

Alaa otay

Full-Stack Engineer | AI-Enhanced Web Applications

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📅 Date of birth 03/16/2002

Software Engineering student and Junior Backend Engineer, with hands-on experience from professional internships at 5DS (France) and Novalize/Nexilan (Switzerland).

Specialized in FastAPI, Laravel, microservices, and secure APIs, with a strong focus on performance, security, and scalability, and solid experience with PostgreSQL/MySQL.

Passionate about real-time systems, applied AI (LLMs, OCR), and building production-ready solutions in Agile environments.

EXPERIENCE

Backend Engineer Intern – Remote

From July 2025 to September 2025 (2 months)

Novalize (Nexilan Agency) Switzerland

- Built and optimized **FastAPI services** supporting **scalable, production-ready REST APIs**
- Implemented **asynchronous backend patterns** to improve **performance and reliability**
- Integrated **Supabase (PostgreSQL, Auth, Storage)** for **secure data management**
- Collaborated with **distributed Agile teams** in a **fully remote environment**
- **Extended work into a deployed full-stack platform (Taxini — real-time ride-hailing system):**
 - Developed a **Vue 3 frontend** with **role-based dashboards** (Rider / Driver / Admin)
 - Implemented **real-time communication** using **WebSockets** and **JWT authentication**
 - Designed **pricing logic** and **RBAC** to support **multi-role access control**
 - **Deployed to production** and managed a **hybrid repository strategy**
 - **Live demo :** taxini-app.vercel.app
- Strengthened **DevOps fundamentals** while managing **concurrent internship workloads**

Backend Engineer Intern – PFA

From June 2025 to August 2025 (2 months)

5DS France

- Developed **scalable FastAPI microservices** for a **production-ready SaaS accounting platform**
- Implemented **secure authentication** using **JWT** and **OAuth2 (Google / LinkedIn)** with **RBAC**
- Built **asynchronous Excel export services** with **real-time progress tracking** via **WebSockets**
- Developed **real-time dashboards** with **sub-second updates** using **PostgreSQL LISTEN/NOTIFY**
- Designed an **OCR pipeline** automating **data extraction from accounting documents**
- Containerized services with **Docker & Docker Compose** and integrated **CI/CD pipelines**
- Ensured **code quality and security** following **PEP8, OWASP, and SonarQube** standards
- Worked in an **Agile Scrum environment** using **Jira** and **Confluence**

FastAPI Career Profile Generator

April 2025 (1 month)

ISIMM Intern Explorer Coding Night ISIMM

- Built a **FastAPI application** to extract **structured data from CVs** using **OCR and LLMs**
- Integrated **Tesseract OCR** with a **Hugging Face fallback** for robust text extraction
- Used **OpenAI APIs** with **JSON Schema** for **validated profile generation**
- Added **automated validation logic** and **retry mechanisms** to improve reliability
- **Live demo:** cv-insight-extractor.onrender.com

web developer internship

From July 2024 to August 2024 (1 month)

Yes2Dev Mednine

- Developed a complete **restaurant management system** using **Laravel, MySQL, and Bootstrap**
- Built an **admin dashboard** with **CRUD operations, RBAC, and sales analytics**
- Implemented a **responsive client interface** for **online ordering and table reservations**
- Managed **database migrations, seeding, and local development** with **Laravel & Laragon**

EDUCATION

Preparatory Cycle and Engineering Degree in Software Engineering

Since September 2021

Higher Institute of Computer Science and Mathematics of Monastir (ISIMM) Monastir

Final-year Software Engineering student — Expected graduation: 2026

Baccalaureate in Technical Sciences

July 2021

Technical high school Mednine

Score: 16.65/20

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- **Laravel – Full Training**, Brightcoding (Authentication, Databases, MVC)
- **Vue.js Training** – Component-based & reactive frontend development
- **Machine Learning & Generative AI**, Google Cloud (LLMs, practical projects)

SKILLS

Backend & Programming:

Python (FastAPI, async, microservices), PHP (Laravel), Java, C

Web & Frontend:

HTML/CSS, JavaScript, Vue.js, Bootstrap

Databases & APIs:

PostgreSQL, MySQL, Supabase, SQLAlchemy, REST APIs, WebSockets

AI, OCR & Automation:

OCR (*Tesseract, OpenCV*), LLMs & Generative AI (*data extraction & validation*), Agents & workflow automation (*n8n*)

DevOps, Security & Quality:

Docker, Docker Compose, Git/GitLab, CI/CD, Swagger/OpenAPI, JWT, OAuth2, RBAC, SonarQube, PEP8

Engineering Practices:

Microservices architecture, async & event-driven systems, Agile Scrum, clean & modular code, API documentation

LANGUAGES

Arabic

Native language

English

Fluent

French

Fluent

SOCIAL NETWORKS



github.com/alaaotay8



linkedin.com/in/alaa-otay8

VIEW PROJECTS

Portfolio : alaotay.netlify.app

