

Ihab Khaled Fouad

Senior Software Engineer | Full-Stack & Integrations | Node.js, TypeScript, React | Scalable Systems & APIs

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Military status: **Completed** | Nationality: **Egyptian**

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EDUCATION

Misr University for Science & Technology, Grade: Good

SEP 2012 - JULY 2016

Bachelor's Degree in Computer Science

Graduation Project

Travelling Salesman Guider (TSP)

A logistics and route-optimization platform built to solve the Travelling Salesman Problem for delivery operations. The project helped businesses organize orders, assign deliveries, track salesmen, and generate more efficient routes using GPS and map-based navigation. Its goal was to reduce transportation time and cost while improving delivery monitoring and overall operational efficiency.

Product Overview

Included an admin web system and a mobile application for salesmen, with features such as order management, route visualization, delivery assignment, live tracking, and order follow-up.

Technologies

C#, web application, mobile application, GPS integration, map APIs, backend/database architecture, and web service concepts including XML, SOAP, WSDL, and UDDI.

WORKING EXPERIENCE

Oncare GmbH, Senior Software, FullStack and Integration Engineer

JUNE 2022 - PRESENT

Worked on myoncare – Your Digital Health Platform, a Class IIa medical device under EU MDR that enables secure sharing of health information between patients and their healthcare teams. The platform allows users to share treatment plans, medication information, files, and activity data while maintaining high standards of data privacy and security.

Website: myoncare.com

- Developed backend features using Node.js, NestJS, Express.js, MySQL, and MongoDB to handle secure data storage, API integrations, and performance optimization.
- Built frontend features with React.js, React Native, and Capacitor by Ionic, ensuring smooth user interaction on web and mobile platforms.
- Implemented mobile-specific features in Kotlin (Android) and Swift (iOS).
- Integrated third-party tools and APIs, including Withings and FHIR, for activity and health data synchronization.
- Participated in Agile planning and refinement meetings, contributing to sprint planning and task estimation.
- Upgraded backend services and packages to latest versions to maintain security and performance standards.
- Provided app support, bug fixes, security enhancements, and performance improvements.
- Conducted code reviews to ensure high-quality, maintainable code.

Technologies Used:

Languages & Frameworks: Node.js, TypeScript, NestJS, Express.js, React.js, React Native, Capacitor by Ionic, Unit Testing, Test-Driven development, Microservices

Databases & Messaging: MySQL, MongoDB, Redis, RabbitMQ, Firebase

ORMs & Build Tools: Sequelize, TypeORM, Webpack, Vite

Mobile & Platforms: Android

Cloud & Services: Firebase

Tools & Collaboration: Jira, Bitbucket, Confluence, Kibana, Postman, Git, Docker

Methodologies: Agile methodologies

Garment IO, Software & Integration Engineer

DECEMBER 2018 - JUNE 2022

Worked on Garment IO, a smart manufacturing and workflow platform that helps garment factories digitize operations, track production, and monitor worker performance. The platform integrates real-time data and provides actionable insights for efficiency and quality control.

Website: garment.io

- Developed backend features using Node.js, PHP, and Laravel to handle business logic, data management, and integrations.
- Built frontend features with React.js for a responsive and user-friendly interface.
- Integrated third-party tools and products using JavaScript to expand platform capabilities.
- Provided application support, bug fixes, security improvements, and performance optimizations.
- Communicated with clients to plan features, estimate tasks, and deliver demos, ensuring alignment with business needs.
- Used ClickUp to organize features, track progress, and manage task estimations.
- Deployed new features to production and maintained tools on CentOS servers.
- Upgraded backend packages and code to latest technology versions to ensure maintainability and security.

Technologies Used:

Languages & Frameworks: PHP, Laravel, JavaScript, React.js, Node.js, Python, Flask, Unit Testing, Docker

Databases & Data Sources: MongoDB, ODBC, Redis, MySQL

Analytics & Reporting: Google Sheets, Tableau

Platforms & Operating Systems: Android, CentOS

Tools & Collaboration: ClickUp, Gitlab, Github

Methodologies: Agile methodologies

eSEED, Software & Integration Engineer

DECEMBER 2018 - JUNE 2022

Worked at eSEED, an Egyptian tech company specializing in web and mobile application development, software consulting, and product support for startups, NGOs, and businesses worldwide. The work involved designing, developing, and maintaining web applications with a focus on scalable, maintainable, and user-friendly solutions.

