

Hisham Alhussain

Senior Software, Cloud & AI Engineer

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Summary

Saudi national and engineer with 7+ years of experience designing, building, and operating software, cloud, and AI solutions for enterprise and government clients, including the oil and gas sector. I deliver production LLM and RAG systems, Palantir Foundry applications, event-driven backend services, and Kubernetes-based platforms on GCP, OCI, and OpenShift. At NEOM I advised the Deputy CEO's Office and led delivery from requirements through adoption: ESRA, the contractor reporting application I built, cut a four-week compliance reporting process to about an hour and became the standard procedure for all 800 contractors. Master's degree in Computer Science (KAUST). Python is my main language (13 years). Native Arabic and fluent English speaker.

Experience

June 2026 – September 2026

Senior Systems Engineer, EPAM Systems Limited Company

Al Khobar, Saudi Arabia

- Led daily meetings with the client to gather requirements and translate them into technical solutions for the development team, keeping the scope of work aligned.
- Led DevOps for the client's HR agent (Node.js/TypeScript, LLM + RAG for HR policy questions, leave requests, and certificates), owning its deployment to production.
- Configured LLM endpoints and routing for a client chat agent, with RAG and vector search over enterprise data.
- Developed the HR agent's Speech-to-Text (STT) backend feature and debugged it directly on the client's network through to a working, deployed solution.

January 2024 – June 2026

- Wrote numerous Python scripts early in the engagement to test connections to third-party systems, surfacing client-network issues before they could block deployment and ensuring smooth deployment and integration of services.
- Designed PostgreSQL database schemas and data distribution, squashed and consolidated migrations, and automated their execution on service startup.
- Deployed to production on GCP and OpenShift using Docker, config maps, secrets, deployment YAML, Terraform, Git, Bitbucket, and ArgoCD (GitOps).
- Managed secrets, TLS/certificate configuration, and LDAP/SAML authentication for deployments.

Senior Solution Architect, NEOM

Tabuk, Saudi Arabia

- Acted as trusted technical advisor to NEOM's Deputy CEO's Office, identifying pain points, scoping AI and data solutions, and presenting designs, executive dashboards, and decision-intelligence tools to senior stakeholders.
- Built ESRA (Environmental & Social Responsibility Application), which contractors use to submit their monthly environmental sheets; it cut compliance reporting from about 4 weeks to about 1 hour and was adopted as the standard reporting procedure by all 800 contractors.
- Built EnviroGPT, an AI chatbot for NEOM's environment teams that answers questions from indexed environmental documentation using retrieval-augmented generation (RAG).
- Built LLM and RAG solutions within Palantir Foundry, and led design of an enterprise environmental data platform integrating multiple waste and compliance systems into a unified model.
- Designed VPC networking and storage architecture on GCP for enterprise data platforms.
- Directed the modernization of Foundry applications and data pipelines, and defined and enforced DevOps and CI/CD standards across internal applications.
- Worked directly on Kubernetes deployments before NEOM's move to OpenShift, and coordinated cross-functional engineering teams.

September 2022 –
December 2023

Senior DevOps Specialist, NEOM

Tabuk, Saudi Arabia

- Designed and delivered a centralized Helpdesk platform for service management, improving resolution times by 150%.

- Onboarded and led a team of 10 consultants through Agile stand-ups, task alignment, and vendor coordination.
- Migrated Software Asset Management (SAM) operations into NEOM IT, ensuring knowledge transfer, governance compliance, and continuity.
- Reduced developer onboarding time from 6 weeks to 2 weeks through workflow automation and knowledge-base development.
- Configured proxy and load balancer settings as part of infrastructure provisioning work.

July 2021 – September 2022

DevOps Specialist, NEOM

Tabuk, Saudi Arabia

- Automated provisioning workflows on Oracle Cloud Infrastructure (OCI), enabling rapid, standardized deployments.
- Standardized application publishing processes, reducing cycle times by 75% and improving governance.
- Integrated CI/CD pipelines and DevOps practices across multiple teams, reducing release risk and downtime.
- Oversaw enterprise-wide software licensing, provisioning, and compliance for 1,000+ users.

