

HEMA OMER

Full Stack Developer | AI/ML Developer

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PROFESSIONAL SUMMARY

I started coding at 16 out of pure curiosity and never stopped. What began as teaching myself to build things turned into a career I genuinely love — from shipping my first projects as a teenager to building AI inference servers, lawful interception platforms, and production-grade LLM systems today.

Full Stack Developer and AI/ML Developer with 6+ years of experience building scalable web applications, intelligent systems, and data-driven pipelines. Proven track record across backend development (Go, Laravel, Python), frontend development (React.js, Vue.js, TypeScript), and AI/ML development including LLM deployment, RAG systems, machine learning, and network-level deep packet inspection. Experienced in freelance consulting, product engineering, and leading technical product teams. Fluent in Kurdish, Arabic, and English.

TECHNICAL SKILLS

Languages	Go, Python, PHP, JavaScript / TypeScript, Dart, C++
Frontend	React.js, Next.js, Vue.js, React Native, Flutter, Tailwind CSS, RTK, shadcn/ui, Framer Motion
Backend & APIs	Laravel, Express.js, Flask, REST APIs, SSE, Socket.io
AI / ML	XGBoost, vLLM, RAG, Qdrant, Prompt Engineering, Intent Classification, Apache ECharts
Databases	MySQL, PostgreSQL, Vector Databases (Qdrant)
DevOps & Infra	Docker, GitHub, JIRA, GPU Server Config, Vercel
Networking & Security	Deep Packet Inspection, ETSI LI (ASN.1/PCAP), VoIP/SIP/RTP, HoneyPot Systems, Penetration Testing
Embedded Systems	Arduino (C++), ESP8266, PlatformIO, I2C, OLED Hardware Interfacing

PROFESSIONAL EXPERIENCE

Ruyat Corp.

Sep 2025 – Present

Iraq

Senior Backend Developer & AI Developer

IoT Cabinet Monitoring Platform

- Built a monitoring system for a large network of field cabinets, helping technicians maximize maintenance efficiency and manage emergency situations.
- Built role-based authentication (Admin/User) with secure session management and role-specific dashboard routing.
- Developed administrative user management APIs with account creation, deletion, and confirmation safeguards.
- Implemented region-based user assignment backend allowing administrators to scope operational data access.
- Developed real-time cabinet status monitoring (Online/Offline) with dynamic region-based filtering and pagination infinite-scroll retrieval.
- Built a multi-type alarm management system (Air Conditioner, Temperature, Water Leakage, Smoke, Battery SoC) with assignment APIs and real-time propagation.
- Implemented real-time alarm notification architecture delivering critical metadata—cabinet ID, alarm type, timestamp—to relevant region users while preventing cross-region data leakage.
- Engineered search functionality backends and sync server infrastructure for reliable IoT-to-application data synchronization.

Messaging Platform — Backend

- Contributed to the backend of an established, high-traffic consumer messaging application.
- Implemented server-side logic for message forwarding with attachment preservation, emoji reaction syncing with count aggregations, thread pinning, and automated @mention tagging.

- Developed unread message counters, one-sided message deletions, image album grouping, and self-destructing messages with server-side expiration and cleanup.
- Built secure SMS OTP verification, phone registration flows, user blocking controls, emergency contact directories, and QR code contact discovery.
- Resolved critical goroutine concurrency vulnerabilities, stack/buffer overflows, and conducted comprehensive SQL injection security audits across the Go backend.
- Integrated a third-party content moderation API for AI-powered content moderation and real-time threat detection.
- Led backend refactoring across multiple modules, fixed critical identifier and counter bugs, and added standardized system documentation.

AI Customer Support Assistant (Project Lead)

- Led end-to-end design, research, and production delivery of a multilingual AI customer support chatbot integrated into a telecom production platform.
- Deployed and tuned a vLLM inference server hosting quantized (AWQ) language models on GPU infrastructure, configuring gpu-memory-utilisation and max-model-len for multi-user stability.
- Configured containerized Qdrant vector database deployments to drive semantic search and retrieval-augmented generation (RAG).
- Built relay logic in Go to intercept messages, retrieve the last 5 turns of conversation context from MySQL, and stream tokenized responses via Server-Sent Events (SSE).
- Designed master system prompts seeded with corporate FAQs, tuned inference parameters per business tier, and resolved Kurdish character-set errors and model hallucinations.
- Directed training and dataset curation for a multilingual intent classification model to auto-route queries across English, Arabic, and Kurdish dialects.

