# **Omar Jabloun**

# Software Engineer

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#### Experience

#### **Software Engineer (Freelance)**

Dec. 2024 – Present

te Al Morocco

 Developed a microservice-based architecture using WhatsApp API, Nest.js, and FastAPI for real-time customer interactions, boosting response efficiency by 35%.

 Built an agent-based system with LangChain and LLMs (OpenAI) for intent recognition, sentiment analysis, and retrieval-augmented generation (RAG) powered by Milvus/Zilliz.

Containerized and deployed services on AWS EC2, reducing deployment times by 40% via CI/CD pipelines using GitHub Actions.

- Stack: Next.js, Nest.js, FastAPI, LangChain, LLMs, Milvus/Zilliz, AWS, Docker, GitHub Actions

#### **Software Engineer (Working Student - Intern)**

Jan. 2024 – Nov. 2024

AS Solutions

Led backend development for 5+ insurance platforms (premium calculations, payment processing), increasing client subscriptions by

- Engineered a custom **pricing engine** to enable non-developers to configure pricing logic, cutting product development time by 80%.
- Stack: Express, Prisma, PostgreSQL, tRPC, Docker, Azure; Methodology: Agile/Scrum, Azure DevOps

#### **Software Engineer (Working Student - Intern)**

Nov. 2022 - Nov. 2023

GoMyCode Central Team

- Spearheaded the design and implementation of a Talent Acquisition platform, reducing hiring time by 30%, 100+ assessments weekly.
- Integrated automated assessments, enhancing processing efficiency by 50% and improving overall candidate quality.
- Managed and optimized Azure-based backend for high performance and scalability.
- Stack: NET 6, C#, Neo4j, Azure DevOps, Clean Architecture; Methodology: Agile/Scrum, Jira

#### Education

#### **Master of Science in Software Engineering**

Sep. 2020 – Oct. 2025 (Expected)

National Institute of Applied Science and Technology (INSAT)

Tunis, Tunisia

**Relevant Coursework**: Data Structures & Algorithms, OOP, Design Patterns, Distributed Systems, AI/ML, Deep Learning, DevOps, Web Frameworks (.NET/Angular/NestJS)

#### **Academic Projects**

## **Social Media-Based Mental Health Disorder Detection**

2024

INSAT - Final Year Project

 Trained a multi-label classifier using CNN, BiLSTM, and fine-tuned BERT/Roberta, achieving 94% accuracy in detecting disorders (depression, anxiety, ADHD, BPD) from Reddit data.

#### **Distributed Big Data Processing**

2024

INSAT - Big Data Project

 Implemented a distributed pipeline using Apache Kafka, Airflow, Hadoop, and Spark for real-time and batch processing of customer purchase data, visualized via Grafana dashboards.

Neo4j OGM for .NET

Open-Source Project - GitHub

- Developed a lightweight Object Graph Mapper (OGM) for .NET to simplify Cypher query execution and record mapping with Neo4j.
- Contributed to the open-source community by providing a tool that streamlines database interactions for .NET developers.

#### Skills & Interests

**Languages**: C/C++, Go, C#, Java, Python, JavaScript/TypeScript **Technologies**: .NET, Express, SpringBoot, Nest.js, GraphQL, tRPC

**Databases**: SQL, Neo4j (Certified), Elasticsearch, MongoDB

AI/ML: Deep Learning, NLP, BERT, RoBERTa, LangChain, LLM

DevOps: Git, Docker, Kubernetes, Azure, AWS, Kibana, Grafana

Agile: Scrum, Jira, Azure DevOps

**Languages**: Arabic (Native), English (Fluent), French (Fluent) **Interests**: Tennis, Volleyball, Photography, Chess, Spearfishing

#### Achievements

- Presidential Prize: Ranked 1st nationwide in the National Computer Science Baccalaureate exam.
- 1st Prize, E-Health Valley Hackathon: Built a solution to enhance medicine distribution in Tunisia, potentially reducing shortages by
- 1st Prize, Upside Education Hackathon: Created a Flask-based quiz generator from course content, cutting assessment creation time by 50%.
- 6th Place, TCPC: Demonstrated strong problem-solving under time pressure among Tunisian collegiate teams.

# Extracurricular Involvement

#### Chess Enthusiasts INSAT (Founding Member, Treasurer)

Sep. 2021 - Sep. 2022

Co-organized and secured sponsorships for 5 chess tournaments adhering to international standards.

# **INSAT Press (Director of Photography)**

Sep. 2021 – Sep. 2022