

# Mahyar Mirrashed

Winnipeg, MB | [github.com/mahyarmirrashed](https://github.com/mahyarmirrashed) | [linkedin.com/in/mahyarmirrashed](https://linkedin.com/in/mahyarmirrashed) | [mahyarmirrashed.com](https://mahyarmirrashed.com)

## Work Experience

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### Full Stack SDE II

March 2023 — Present

PTx Trimble

Winnipeg, MB

- **Grain Cart System Updates:** Designed asynchronous OTA updates for global IoT controller fleets using MQTT and state machines. Reduced costs by 85% via a local Docker registry and minimal AWS footprint (S3, IAM, IoT, ECR, CF), scaling from 12 to hundreds of devices.
- **Guidance System Updates:** Delivered an off-grid update solution for ~100 remote IoT controllers using mobile-based data transfer, saving 2.5GB per update and cutting deployment workflows from 45 to 5 minutes.
- **Optimized Dev/Test Pipeline:** Shortened software installation times from 22 to 8 minutes, boosting QA test cycles by 275% and accelerating product iterations for a 20-engineer team.
- **Wind Tools CLI:** Built a shell-based ECU reprogramming CLI, removing UI dependencies and saving 150+ hours in testing/support. Enabled 400% more automated testing pipelines for firmware developers.
- **Developer Operations:** Cut project clone times by 80% and build times by 98% using advanced Git, Docker, and Linux optimizations. Maintained 99% uptime on local infrastructure and introduced Nix Flakes for reproducible builds, saving ~10 engineering hours weekly.

### Full Stack SDE Intern

May 2021 — Nov 2022

Harris Computer

Winnipeg, MB

- **Patient Portal Implementation:** Led a team of three (3) interns to deliver a patient portal for ten (10) hospital clients, increasing client revenue by 20% through improved user engagement and streamlined patient data access.
- **Modernizing Legacy Systems:** Rebuilt legacy UIs with modern ReactJS frontends, improving UI performance by 85% and enhancing user satisfaction and productivity.
- **Secured Legacy Systems:** Strengthened API security by implementing JWT-based authentication, ensuring 100% HIPAA compliance and safeguarding sensitive patient data.

## Core Skills & Technologies

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- **Languages/Frameworks:** Python (FastAPI), JavaScript/TypeScript (ReactJS, VueJS, Svelte), Golang, Rust, Nixlang
- **Cloud/Infrastructure:** AWS (S3, IAM, IoT, ECR, CF), Terraform, Packer, Docker, Kubernetes (K3s/K8s), Ansible, Nix
- **DevSecOps:** HIPAA Compliance, PKCE OAuth/OIDC, RBAC, CodeCov, Networking, Advanced Docker Concepts

## Education

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### University of Manitoba

Winnipeg, MB

Bachelor's of Science in Computer Engineering (with Distinction)

Sep 2019 — Apr 2023

- Cumulative GPA: 4.2/4.5 | Dean's List, Price Engineering Scholarship (x3)

## Certifications

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Hashicorp Certified: Terraform Associate (003)

Dec 2024

Certified Kubernetes Application Developer (CKAD)

Dec 2024

AWS Certified Developer Associate

(Expected) Jan 2025

## Technical Projects

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### Study Spots ([github.com/mahyarmirrashed/study-spots](https://github.com/mahyarmirrashed/study-spots))

Dec 2024

- Developed a backend-free study location web app serving 100+ weekly users at zero infrastructure cost and maintaining 99.9% uptime via GitHub Pages.
- Leveraged CORS proxies for external data access and utilized Svelte 5 runes to enable highly reactive, mobile-friendly UI updates in real time.