

Hassan Mohammed

(825) 440-6430 | hf.mohammed21@gmail.com | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

EDUCATION

University of Alberta

Bachelor of Science Honors, Computing Science

Sep 2022 - May 2027

Edmonton, AB

- Coursework: OOP, DSA, Software Engineering, Databases, Operating Systems, Machine Learning

EXPERIENCE

CGI Inc.

Full Stack Developer Co-op

Edmonton, AB

May 2026 - Present

- Building internal web applications using **Blazor** and **.NET**, contributing to full-stack feature development within an enterprise environment.

University of Alberta

Undergraduate Research Assistant

Edmonton, AB

May 2025 - Aug 2025

- Designed and built an automated data-quality pipeline monitoring **13 pose categories** across **10 participants**, flagging coverage gaps before they reached model evaluation and preventing wasted training runs.
- Built a 3D mesh and joint visualization tool adopted by the research supervisor as the primary interface for reviewing markerless tracking outputs, replacing ad-hoc manual inspection.
- Benchmarked **4 pose-estimation models** against real-world workloads and delivered a trade-off analysis that directly determined which model the team shipped to production.

Scale AI

Software Engineer in Test Intern

Remote

Sep 2024 - Apr 2025

- Reviewed **300+ pull requests** across multiple codebases to understand system behavior deeply enough to write regression tests that caught real bugs before they reached production.
- Rewrote **500+** task specifications and test cases for AI agents, lifting success rates by **~30%** demonstrating that clear, well-scoped requirements matter as much as the code itself.
- Reverse-engineered undocumented code changes to reconstruct expected behavior, turning ambiguous fixes into reproducible test scenarios that improved long-term test coverage.

PROJECTS

Near Buy Goods | *Django, PostGIS, Redis, Celery, Docker, React Native, OpenAI API* | [Demo](#)

- Built a full-stack local commerce platform (~70k LOC) that lets brick-and-mortar retailers compete with e-commerce, using PostGIS geospatial queries and optimized APIs to serve location-based product search at low latency.
- Designed an async bulk-ingestion pipeline (Celery + Redis) that lets retailers upload thousands of products at once with AI-assisted field mapping and live progress updates without blocking the main request thread.
- Maintained a **921-test suite** (595 backend + 326 frontend) integrated into a CI/CD pipeline that automatically ran tests, built the APK, and deployed to a live production server on every merge.

Learning Management System (LMS) | *React.js, Node.js, AWS*

- Built a multi-tenant LMS backend supporting **150+ users** with role-based access control, offloading all media to **AWS S3** to keep the application layer stateless and easy to scale.

FireGuard: HackEd 2025 1st Place Winner | *Raspberry Pi, Python, YOLOv8, Roboflow* | [GitHub](#)

- Developed a real-time fire **detection and classification** system on constrained edge hardware that **won first place** in the Hardware Challenge at **HackED**, the University of Alberta's annual hackathon with **300+ attendees**.

Gazprea Compiler | *C++, x86_64 Assembly* | [GitHub](#)

- Implemented a full compiler pipeline in **C++**, lexing, parsing, AST construction, and code generation, with a focus on producing correct, predictable output over a large test suite.
- Generated x86_64 assembly with scoped variables and structured control flow, developing a strong intuition for how high-level code maps to low-level execution.

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, JavaScript, Java, RISC-V Assembly, HTML, CSS

Frameworks & Libraries: FastAPI, Django, React, React Native, Next.js, Node.js, OpenCV, YOLOv8

Tools & Platforms: Git, AWS, Docker, Cybera, Firebase, Android Studio, VS Code, REST APIs, MongoDB, Roboflow, Supabase, UNIX