Network Traffic Analytics Platform

- Built a VoIP traffic analytics module for real-time SIP, RTP, RTCP, and SRTP protocol analysis, categorizing traffic by Autonomous System, application, and content category.
- Developed a call detection system leveraging network/relay IP address fingerprinting to track encrypted VoIP signatures from popular messaging apps.
- Trained an AI model for user-activity recognition from deep packet inspection data and built a voice recognition system for network-level audio stream analysis.

Fraud & Risk Analytics System

- Designed and built an end-to-end ML pipeline using XGBoost to classify and predict suspicious financial transactions across digital wallet products.
- Performed advanced feature engineering over structured transaction datasets and engineered custom network-layer visualization tools to trace transaction flows layer by layer.

Compliance & Interception System

- Built and extended a Go-based service compliant with international lawful-interception (ETSI) standards to ingest and decode standardized transport protocol data via industry-standard ASN.1 decoding libraries.
- Developed a protocol classification scanner alongside internal replay/testing utilities for lab validation against regulated endpoints.
- Implemented audio codec detection and decoding (G.711 A-law/μ-law) to isolate, translate, and export intercepted payload streams into standard WAV audio files.

H3MA Agency

Sulaymaniyah, Iraq

Jan 2023 – Mar 2025

Founder & Full Stack Solutions

- Founded a digital transformation solution delivering tailored web development, rebranding, and custom internal systems (sales, inventory, employee performance, and debt management dashboards) for 16+ SME clients.
- Managed concurrent client pipelines using Agile methodology with JIRA to ensure execution met exact technical specifications.

We Are iQ Group

Sulaymaniyah, Iraq

Jun 2023 – Aug 2023

Software Developer — University Internship

- Processed a large volume of multilingual records (Arabic, English, Kurdish) using Python, achieving high accuracy by leveraging mapping APIs for address/name validation and pre-trained translation models to resolve cross-language inconsistencies.
- Rectified data anomalies, misspellings, and category errors across three languages to produce a clean, consistent dataset for production use.

- Conducted authorized penetration testing for an internal client project, successfully identifying access control gaps on three separate occasions via three distinct methods, directly contributing to improved security measures.

Potan

Jun 2022 – Jan 2023

Sulaymaniyah, Iraq

Frontend Developer & Flutter Developer

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- Managed API integration, refresh logic, and core functionality for the Joomla! e-commerce mobile app (Flutter), covering home, search, category, cart, and settings screens; resolved cart item count discrepancies.
- Rebuilt the entire Joomla! backend from scratch using Laravel to handle production-scale operations.
- Developed the complete Joomla! admin dashboard frontend with React and Tailwind CSS, implementing comprehensive CRUD functionality via RTK for admins, users, locations, items, companies, drivers, orders, discounts, currencies, and more.
- Created the Hama Group blog page and full admin dashboard using React and Tailwind CSS.
- Enhanced the UI/UX and continued development on an internal HR app and dashboard using React Native.

Potan

Nov 2020 – Dec 2020

Sulaymaniyah, Iraq

Freelance UI/UX Designer

- Designed the complete UI for Sardam Post App (Adobe XD) — a parcel posting and delivery application for the Kurdistan Region.
- Designed a UI prototype for Potan's corporate website (Adobe XD) to showcase their services and portfolio.
- Designed the complete UI for Aryan Post App (Adobe XD) — a second regional posting and delivery application for the Kurdistan Region.

Speedway IQ

Dec 2020 – Apr 2022

Sulaymaniyah, Iraq · Hybrid

Full-Stack Developer (Part-time)

- Assisted in developing internal tools and dashboards to support daily operations across multiple departments.
- Learned and applied Laravel for backend development and React.js for frontend components under senior developer guidance.
- Collaborated with design and operations teams to understand project requirements and implement features.
- Gained foundational experience with documentation standards, Git version control, and testing procedures through structured mentorship.

