

# GURJASHAN SINGH

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## EDUCATION

University of Toronto – Computer Engineering – PEY (Graduating May, 2026)

Toronto, ON

Bachelor of Applied Sciences

Class of 2025

- Currently pursuing minors in business and artificial intelligence
- Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Software Communication, Applied Deep Learning, Robot Modeling and Control, Machine Learning
- Other Coursework: Operating Systems, Embedded Systems, Digital Systems,
- Academics: Dean's List Honoree for 2 semesters

## TECHNICAL SKILLS

Programming Languages

JavaScript, HTML/CSS, MySQL, Python, C++, C, Golang, Perl, Verilog, ARM Assembly

Frameworks/Libraries

React.js, Next.js, Tailwind CSS, Node.js, Express.js, Pytorch, Typescript, Zod, Flask

Tools

Git, Linux, MongoDB, Docker, Kubernetes, Moshell, Netconf, ArgoCD, Jenkins, Prometheus

Concepts

MVC, SEO, RESTful APIs, Agile, SDLC, Multithreading, DevOps, GitOps

## EXPERIENCE

Cloud RAN Feature Verification Intern

Ottawa, Canada (Remote, Part time)

Ericsson

August 2025 – Present

- Driving productization of the tool: transitioning it from PoC to a funded, product-grade platform.
- Developed AI scheduling PoC, introduced **TypeScript + Zod** (frontend) and **Marshmallow** (backend) for stricter schema validation.
- Responsible for the overall upkeep and stability of the tool, ensuring reliable deployments and continuous functionality, streamlined developer experience with bash scripts for common setup and maintenance tasks.

Cloud RAN Integration Co-op

Ottawa, Canada

Ericsson

May 2024 – August 2025

- Led frontend development of a MongoDB + Flask + React tool managing **hardware resources which saw the user base grow from 200 to 800**.
- Introduced **Vite** and removed legacy packages, reducing build times drastically **from 10 to 3 minutes**
- Unified UI with **Ericsson Design System (EDS)** and wrote React wrappers for third-party JS components, became a **go-to contact across teams** — advised other developers on adoption and integration, and **helped connect the library with a Perl backend templating system**.
- Automated **JSON-driven table/field configs**, reducing frontend code from **8000 to 3000 lines of code**.
- Managed **Dockerized builds, NGINX configs, SSL certs**, and **Jenkins CI/CD** for staging & production.
- Supported **virtual DU test monitoring** (JCAT logs, Moshell, Kubernetes CLI) and automated network data retrieval.

Web Developer

Delhi, India (Remote)

KaryaDotShop Pvt. Ltd.

May 2023 – August 2023

- Created and deployed a responsive landing page website with **HTML, CSS, and JavaScript**, that generated **over 12,000 clicks** demonstrating successful user engagement.

## PROJECTS

Home DevLab & AI Malware Detection (Capstone, In Progress)

[Code Link](#)

- Built a **K3s Kubernetes cluster** with **Argo CD** for **GitOps-as-Code** on local hardware.
- Deployed **Prometheus + Grafana** for monitoring and authored **Ansible roles** for reproducible setup.
- Created a secure **VLAN lab** for **eBPF-based syscall tracing**, enabling remote teammate access via **WireGuard VPN replicating enterprise setups**.
- Designed dashboards for container CPU/memory throttling to monitor K3s resource efficiency.

Google Maps Clone GIS

- Built a mapping tool with **OpenStreetMap API, GTK UI**, and **multi-threaded Dijkstra/A\*** pathfinding, achieving **22% faster queries** and **12x TSP runtime reduction**.

Colorization of Grayscale Images with Deep Learning:

[Demo Link](#) [Code Link](#)

- Trained a U-Net cGAN in PyTorch using ResNet-34 encoder and CUDA, producing high-quality colorized images from the 25 k-image Kaggle dataset.

Other Projects: [“N.E.O.” \(GPT-powered voice assistant\)](#) · [Portfolio Website](#) · [2D Game Clone \(DE1-SoC\)](#) · [Movie Ticket Booking System](#)