# **Naman Sood**

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## **EDUCATION**

## University of Waterloo

Bachelor of Computer Science - 94.5%

Sep 2019 - Apr 2024

- Awards and Honors: Received \$15,000 Computer Science Upper Year Scholarship, and placed on Dean's Honors List.
- Relevant Coursework: Data Structures, Object-Oriented Programming (C++), Functional Programming (Racket, Haskell)

## **SKILLS**

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**

Carta

Sep 2021 – Dec 2021

Incoming Software Engineering Intern, Infrastructure

**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 knowledge base and corporate blog (link).

## **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**

#### CHIP8-rust (link) Rust

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

Prose (link) Go

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

#### Turtle Shell (link) C, POSIX APIs

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

# cmdmap (link) Node.js

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