

Ryan Prairie

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Skills

Languages: Python, Golang, Rust, Clojure, Bash, TypeScript, JavaScript, Ruby, Java, HTML, CSS, C, Powershell

Frameworks: ReactJS, Flask, SvelteJS, Ruby on Rails

Technologies: Jenkins, Packer, Docker, Linux, Windows, TCP/IP, Emacs, PostgreSQL, Nginx, Ansible, Regex

Experience

NVIDIA

Santa Clara, CA

Senior Security Software Engineer

April 2024–Present, Senior since April 2024

- Designed and deployed a event-driven distributed state machine to automate server draining of high-performance storage VMs across 85 zones (255 servers total). Reduced manual effort by 10,000 hours per year
- Led 5 engineers to automate storage VM maintenance distributed state machine integrated into Kubernetes
- Migrated outbound cloud service calls in a 16K-line Python legacy codebase from API keys to OAuth2, introducing token reuse and adaptive scope selection for better security and performance
- Improved deployments by 3x with custom parallel deployment logic
- Developed automation tool that replaced a web-based workflow resulting in 5x workflow efficiency.

NVIDIA

Remote

Security Software Engineer Intern

May 2022–September 2022

- Security hardened Linux with Ansible, achieving PCI DSS compliance and passing 93% of CIS CAT Assessor Tests
- Coordinated with multiple teams to integrate security rules into an operating system image

Trexo Robotics

Mississauga, ON

Robotics Fullstack Software Developer Intern

January 2022–April 2022

- Created REST API to control wifi connectivity of exoskeleton robots using D-Bus and Golang
- Optimized database queries, making queries 15% faster
- Implemented custom JWT authorization and authentication based on OAuth 2.0 in Golang

University of Windsor Computer Science Society

Windsor, ON

Head of Technology

June 2020–April 2023

- Led a team of 7 to develop a student wiki built with Docusaurus, ReactJS, and Markdown
- Built a quiz webapp using Ruby on Rails, ReactJS, JavaScript, and GraphQL to be used in a major student event

BlackBerry

Waterloo, ON

Systems Analyst Intern

May 2021–August 2021

- Led the design of a automation tool in Golang, achieving over 5x faster deployments on projects company wide
- Facilitated cross-departmental collaboration to develop a ReactJS, TypeScript, and REST API app company wide

Projects

Buoy – Mesh VPN

- Distributed VPN connecting clients to clients directly written in Golang
- Concurrent design to maximize throughput and availability
- Won Best Capstone Project for U of Windsor 2023 Computer Science

imacry – Proof of Concept Ransomware

- 500 MiB/s fully concurrent file encryption and decryption using Golang
- Custom protocol built on websockets with network jitter to hide heartbeat

Education

University of Windsor

Windsor, ON

Honours Computer Science B.S.

September 2018–June 2023