Website: eseed.net

- Developed backend features using Node.js, MySQL, and Spring Boot, implementing business logic and database integrations.
- Built frontend interfaces using React.js, HTML5, CSS, Bootstrap, and jQuery to create responsive and interactive user experiences.
- Contributed to full software design and development lifecycle, ensuring alignment with client requirements and Agile practices.

- Participated in Agile planning and development, including sprint planning, task estimation, and progress tracking.
- Integrated third-party tools and APIs to enhance application functionality.
- Provided application support, bug fixes, and performance optimization.
- Worked with WordPress for content management projects and customized web solutions for clients.

Technologies Used:

Languages & Frameworks: JavaScript, React.js, Node.js, Spring Boot, WordPress

Databases: MySQL

Frontend Technologies: HTML5, CSS, Bootstrap, jQuery

Methodologies: Agile methodologies

Freelance, Software & Integration Engineer

JUNE 2016 - PRESENT

Worked as a freelance Software Engineer delivering web, mobile, and backend solutions across multiple domains including fintech, healthcare, SaaS platforms, B2B procurement systems, security platforms, real-time systems, and consumer applications. Responsible for end-to-end delivery, from requirements analysis and system design to implementation, testing, deployment, and post-launch support, ensuring production-grade quality and scalability.

Led development of large-scale platforms including multi-tenant SOC/SIEM systems and enterprise procurement platforms, applying strict engineering standards, secure architecture principles, and cloud-ready deployment strategies.

- Designed, developed, and maintained scalable web and mobile applications with strong focus on business logic, performance optimization, security, maintainability, and clean architecture.
- Built full-stack solutions including backend services, RESTful APIs, frontend interfaces, and mobile applications using modern JavaScript and TypeScript ecosystems.
- Implemented authentication, authorization (RBAC), payment processing, real-time data synchronization, multi-tenant isolation, and third-party API integrations.
- Developed real-time and event-driven architectures including streaming workflows, background jobs, message queues, and location-based services.
- Led system upgrades, refactoring initiatives, legacy code modernization, performance optimization, and regression testing.
- Integrated cloud services, containerized deployments (Docker), CI/CD pipelines, and production monitoring to ensure reliable and scalable environments.
- Enforced strict code quality standards using ESLint, Prettier, Husky, Commitlint, automated linting, formatting, and pre-commit build validation.
- Applied TypeScript strict mode (tsc), unit testing, coverage enforcement, and structured pre-commit hooks to maintain high engineering standards.
- Conducted unit, integration, system, and regression testing to ensure production readiness and application stability.
- Collaborated with clients, product stakeholders, and cross-functional teams to align technical implementation with business objectives and deliver production-grade solutions.
- Provided ongoing support, bug fixes, performance tuning, and security hardening for live production systems.

Technologies Used:

Selected Platforms Delivered: AuraSpear – Designed and implemented a production-grade multi-tenant SIEM/SOC platform integrating Wazuh, OpenSearch, MISF, and AI-assisted investigation workflows with strict tenant isolation and Zero-Trust backend architecture.

Tarsyaa – Built a scalable B2B procurement and tender management platform enabling secure supplier onboarding, competitive bidding workflows, and role-based access control for enterprise operations in KSA.

Languages & Frameworks: JavaScript, TypeScript (Strict Mode), Node.js, NestJS, Express.js, Next.js, React.js, React Native, Vite, PHP, Laravel, Ember.js, C#, CodeIgniter

Databases & Storage: MySQL, PostgreSQL, MongoDB, Firebase (Realtime DB & Firestore), Microsoft SQL Server

Cloud & DevOps: Google Cloud Platform (GCP), Kubernetes (GKE), Cloud Run, Docker, CI/CD (GitHub), Vercel, Nginx, Apache, Linux (CentOS, Ubuntu)

Code Quality & Engineering Standards: ESLint, Prettier, Husky, Commitlint, Jest, Unit Testing, Coverage Reporting, TypeScript Compiler (tsc), Pre-commit Build Validation, Linting Pipelines, Code Formatting Automation, Secure Coding Practices, System Design, RESTful Architecture, SDLC, Agile & Waterfall, Performance Optimization, Security Hardening

APIs & Integrations: Stripe, Spotify API, Firebase Authentication, Google APIs, Third-Party REST APIs, AI/LLM Integrations

WORKING PROJECTS

- **Myoncare** (Microservices, Node.js, React, React Native, TypeScript, NestJS, Capacitor by Ionic, MySQL, MongoDB, Redis, RabbitMQ, Docker, Nginx, AI). Engineered a healthcare platform for care task management, patient monitoring, wearable integrations, and secure microservices-based backend infrastructure.