SMARTMED

Jul 2020 – Sep 2020

Iraq

Freelance Full-Stack Developer

- Developed a Customer Relationship Management (CRM) web application end-to-end, building both the backend and frontend using Laravel and Vue.js with Laravel Sanctum for authentication.
- Improved UI/UX and resolved frontend bugs in their Smart-Inventory system, a storage management platform used in market operations.

EDUCATION AND CERTIFICATES

Komar University of Science and Technology

Jan 2021 – May 2025

BSc in Computer Science · Sulaymaniyah, Iraq

- Founded the university's first technology club; structured technical workshops and mentored 20+ students across web development, programming, and Git version control.
- AUK Iraq Universities Hackathon — 3rd Place (2024): Led a team of 4 to build a Kurdish natural-language medical voice assistant using Python and the Claude API.
- Komar Tech Day — 2nd Place (2023): Coordinated a multi-project club showcase and secured second place with a custom WiFi security deployment framework.
- BIT Festival Hackathon Participants assistants (2022)
- Hackasuly Participants Mentor (2021)

- Hacksuly hackathon participant (2019)

NOTABLE PERSONAL PROJECTS

Sahih Explorer — github.com/h3ma209/sahih-explorer

Stack: Next.js 15+, TypeScript, Tailwind CSS, Apache ECharts, Python

Full-stack web application for exploring Islamic scholarship across 24,000+ relational scholar profiles. Renders interactive charts displaying historical lineages and chains of transmission.

- Built interactive network graphs with Apache ECharts to map teacher-student relationships.
- Engineered an asynchronous Python text extraction pipeline across 6 text collections.
- Implemented localized 3-language i18n with native Arabic RTL layout support.

krain-sec — Cybersecurity Honeypot — github.com/h3ma209/krain-sec

Stack: Go, Multi-threading, Systems Programming, Network Security, Socket Programming

Open-source threat intelligence framework in Go functioning as a multi-protocol honeypot to safely trap, log, and analyze malicious server connection behaviors.

- Designed extensible socket emulators across HTTP, SSH, FTP, Telnet, and SMB protocols.
- Incorporated live port-scanner reconnaissance detection and a structured CSV threat logging system.

R6 Vulture — RainbowSix Siege Overlay

Stack: TypeScript, Python, Event-Driven UI, Service Boundary Design, Local Caching

- R6 Vulture is an in-game tactical intelligence overlay for Tom Clancy's Rainbow Six Siege. It runs as a web app and shows ranked player dossiers, team-level reads, and operator context while you play.
- During a match, the overlay listens to live game events (roster, phase, kills, deaths, operators) through Overwolf's Game Events Provider (GEP). For each enemy (and optionally yourself), it fetches ranked statistics through a local proxy, runs them through the tactical engine, and renders dossiers in an in-game dashboard.
- The goal is pre-round and mid-match decision support: who to pressure, how they play attack and defense, which operators they lean on, and how confident that read is for their rank band.

Pengz0 — Embedded Security Toolkit — github.com/h3ma209/Pengz0

Stack: Arduino (C++), ESP8266, PlatformIO, Hardware Interfacing, I2C Protocol

I have created a Portable hardware-based Wi-Fi security research device for ESP8266 microcontrollers with modular network firmware and physical SSD1306 OLED menu system.

- Programmed modular fake access points, DNS hijacking, and custom captive portals.
- Optimized with PROGMEM bitmap allocations to fit resource-constrained chip memory.

SAI — Security AI

Stack: Vue.js, Express.js, Flask, Python, Node.js, Machine Learning

Platform featuring an AI-powered web application firewall that dynamically validates live requests between client and server.

- Trained a predictive ML model to recognize diverse web attack patterns with high precision.
- Linked the Flask-based predictive layer directly to an Express.js backend and Vue.js administrative interface.

CERTIFICATIONS & LANGUAGES

Awards	AUK Iraq Universities Hackathon — 3rd Place (2024) · Komar Tech Club Opening Day — 2nd Place (2023) · BIT Festival Mentor (2021)
Languages	Kurdish (Native) · English (Full Professional) · Arabic (Elementary)