July 2018 – July 2019

Software Developer, IBM

Austin, TX, USA

- Built production web UI components in React and wired them into backend service logic to support enterprise reporting features.
- Recorded analytics data into databases and integrated backend and frontend analytics platforms for real-time monitoring and executive reporting.
- Automated compliance and security scans within IBM's DevOps Insights, improving audit efficiency by 50%.

May 2017 – August 2017

Mobile Software Developer (Intern), IBM

Durham, NC, USA

- Developed and deployed enterprise-grade features for the IBM Connections mobile app using React Native.
- Improved app performance by 50% with optimized state management.

Selected projects

ESRA: Environmental & Social Responsibility Application

NEOM

Application NEOM's contractors use to submit their monthly environmental sheets, feeding validated data into compliance dashboards. Cut compliance reporting from about 4 weeks to about 1 hour and became the standard procedure for all 800 contractors.

Stack: Online forms, data pipelines, validation, dashboards

EnviroGPT

NEOM · Palantir Foundry

AI chatbot for NEOM's environment teams that answers questions from indexed environmental documentation, generating responses with retrieval-augmented generation (RAG).

Stack: GenAI, RAG, Palantir Foundry

NEV Environmental Dashboards

NEOM

Interactive dashboards covering projects by status, compliance metrics, complaints and exceedances, regional breakdowns, and diesel generator locations.

Stack: React, data visualization, maps

Presentation Parsing Pipeline

NEOM · Palantir Foundry

End-to-end pipeline that extracts content from PowerPoint files, with OCR fallback, slide quality checks, and logging, productionized in Foundry.

Stack: Python, pytesseract, Tesseract, Pillow, Palantir Foundry

CAPEX Estimator for the Line FM

Palantir Foundry

Foundry application for estimating capital expenditure (CAPEX) for the Line FM.

Stack: Palantir Foundry

Oil & gas pipeline geomap

Palantir Foundry · confidential energy-sector client

Geospatial application mapping pipeline routes and stations, with operational dashboards. Client and project details withheld due to confidentiality.

Stack: Palantir Foundry, maps

Automation and security practices

- Automated infrastructure tasks with Ansible and GitLab.

- Applied server hardening practices, including SSH configuration, firewall rules, patching, and access control.
- Wrote many Python and shell scripts to smoke-test connections to services.
- Explored penetration testing independently with Kali Linux and Nmap.

Personal and collaborative projects

Emojination

Collaborative NLP and machine learning project applying semantic analysis to text-to-emoji translation, built with a fellow developer.

Personal projects

React and Next.js applications, published on GitHub (github.com/hisham8383).

Certifications

Palantir Foundry Data Engineer Associate

March 2024

Palantir Foundry Application Developer Associate

January 2024

Education

Master's Degree in Computer Science

King Abdullah University for Science & Technology (KAUST), Thuwal, Saudi Arabia, September 2019 – December 2020

GPA 3.70/4.0. Coursework included natural language processing, machine learning, and data science.

Bachelor's Degree in Computer Science

University of Massachusetts Amherst, Amherst, MA, USA, September 2014 – May 2018

GPA 3.88/4.0. Coursework included cybersecurity; many computer science projects built in Java.

Skills

Programming

Python (13 years), Node.js/TypeScript, Java, React, React Native, Next.js; basic working exposure to Angular and .NET

AI and data

LLM integration, RAG and vector search, AI agents, Speech-to-Text, Palantir Foundry, data platform design, executive dashboards; daily use of AI coding agents (Claude Code)

Cloud and containers	Google Cloud Platform (GCP), Oracle Cloud Infrastructure (OCI), AWS, Azure, Kubernetes, OpenShift, Docker, VPC networking
DevOps and automation	Terraform, Ansible, GitLab, ArgoCD (GitOps), Jenkins, Git, Bitbucket, CI/CD pipelines, Linux, shell scripting
Data and messaging	PostgreSQL (schema design, migrations), Redis (caching, pub/sub, Streams), event-driven architecture
Observability and security	Prometheus, Grafana and OpenTelemetry (basic), TLS/certificates, secrets management, LDAP/SAML, server hardening
Languages	Arabic (native), English (fluent)