

Mohamed Hussein Abo El-Ela

+201221575493 — mohamed.hussein811811@gmail.com — [LinkedIn](#) — [GitHub](#) — [Portfolio](#) — Military Status: Exempted

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Python, PHP, HTML5, CSS3, SQL, C++, C#, Dart, Go, PAWN
Frontend Technologies: React.js, Next.js, React Native, Redux, Flutter, Bootstrap, Tailwind CSS, jQuery, Vite
Backend Technologies: Node.js, Express.js, Laravel, Django, FastAPI, Nest.js, RESTful APIs, WebSocket
Databases & Caching: MongoDB, PostgreSQL, MySQL, Redis, Supabase
Cloud & Infrastructure: AWS (EC2, S3), Google Cloud Platform, Vercel, Docker, Cloudinary, Groq Cloud
Payment & Integration: Paymob, Google OAuth, Google AdSense, Google Search Console
Security & Authentication: JWT, Two-Factor Authentication (2FA), Data Encryption (AES-128, bcrypt)
Development Tools: Git, Jira, Postman
AI & Machine Learning: LLMs, LLaMA, TensorFlow, PyTorch, scikit-learn, OpenCV, Hugging Face, LangChain, RAG

EXPERIENCE

- Backend Developer** *Technoam*

Aug 2025 - Present

 - Developed scalable backend systems using Django framework for enterprise-level applications
 - Deployed and managed cloud infrastructure on AWS EC2 instances (Linux and Windows environments)
 - Optimized database performance and implemented secure API endpoints for high-traffic applications
- Software Engineer** *NovaTech*

Aug 2024 - Present

 - Founded technology startup delivering custom web applications, mobile applications, and artificial intelligence/machine learning solutions to enterprise clients
 - Developed full-stack applications using MERN stack (MongoDB, Express.js, React, Node.js), Flutter framework, and implemented machine learning models for real-world business solutions
 - Led cross-functional development team to deliver high-quality software solutions across diverse client projects
- Backend Developer** *AiTech*

Sep 2024 - Feb 2025

 - Designed and implemented RESTful APIs and backend architecture using Laravel PHP framework
 - Collaborated with frontend development teams to integrate server-side logic with user interface components and ensure seamless API integration
- Web & Mobile Development** *Freelancing*

Jan 2022 - Jan 2026

 - Built responsive websites and mobile apps using React, Flutter, Laravel, and Node.js
 - Integrated AI features and third-party APIs to enhance functionality
 - Worked closely with clients to deliver projects on time and meet requirements
- Flutter Development** *ITI BootCamp*

Jan 2024

 - Completed intensive one-month Flutter BootCamp, mastering mobile app development with Dart and Flutter framework

EDUCATION

- October University for Modern Sciences and Arts** *Computer Science*

2021 - 2025

Bachelor of Science in Computer Science

PUBLICATIONS

- Adaptive Urban Pathfinding Using Deep Learning and Heuristic Optimization** *IMSA 2025*

July 12-13 2025

 - Research proposed an inclusive solution for urban pathfinding by integrating advanced heuristic algorithms (Tabu Search, Branch and Cut) with deep learning models (MLP, GRU, LSTM, Autoencoders, Transformers)
- Health-aware Heuristic Modelling for Asthma-friendly Route Optimization** *ICACIN 2024*

Dec 16-17 2024

 - Research focused on optimizing urban routes with health-centric approach, addressing asthma triggers while ensuring efficient travel
- Deep Heuristic Learning for Real-Time Urban Pathfinding** *MIUCC-24*

Nov 13-14 2024

 - Research addressed urban navigation complexities by integrating advanced heuristic algorithms and real-time data analysis, contributing to smarter city development by enhancing efficiency and reliability in urban transportation systems

PROJECTS

Geno <i>FastAPI, Meta API, Supabase, RAG, OAuth</i>	<u>Geno</u>
- Developed multi-platform chatbot integrating Meta APIs for Facebook, Instagram, and WhatsApp Business with OAuth authentication - Built RAG-powered product recommendation engine using Supabase vector database for automated customer support and sales - Implemented webhook messaging system for real-time social media interactions with centralized business dashboard - Created secure token management storing Meta credentials with role-based access for multi-account conversational AI	
NeuraNote <i>React.js, Node.js, FastAPI, MongoDB, OpenAI, Supabase, Groq Cloud</i>	<u>NeuraNote</u>
- Developed Retrieval-Augmented Generation (RAG) system supporting multiple file formats (PDF, DOCX, images) for intelligent content analysis and personalized learning recommendations - Built comprehensive AI-powered examination system featuring oral quizzes with voice recognition, automated test generation with intelligent grading, and detailed performance analytics dashboard - Created integrated study management system with time tracking, task scheduling, progress monitoring, and adaptive learning pathways for enhanced student productivity	
E-Commerce Platforms <i>React.js, Node.js, MongoDB, Redux, Paymob</i>	<u>Nour Collection</u> — <u>Bonfila Chocolate</u>
- Developed scalable multi-vendor e-commerce marketplace supporting four user roles (Admin, Moderator, Vendor, Guest) with comprehensive role-based access control and permissions management - Implemented full-stack e-commerce functionality including product catalog management, shopping cart system, secure payment gateway integration, inventory tracking, order management, and real-time analytics dashboard - Built advanced marketing automation system with discount codes, promotional campaigns, dynamic pricing algorithms, and content management system (CMS) for seamless brand customization	
F3-IR Security Services <i>React.js, Node.js, MongoDB, JWT, AES-128</i>	<u>F3-IR</u>
- Developed professional corporate website for security services company, establishing strong digital presence and comprehensive service portfolio showcase with responsive design - Implemented real-time communication system with AI-powered chatbot for customer service automation, inquiry management, and intelligent support response generation - Built multi-layered security architecture featuring two-factor authentication (2FA), data encryption for sensitive information, and secure user access controls	

CERTIFICATES AND ACHIEVEMENTS

Deep Minds 4 Certificate & Medal <i>MSA University</i>	1st Place <i>Jan 27 2025</i>
Certificate of Appreciation <i>MSA University</i>	Research Achievements <i>Jan 27 2025</i>
iTi Software Testing & Quality Assurance Certificate <i>Information Technology Institute</i>	30 Hours <i>Jan 27 2025</i>
ICACIN 2024 Presentation Certificate <i>Birmingham City University, UK</i>	<i>Dec 22, 2024</i>
MIUCC-24 Participation Certificate <i>Cairo, Egypt</i>	<i>Dec 3 2024</i>
6th Olympiad (ITA-SDGs) Certificate <i>Damietta University</i>	<i>Jul 17, 2024</i>
Flutter Development Certificate <i>Issued by: iTi</i>	60 Hours <i>Dec 30, 2023</i>
Hackathon Certificate <i>Issued by: MSA University</i>	<i>Jun 19, 2023</i>
CS-283 Web Programming Certificate <i>Issued by: MSA University</i>	<i>Jan 25, 2023</i>
Microsoft Certified: Azure Data Fundamentals <i>Issued by: Microsoft</i>	<i>Jan 12, 2023</i>