmap Node.js

Node module to map CLI programs to a JSON API. Designed abstraction over standard library features for improved security.

## EDUCATION

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### University of Waterloo

Sep 2019 – Apr 2024

*Candidate for Bachelor of Computer Science – 94.5%*

- **Awards and Honors:** Received \$15,000 Computer Science Upper Year Scholarship, and placed on Dean's Honors List.
- **Mentor, StarterHacks 2020:** Provided technical and design advice in Canada's largest beginner-focused hackathon.
- **Editor, mathNEWS:** Provide news and recreation to student body via student publication of the Faculty of Mathematics.
- **Relevant Coursework:** Data Structures, Object-Oriented Programming (C++), Functional Programming (Racket, Haskell)