Naman Sood

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EDUCATION

University of Waterloo Sep 2019 – Apr 2024

Bachelor of Computer Science – 3.92 GPA

- **Relevant Coursework:** Operating Systems, Applied Cryptography, Data Structures & Algorithms

SKILLS

Languages	JavaScript, Go, Rust, C++, C, Python, Scala, HTML/CSS, Shell, Haskell
Technologies	Git, Docker, Kubernetes, AWS EC2/S3, gRPC/Protobuf, React, SQL, MongoDB

EXPERIENCE

data.world May 2022 – Present

Software Engineering Intern *Austin, TX*

- **Spearheaded Databricks and Apache Spark support** in Java-based data catalog service by integrating JDBC database drivers.
- Boosted user productivity in code editing workspace by generating autocompletions for RDF classes and properties.
- **Delivered key usability improvements** to code workspace in areas like error visibility and autogeneration of code snippets.
- Refined syntax highlighting for SPARQL queries by improving regular expressions used to parse language constructs.

Carta Sep 2021 – Dec 2021

Software Engineering Intern, Infrastructure *Kitchener, ON*

- Designed distributed gRPC logging system using Apache Fluent for **scalable auditing and compliance** across organization.
- Created proof-of-concept for logging system using Kubernetes DaemonSets, with ConfigMaps to deploy custom configurations.
- Enforced standardization of Protobuf definitions for **over 300 microservices** by designing static analysis tool in Go.
- **Optimized build times by 10x** for Docker images by simplifying package requirements to allow precompiled dependencies.
- Improved system availability by identifying and removing bottlenecks in Redis server connections in Python library.

Tailscale Jan 2021 – Apr 2021

Software Engineering Intern *Toronto, ON*

- **Introduced cloud/serverless support** by emulating TCP/IP stack in userspace for Docker containers, using Google gVisor.
- Enabled standardized communication using SOCKS5 protocol over Tailscale VPN by implementing proxy server in Go.
- **Simplified deployments in cloud environments** by creating single-session authentication keys with auto-cleanup.
- Developed a GitHub Action for end-users that allows **plug-and-play security** for CI/CD pipelines.
- Expanded outreach within the technical community by writing long-form content for corporate blog.

University of Waterloo May 2020 – Aug 2020

Research Associate *Waterloo, ON*

- Optimized Go consensus system to **3x throughput** by increasing maximum transaction count sent in each message.
- Streamlined deployment of project by using Docker images to generate repeatable builds across diverse environments.
- Unified similar codebases by migrating duplicate components to a single C++ project.
- Assisted distributed systems research by conducting experiments on AWS EC2 and analyzing performance data in gnuplot.

The Girl Code Mar 2018 – Apr 2020

Volunteer Full Stack Developer *New Delhi, India*

- Developed online platform to interactively teach programming in **10+ workshops across 3 countries** using NodeJS.

PROJECTS

CHIP8-rust *Rust*

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

Clay *C, x86 Assembly*

A minimal x86 operating system. Handled tasks like interrupts, timers, paging, while balancing performance and maintainability.

cmdmap *NodeJS*

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