

Mazen Elabd

+447849737454 / mazenelabd98@gmail.com / mazenelabd.com / [GitHub](https://github.com/mazenelabd) / [LinkedIn](https://www.linkedin.com/in/mazenelabd)

Experience

Full Stack Engineer | mindtrace.ai | Oct 2023 – Present

- Led full-stack development of Next.js web apps for enterprise clients, including Adient and United Utilities.
- Designed and deployed production LLM agents (LangGraph, LangChain, Pinecone RAG, MCP tools) for internal developer code generation and client-facing product features for natural-language data analysis and visualisation.
- Built LLM agent evaluation pipelines (LLM-as-a-judge, Inspect AI, unit tests) to improve reliability of shipped tools.
- Built the [Brain Sense Portal](#) (React, Three.js, MongoDB, AWS), enabling LiDAR data visualization & ML classification.
- Developed [2D Brain Sense Portal](#) (Next.js, tRPC, PostgreSQL, FastAPI, GCP) for manufacturing defect detection.
- Architected multi-camera streaming and capture systems (USB2/3, GigE, etc.).
- Designed and implemented the [Database module](#) for the [open-source mindtrace package](#) (Python), unifying schemas across MongoDB, Redis, and local DBs with Pydantic and enabling advanced querying.
- Delivered [Poseidon ML platform](#) with model deployment, inference workflows, org management, and dashboards.

MSc. Thesis Project | University of Sunderland | Mar 2023 – Sep 2023

- Proposed 5 novel multimodal models achieving state-of-the-art sentiment & emotion classification results.
- Utilised Python, PyTorch, PyTorch Lightning, HuggingFace, scikit-learn, and GCP.

Full Stack Engineer | Beyond Apps Group | Jun 2021 – Mar 2023

- Shipped features for [myzesty](#) and [beyond apps group](#) using React, Node.js, Next.js, MongoDB, Redis, Socket.IO.
- Implemented AWS architecture (Lambda, S3, EC2, VPC, CloudFront, Elastic Beanstalk).
- Integrated FFmpeg with AWS Lambda for efficient serverless image and video processing.
- Optimized database queries and enabled EC2 auto-scaling for stability.
- Boosted SEO and analytics-driven optimisation, increasing traffic by 300%.

Full Stack Engineer | Maison Pyramide | Nov 2020 – May 2021

- Refactored the [showroom](#) website to MERN stack, leveraging TypeScript, GraphQL, and NestJS.

Publications

- Elabd, M. and Jaf, S. (2024). Simple Attention-Based Mechanism for Multimodal Emotion Classification. [ICAC 2024](#).

Education

MSc in Data Science (with Distinction) | University of Sunderland, UK | Sep 2022 – Oct 2023

BSc in Computer and Systems Engineering | Kafr El-Sheikh University, Egypt | Sep 2016 – Jun 2021

Projects

- **AI Voice Chat** [\[GitHub\]](#): Next.js + WebSockets + OpenAI (LLM & TTS) real-time chat with streaming voice replies.
- **HateGuard** [\[GitHub\]](#): PyTorch + Transformers hate speech detection with Flask backend & Next.js frontend.
- **My Portfolio Website** [\[GitHub\]](#) [\[Website\]](#): Built with Next.js, React, and Three.js.
- **Photographer Template** [\[GitHub\]](#) [\[Website\]](#): JavaScript, jQuery, Bootstrap (11 pages).

Skills

Frontend: React, React Native, Next.js, JavaScript, TypeScript, jQuery, Three.js, Redux, Webpack, Tailwind, Mantine.

Backend: Node.js, Express.js, MongoDB, Redis, GraphQL, NestJS, Socket.IO, Flask, FastAPI, PostgreSQL, Firebase.

Machine Learning and Data Science: Python, R, PyTorch, scikit-learn, LangGraph, LangChain, Pinecone, FastMCP.

Testing: React Testing Library, Jest, Cypress.io, pytest.

Cloud & DevOps: AWS, GCP, Docker, Linux, Nginx, Firebase, Kubernetes.