HANIEH KHALID

Junior Software Engineer · 42 Abu Dhabi Bachelor Student
(Software Development)

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PROFILE

Junior software engineer and 42 Abu Dhabi Bachelor student (common core graduate) with hands-on experience in full-stack web development, DevOps, and applied AI. Built production-style projects using TypeScript, Node.js, Docker, and C/C++. Delivered AI and programming training to students and ADNOC employees. Actively looking for an **internship or junior role in software engineering (web/backend/AI)** where I can ship real features and learn from a professional team.

TECHNICAL SKILLS

Programming: Python, C, C++, Java, TypeScript, JavaScript

Web / Frontend: HTML5, CSS3, Vanilla JavaScript, TypeScript, Responsive Design

Backend: Node.js, Fastify, RESTful APIs, WebSocket, real-time communication

DevOps & Systems: Docker, Docker Compose, NGINX, Linux/Unix, basic system administration, deployment

AI / ML: Model training & fine-tuning, computer vision (face recognition, CCTV), NLP, prompt engineering, agentic AI workflows

Tools & Practices: Git, Agile-style workflows, project management

Languages: Arabic (Native), English (Fluent), French (Basic)

PROJECTS

Transcendence – Real-Time Multiplayer Web App (Capstone)

TypeScript, JavaScript, CSS, Node.js, Fastify, WebSocket, Docker, NGINX

- Built a production-style real-time Pong web application with custom frontend architecture using TypeScript and vanilla JS.
- Implemented backend services with Fastify, including authentication, REST APIs, and WebSocket communication for live gameplay and matchmaking.
- Containerized the full stack with Docker & Docker Compose, using NGINX as a reverse proxy for deployment.

Poll Voting System – Full-Stack Application

TypeScript/JavaScript, Node.js, REST APIs, Docker

- Developed a poll platform with user authentication, poll creation, and real-time vote updates.
- Designed backend APIs for poll management and data storage; deployed the system to handle concurrent users.

Inception – Container Infrastructure & DevOps

Docker, Docker Compose, NGINX, WordPress, MariaDB, Linux

- Designed a multi-service container architecture with separate containers for NGINX, WordPress, and MariaDB.
- Configured custom networks, persistent volumes, and SSL/TLS certificates for a production-like deployment.

IRC – Internet Relay Chat Server

C++, TCP/IP, Sockets, Linux

- Implemented a real-time IRC server in C++ using TCP/IP socket programming and multiplexing.
- Supported channels, private messaging, authentication, and multiple concurrent clients with robust command parsing.

Cub3D – 3D Game Engine in C

C, Math for Graphics, Raycasting

- Built a mini 3D engine inspired by Wolfenstein 3D using raycasting techniques.
- Implemented texture mapping, collision detection, and player movement with smooth input handling.

AI & Agentic Prototypes

Python, AI/ML tools, agent frameworks

- Prototyped an AI-powered ERP assistant using natural language and autonomous agents to handle routine tasks.

EXPERIENCE & LEADERSHIP

Software Developer & Community Educator – 42 Abu Dhabi

Abu Dhabi, UAE · 2022 – Present

- Mentored new students in the Al Ain Piscine, helping them debug C projects and understand core programming concepts.
- Planned daily activities and managed schedules, keeping operations running smoothly for dozens of participants.
- Led AI bootcamps on AI fundamentals and prompt engineering for 50+ participants, including ADNOC employees.
- Taught Python programming and problem-solving using practical exercises and projects.
- Ran hands-on Arduino and robotics sessions for 30+ children, teaching circuits and basic STEM concepts.

HACKATHONS & AI PRACTICE

- Developed a crowd management solution to optimize patient flow and reduce waiting times at a Cleveland Clinic Abu Dhabi hackathon.
- Built a real-time employee recognition system using computer vision and fine-tuned a face recognition model on the Buffalo dataset.
- Designed an AI-powered chatbot landing page for a jewelry e-commerce brand to improve customer engagement.
- Contributed to an Abu Dhabi Government Services hackathon focused on streamlining online services and accessibility.
- Completed an intensive AI & Machine Learning program (Sprints), including an agent-driven ERP prototype using autonomous agents.

EDUCATION

42 Abu Dhabi – Bachelor's Program in Software Development (in progress)

Abu Dhabi, UAE · 2022 – Present

- Completed the 42 common core (diploma level) and progressed into the Bachelor track in Software Development.
- Project-based software engineering program focused on full-stack development, systems programming, algorithms, and DevOps.
- Completed numerous individual and team projects under peer review, demonstrating self-learning, collaboration, and resilience.

Al Nahda National School

Graduated June 2022

- Graduated with top honors; participated in Sheikh Mohammed bin Rashid's Arabic Reading Challenge and received multiple academic awards.

COMMUNITY & EVENTS

- Volunteered in Ramadan food distribution, beach clean-ups, and local community initiatives.
- Worked at major events including Formula 1 Grand Prix, Coldplay concert, Comic Con, ADIPEC, and international conferences at ADNEC, handling room management, registration, and on-site coordination with international delegates.