Website: myoncare.com

- **Garment IO** (Node.js, React, Laravel, JavaScript, MongoDB, Android, Python Flask, Docker, Nginx). Built an IoT-driven garment manufacturing management system integrating real-time production tracking, device telemetry, and operational dashboards.

Website: garment.io

- **Tarsyaa** (Node.js, React, Vite, TypeScript, ESLint, Jest, Husky, NestJS, TypeORM, PostgreSQL, Mongoose, Redis, Docker). Developed a B2B procurement and tender management platform connecting companies with certified suppliers across KSA, enabling transparent bidding, supplier verification, and purchase request workflows. Implemented scalable backend services with strict TypeScript standards, unit testing, and secure role-based access control.

Website: tarsyaa.com

- **CallRater / Dealer-FX** (Blueprint Inc) (PHP, MySQL, Angular, JavaScript, Apache). Developed a call analytics and rating platform enabling enterprise performance tracking, reporting dashboards, and scalable backend data processing.

Websites: callrater.com | dealer-fx.com

- **VMS (GIZ Project – Volunteering Management System)** (PHP, Laravel, MySQL, Eloquent, JavaScript, Apache). Developed a volunteering management platform supporting volunteer registration, assignment workflows, reporting, and administrative coordination for large-scale programs.

- **Ovarc** (React, Node.js, Sequelize, Prisma, Docker, MySQL). Contributed to a global business expansion platform streamlining incorporation, payroll, benefits, compliance, and international HR operations through a unified, scalable web application.

Website: ovarc.io

- **AuraSpear (Next.js, NestJS, Prisma, PostgreSQL, Redis, OpenSearch, Wazuh, MISP, AWS Bedrock AI, Docker, Vercel)**. Architected and implemented a production-grade multi-tenant SIEM platform with tenant isolation, RBAC enforcement, alert triage, AI-assisted threat hunting, case management, and Zero-Trust security architecture.

GitHub (Frontend): github.com/ihabkhaled/auraspear

GitHub (Backend): github.com/ihabkhaled/auraspear-backend

- **ClawAI** (Microservices, React, Next.js, TypeScript, ESLint, Jest, Vitest, Husky, NestJS, Prisma, PostgreSQL, MongoDB, Mongoose, Redis, Docker, Nginx, Proxy Nginx, Ollama, LlamaCPP, OpenAI, Gemini, Claude, Kimi, GLM, Qwen, Gemma, OpuX, Fable, GPT).

A production-grade, local-AI-first orchestration platform built for companies and enterprise teams to securely manage, route, compare, and operate multiple AI models from one unified workspace. It prioritizes private local inference through Ollama and llama.cpp, while also supporting Ollama Cloud, OpenAI, Gemini, Grok, Claude, and AWS Bedrock. The platform includes standard chat, multi-model comparison, consensus mode, judge mode, intelligent routing, provider fallback, model selection, memory and context packs, workspace grounding, file processing, reusable prompts, secure provider management, usage controls, and configurable privacy policies. AI agents can interact with and automate connected business tools such as Jira, Bitbucket, ClickUp, GitHub, Gmail, Slack, Google Drive, Google Calendar, and other enterprise integrations through permission-aware workflows and controlled tool execution. Designed as a large-scale microservices platform for organizations that need secure AI adoption, local data control, multi-provider flexibility, workflow automation, extensibility, observability, reliability, and production-ready governance. (Node.js, TypeScript, NestJS, Microservices, Ollama, llama.cpp, Ollama Cloud, OpenAI, Gemini, Grok, Claude, AWS Bedrock, AI Agents, Tool Calling, Enterprise Integrations).

Github: github.com/ihabkhaled/ClawAI

OTHER PROJECTS AND INTEGRATIONS

AI INTEGRATIONS

- OpenAI API integrations (Node.js, TypeScript, NestJS, REST APIs).
- Gemini API integrations (Node.js, TypeScript, NestJS, REST APIs).
- OpenClaw gateway integrations (Node.js, TypeScript, NestJS, multi-provider AI orchestration).

SECURITY TOOLS

- SIEM/SOC tooling and integrations (Wazuh, OpenSearch, MISP, AWS Bedrock AI-assisted workflows).

