Aymen Mabrouk

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Portfolio

08 Sep 2001

About Me

Data Science Engineering student specializing in AI automation and computer vision. Seeking a Data Science & AI internship to apply experience with LLMs and machine learning to build impactful, data-driven solutions.

Education

Engineering in Data Science & AI
Polytechnique
Sep 2024 – Jun 2026 | Sousse

Master's in Software Engineering
ISIMM
Sep 2023 – Jun 2025 | MONASTIR

Bachelor's degree in Computer Science, specializing in Software Engineering
ESSTHS
Jun 2023 | Sousse

Skills

Interpersonal Skills:
- Team spirit and teamwork
- Ability to work independently and manage multiple tasks simultaneously

Work Methodologies:
- Ability to follow instructions and deliver quality results
- Ability to work in an agile environment

Languages

English

French

Arabic

Professional Experience

Freelance AI Automation Engineer | ByteClick Germany **Jul 2025 – Present**
- Engineered and deployed AI automation pipelines using n8n and multiple LLMs (OpenAI, Claude, Gemini) for intelligent document and invoice processing.
- Architected end-to-end SaaS platforms integrating RAG systems, vector databases, and API-driven workflows.
- Automated invoice parsing, classification, and knowledge extraction from unstructured documents, achieving >95% accuracy.
- Orchestrated custom integrations with SaaS systems (billing, CRM, ERP) to streamline business processes.
- Delivered production-ready AI systems that improved operational efficiency and reduced manual workload by 70%.

Techs: n8n, LangChain,LLMs, Vector Databases, RAG, REST APIs, SaaS, Docker

Final-Year Master's Internship **Feb 2025 – Aug 2025 | LEONI TNS**
- Conceptualized a comprehensive access management system for employees and vehicles, featuring real-time alerts and delay tracking.
- Constructed a web portal (Next.js) for administration, real-time monitoring, and reporting.
- Launched a cross-platform mobile application (Flutter) utilizing NFC/Bluetooth for contactless attendance, increasing check-in efficiency.
- Integrated AI-based license plate and ID card recognition (Python, OpenVINO).
- Spearheaded the implementation of a microservices architecture using gRPC communication and JWT security, following the Scrum methodology.

Techs: Next.js, Flutter, PostgreSQL, Node.js, Python, OpenVINO, gRPC, JWT, Scrum

Freelance web developer **Jun 2024 – Nov 2024 | Sousse**
- Crafted reusable UI components, which streamlined development and reduced coding time by an estimated 25%.
- Engineered responsive product pages with server-side rendering (SSR) and API integration to ensure real-time data and high performance.
- Developed and integrated a conversational AI assistant using LLMs and RAG to guide customers and provide personalized product suggestions.
- Delivered seamless cross-device experiences for all users.
- Collaborated closely with clients to ensure timely delivery and alignment with business needs.

Techs: Next.js, React, Tailwind CSS, API, SSR, WIX, LLMs, RAG

Final-Year bachelor's Internship **Jan 2023 – Jun 2023 | LEONI TN1**
- Pioneered a cross-platform IoT application for real-time climate monitoring and control in server rooms, enabling proactive environmental management.
- Integrated C++ microcontroller code to collect sensor data (temperature, humidity, etc.) and stream it via Firebase.
- Visualized real-time sensor data by creating interactive dashboards with alert systems, threshold-based notifications, and sensor health indicators.
- Instituted user and role management features for admin users to assign permissions and monitor system activity.
- Enabled secure data flow and device communication using Firebase Realtime Database and cloud functions.

Techs: React.js, Node.js, Flutter, Dart, C++, Firebase

Projects

Tennis & Padel Analysis Project
Developed a computer vision system to analyze tennis and padel matches with a player and ball tracking accuracy of over
95%. The system generates advanced statistics like court positioning heatmaps and tactical placement analysis. Awarded best project of the semester and resulted in a published research paper.

AI Vision Suite – Smart Parking System
Constructed an advanced computer vision system integrating Tunisian license plate recognition and ID card extraction. This automated parking management, reducing average vehicle entry time by 30% Improving space efficiency by 15%.

Certificates

- Azure AI-900
- Cisco CyberOps Associate Certification
- NVIDIA Fundamentals of Deep Learning for Computer Vision