

HANAN HUSSAIN

hanan@hananhussain.com | 3064441025 | linkedin.com/in/hananhussain1 | github.com/HananProjects | hananhussain.com

EDUCATION

University of Saskatchewan | Saskatoon, SK

Bachelor of Science in Computer Engineering | June 2026

EXPERIENCE

Co-founder & Engineer - Keytrus | Saskatoon, SK | Jul 2026 - Present

Next.js 16, TypeScript, PostgreSQL, Supabase (Auth/RLS), Tailwind CSS, shadcn/ui

- Co-founded and shipped a multi-tenant property management SaaS, now in use by 4 landlords and 4 property portfolios
- Designed the PostgreSQL schema (**15+ migrations**) with Row-Level Security enforced through composite foreign keys, collapsing every tenant-isolation policy into a single array-membership check
- Built server-side authorization and billing end-to-end: a role-based permission system (**4 roles, 14 permission keys**)
- Delivered full property/lease/tenant management including a lease engine that auto-generates rent-charge schedules and financial reporting - plus team invitations and an automated test suite exercising real **RLS policies** under different roles

Software Developer - Motion Fitness | Saskatoon, SK | Jun 2026 - Present

Python

- Built internal financial dashboards for both front desk-operations and accounting team to review, reconcile, and automate expense work across **5** gym locations, replacing **5** separate spreadsheets with a single system
- Owned the underlying data workflow end-to-end; Cleaning and structuring raw operational data, automating expense/invoice processing, and building recurring reports making processing **3x faster** and auto-flagging discrepancies before reconciliation
- Designed and shipped an internal HR management system with zero recurring costs that fully replaced a paid third-party HR SaaS subscription (**saving them \$2400 a year**)

Software Developer - Autoholic | Saskatoon, SK | Jan 2026 - Present

- Built and deployed a production invoicing system and business website now in daily use by the shop - client, vehicle, invoice, and expense management
- Designed the relational **SQLite schema** for client, vehicle, invoice, and expense data, with queries handling GST/PST tax calculations and reconciliation
- Owned the full delivery cycle solo: requirements with the owner, design, deployment on Railway, and ongoing support

PROJECTS

FraudGuard – Real Time Fraud Detection Pipeline | 2026

Go · Next.js/TypeScript · Terraform · Azure (Event Hubs, Cosmos DB, Container Apps, SignalR) · GitHub Actions

- Designed and built a distributed event-driven fraud-detection pipeline on **Azure**: A **Go** microservice consumes a live event hubs transaction stream on Azure Container Apps, autoscaling via **KEDA** on Event Hubs lag to zero for fault-tolerant scaling
- Built a rules-based fraud-scoring engine (z-score, velocity, geo checks) - 50% precision, 64% recall on labeled test data
- Delivered real-time, consistent dashboard updates via **Cosmos DB** with a NextAuth-gated Next.js/TypeScript frontend

AI Code Review Pipeline | 2026

Python, CrewAI, Claude API, FastAPI, GitHub API, GCP Cloud Run, Docker

- Built a multi-agent AI code review system using CrewAI and Claude API that automatically reviews GitHub PRs via webhooks; deployed to **GCP Cloud Run** with Docker - serverless, scales to zero, permanent public URL
- Engineered and orchestrated **3 parallel AI agents** (security, performance, style) running concurrently via ThreadPoolExecutor, reducing review time by **3x vs sequential execution**
- Integrated GitHub Review API to post **inline comments pinned to specific lines of code**

Two-Way Portable English-to-ASL Translator (Capstone) | Sept 2025 - Apr 2026

Raspberry Pi 5, Python, MediaPipe, VOSK STT, C, Linux, I2S/I2C/CSI, Edge Inference

- Designed and integrated a real-time bidirectional ASL-English translation system on Raspberry Pi 5; achieved **end-to-end latency under 2 seconds** with fully offline operation across **100+ word vocabulary**
- Developed a key-point-based gesture recognition pipeline using Python and MediaPipe; achieved **>85% classification accuracy** across gesture classes through landmark extraction, inference logic, and token mapping
- Architected a modular, fault-tolerant multi-threaded system managing **5 concurrent subsystems** (camera, microphone, display, speaker, control) on a single embedded platform within a **\$500 hardware budget**

TECHNICAL SKILLS

Languages: C, C++, Python, Java, Verilog, TypeScript/JavaScript (React, Node.js), HTML/CSS, SQL

Frameworks & Tools: FastAPI, Django, Next.js, Tailwind CSS, Linux, Bash, Git, Docker, GCP Cloud Run, Railway, Azure, REST APIs, Pytest, Agile/Scrum, CI/CD (Github Actions)

CERTIFICATIONS

Google Cloud Fundamentals - Core Infrastructure (2025) | **GitHub Foundations Certificate** (2024) | **AWS Certified Cloud Practitioner** (2026) | **AWS Certified AI Practitioner** (2026) | **Microsoft Azure Fundamentals – AZ-900** (2026)