

ISRAEL EDEH

Software Engineer

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LinkedIn | GitHub | Portfolio

PROFILE

Software engineer who builds and ships across the whole stack, from backend services and relational data models to React and React Native frontends, on AWS with Docker and CI/CD pipelines. Over nine months I built the backend and AI layer for a National Cyber Security Centre tool, from interviewing the assessors who would use it to a working prototype, writing automated tests, building and consuming REST and WebSocket APIs, and applying AI tools thoughtfully in the workflow every day. I like owning a well-scoped feature from first line to deployment, and I care about cost and latency at scale.

TECHNICAL SKILLS

- **Languages:** Python, Java, JavaScript, TypeScript, Kotlin, SQL
- **Backend and APIs:** FastAPI, Node.js, Express, REST APIs, WebSockets, SQLAlchemy, Pydantic
- **Frontend:** React, Next.js, React Native, Expo, Tailwind CSS
- **Databases and data modelling:** PostgreSQL, MongoDB, Redis, relational schema design
- **Cloud, DevOps and testing:** AWS, Docker, Git, GitHub Actions (CI/CD), pytest
- **AI in the workflow:** LLM APIs (OpenAI), Retrieval-Augmented Generation (RAG), vector search, LangGraph; AI-assisted development with Claude, Codex, and Cursor, every generated block reviewed and tested

PROFESSIONAL EXPERIENCE

Software Development Engineer (Backend & AI)

Sep 2025 - May 2026

National Cyber Security Centre, via CSE Connect, United Kingdom

- Built the backend and AI layer for a prototype tool used by government assessors to certify university cyber security degrees. It began as a real government brief: before writing code, my teammate and I interviewed the assessors and university representatives who use the process and turned that into our requirements. In a team of two, I owned the database, the entire backend, and the AI layer, and wired it to my teammate's frontend.
- Wrote it in Python and FastAPI, fully asynchronous, over a relational PostgreSQL schema I designed in SQLAlchemy, building and consuming REST and WebSocket APIs across the service.
- Replaced manual checks across dozens of PDF, Word, and Excel files with one workflow that graded evidence against more than 130 fixed criteria and produced a professional PDF report; the prototype was projected to cut a review cycle from roughly 12 weeks to an estimated 6.
- Solved the hardest problem myself: deciding, criterion by criterion, when plain deterministic code was enough, when a criterion needed AI judgement, and when to ground that judgement in retrieved evidence (RAG), keeping the tool accurate, affordable, and fast rather than an expensive black box.
- **Tests, review, recognition:** wrote automated tests across 8 defined cases including deliberately broken evidence (all 8 passed, including the fail-safe ones), and used Claude daily with every generated block reviewed and tested. This was my First Class final year project (mark 77), earned an Employer Commendation, and drew a personal letter from the NCSC Deputy Director.

Full Stack Software Engineer, Mobile Behaviour Analytics

Jun 2025 - Sep 2025

CSE Connect (Experience Exceler8or programme), Cambridge

- Built a full stack phone-usage analytics system end to end on my own: a Kotlin Android app, a Node.js and Express backend, and a web dashboard, all self-hosted with Docker and MongoDB.
- Designed the data model and APIs so app names were anonymised on-device (HMAC) before sync, a privacy-by-design schema the server could never de-anonymise, with 7-day retention enforced in the app, the database, and every query, all behind encrypted, JWT-protected connections.

Software Development Engineer (AI Legal Tech)

Mar 2025 - Aug 2025

Largence, Remote / Cambridge

- Joined a founder-led startup as its first engineer and built the prototype that became the company's main investor and client demo, turning plain-English requests into structured legal drafts in Python with FastAPI, MongoDB, and the OpenAI API.
- Designed the LangGraph agent workflow (template retrieval, missing-information checks, drafting, self-review) and streamed live progress to a Next.js chat and document editor over WebSockets, then briefly led other engineers through the MVP before stepping back for my degree.

PROJECTS

Ovelo, AI Video Identification App

Mar 2026 - Present

Full stack monorepo: React Native (Expo) client and FastAPI server

- A full stack "Shazam for movies and TV": a React Native (Expo) frontend and FastAPI backend that name a title from a short clip in 15 to 30 seconds at 90% accuracy, using the OpenAI API, AWS Rekognition, and OpenCV, with a WebSocket streaming progress to the phone live. Hardened on AWS with rate limiting, caching, and request de-duplication.
- Version 1 indexed movie transcripts in a vector database, until I realised that meant paying to index effectively every film ever made; version 2 extracts the key clues and searches the live internet for the same result at a fraction of the cost.

Machine Learning Projects

2024 - 2026

Standalone Python pipelines exploring ML and LLM capabilities

- A football outcome model over about 12,500 matches (XGBoost, calibrated probabilities) reaching about 70% precision on high-confidence calls from a 51% baseline, and a chatbot response classifier at about 83% accuracy on leakage-safe, session-aware splits.

EDUCATION

BSc (Hons) Software Engineering

Sep 2023 - Jun 2026

Anglia Ruskin University, Cambridge

- **First Class Honours, overall 78.92%.**
- **Selected modules:** Cloud Computing 80, Advanced Object Oriented Programming 82, Machine Learning 71.
- **Certifications:** AWS Academy Cloud Foundations; Cisco Python Essentials 1.