# Omar Jabloun
## Software Engineer

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## Experience

**Software Engineer (Freelance)**                                                                 Dec. 2024 – Present
*Palete AI*                                                                                                      *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*                                                                                                    *France*
- Led backend development for 5+ insurance platforms (premium calculations, **payment processing**), increasing client subscriptions by 60%.
- 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*                                                                                          *Tunisia*
- 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**                                                                                                  2023
*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, Angular, Nest.js, GraphQL, tRPC

**Databases**: PostgreSQL, Neo4j (Certified), Elasticsearch, MongoDB, MySQL

**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 60%.
- **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
*Led a team of 10+ photographers covering 30+ university events for Tunisia's first university press club.*