PLATFORM & API INTEGRATIONS

- Withings API integration (Node.js).
- Stripe API integration (NestJS).
- PayPal API integration (PHP, WordPress).
- Health Connect integration (JavaScript).
- Apple Health integration (JavaScript, Swift).
- FHIR API integration (Node.js).
- M3U8 live streaming (FFMPEG, Nginx, OBS).
- Spotify API integration (NestJS).
- Profile avatars service (Next.js, GCP, Google Cloud Storage).
- Android charging/RFID regulator solution for tablets (Java).
- Fingerprint device integration solution (Node.js).

APPLICATIONS & UTILITIES

- **TwinyAI** — Privacy-safe AI style and vibe matching game with bilingual support, secure image processing, and multi-stage AI analysis (Next.js, NestJS, TypeScript, Gemini AI, Fastify, Docker).
- **ClawAI** — Local-first AI orchestration platform supporting intelligent model routing, cloud and local providers, memory, file processing, workspace grounding, and comparison workflows (Node.js, TypeScript, NestJS, Microservices, AI/LLM Integrations).
- **NextRanger** — Production-grade Next.js frontend engineering starter with strict architecture, internationalization, testing, security, accessibility, and AI-agent development rules (Next.js, React, TypeScript, Vitest, Playwright, ESLint).
- **IronNest** — Strict NestJS backend engineering operating system with clean layered architecture, custom ESLint rules, testing, security gates, observability, and CI/CD workflows (NestJS, Node.js, TypeScript, Fastify, Pino, Docker).

- **FoodOrder** / Gama3 Orderak — Collaborative food-ordering application with shared orders, invitations, participant receipts, fair fee distribution, order history, and Arabic/English support (React, TypeScript, Vite, Capacitor, Firebase, Android, iOS).
- COVID-19 plasma donation nearby (React.js).
- WISM “Where is My?” (React Native).
- Food Project (React Native).
- Blog/Forum (AJAX, PHP, MySQL).
- Book Store (HTML, JS, jQuery).
- Calculator (JavaScript).
- Cinema Website (HTML, CSS, JS).
- Physical Therapy System (C#).
- Alarm (C#).
- Employees System (C#).
- Chatting and sending files over IP in a local network (C#).
- Windows Hotspot (C#).
- Lock and Unlock Windows (C#).

Skills

- JavaScript
- TypeScript
- Python
- PHP
- C#
- C++
- Java
- Swift
- SQL
- HTML
- HTML5
- CSS
- Matlab
- PostgreSQL
- MySQL
- MariaDB
- MongoDB
- Redis
- Memcached
- Elasticsearch
- Cloud Firestore
- Microsoft SQL Server
- OpenAI API
- OpenAI Codex
- ChatGPT
- Claude
- Gemini
- Google Gemini
- OpenClaw
- Amazon Bedrock

- AI Integration
- LLM Orchestration
- Ubuntu
- Linux
- Terminal
- CMD
- Batch Files
- Shell Scripts
- Wazuh
- Logstash
- Graylog
- Velociraptor
- MISP
- Shuffle
- Grafana
- InfluxDB
- SIEM
- SOAR
- Threat Intelligence
- Security Monitoring
- Observability
- Time-Series Data
- Data Pipelines
- Backend Integration
- Docker
- Kubernetes
- DevOps
- Google Cloud Platform (GCP)
- Nginx
- RabbitMQ
- Node.js
- NestJS
- Express.js
- React.js
- React Native
- Next.js
- Redux.js
- Zustand
- Capacitor by Ionic
- Microservices
- REST APIs
- RESTful Web Services
- Web Services API
- API Development
- Webhook
- JSON
- Prisma ORM
- TypeORM
- Sequelize
- Firebase
- Spring Boot

- Flask
- Laravel
- CodeIgniter
- WordPress
- Bootstrap
- jQuery
- AngularJS
- OpenGL
- Android
- Android Development
- iOS
- iOS Development
- Google API
- Software Integration
- Software Development
- Web Development
- Front-end Development
- Back-End Web Development
- Software Design
- Software Architecture
- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- FinTech
- Databases
- Event-Driven Programming
- Sockets
- Unit Testing
- Manual Testing
- System Testing
- Test-Driven Development
- Agile Methodologies
- Agile Application Development
- Software Development Life Cycle (SDLC)
- Object-Oriented Programming (OOP)
- Problem Solving
- Networking
- Interpersonal Communication
- Self Learning

COURSES & TRAININGS

- PHP Full Stack
- MEAN Stack
- CCNA Routing & Switching

LANGUAGES

- Arabic (Native)
- English (Fluent)

- French (Basics)