

PROFILE SUMMARY

I'm an engineer who finds true passion in the details that others might overlook. For me, every technical aspect is a puzzle waiting to be solved, leading to improvements in both performance and efficiency. My focus isn't just on the immediate task at hand; I have an eye for how these details fit into the larger picture, influencing long-term outcomes. This approach isn't confined to my professional life; it is a fundamental part of who I am. Whether it is a complex project or a simple everyday task, I am driven by the same principles: attention to detail, efficiency, and a vision for future impact. This unique blend of qualities shapes my journey, both as an engineer and as a person, guiding me to make meaningful contributions in every endeavor.

EDUCATION

- **École Nationale Supérieure d'Arts et Métiers ENSAM** Meknes, Morocco
Engineering degree in Electromechanical and Industrial Systems Sept. 2016 – July. 2021
- **Université Euro Méditerranéenne UEMF** Fès, Morocco / Remote
Automotive Embedded Systems Engineering and Intelligent Mobility Apr. 2022 – May. 2023
- **ALX Software Engineering Online Bootcamp** Remote
View Curriculum. Mar. 2023 – Apr. 2024

EXPERIENCE

- **Onclusive** Rabat, Morocco / Remote
Python Data Engineer Apr. 2024 – Present
 - **Role Overview:** Building and optimizing robust, scalable data platforms to handle media content processing with a strong emphasis on efficiency, reliability, and cost-effectiveness.
 - **Key Responsibilities:**
 - * Built scalable, high-performance data pipelines for media content processing, optimized for throughput and maintainability.
 - * Migrated AWS Lambda-based workflows to Apache Beam and Flink, improving performance, control, and observability.
 - * Helped design and implement Kafka-based ingestion systems, enabling low-latency, high-throughput data flow.
 - * Developed data integrity mechanisms using schema validation tools to enforce consistency across pipeline stages.
 - * Maintained and optimized Kubernetes infrastructure using GitOps practices with FluxCD for automated, version-controlled deployments.
 - * Performed infrastructure cost assessments and applied optimizations to reduce cloud expenses.
 - * Practiced Test-Driven Development (TDD) to ensure code quality, maintainability, and faster iteration cycles.
 - **Technologies:** Kafka, Kafka SQL, Apache Beam, Apache Flink, AWS (ECR, ECS, Lambda, Managed Flink, Glue, Kinesis), Azure (Entra ID), Okta, Elasticsearch, Kubernetes, Schema Registry Management, GitHub Actions, CI/CD (FluxCD), Python, Java, Agile methodologies (Kanban).
- **Stellantis - Alten** Rabat, Morocco
Python Developer - Data Engineer Apr. 2023 – Apr. 2024
 - **Role Overview:** Developed tools and software solutions using Python and Spark for Big Data projects related to vehicle rolling data analysis.
 - **Project Highlights:** Key activities and contributions:
 - * Built Python and Spark applications for processing large-scale driving data.
 - * Analyzed vehicle test data and delivered reports for the SI ESSAIS teams.
 - * Automated data extraction and reporting to support technical analysis.
 - * Migrated processing and automation workflows to Databricks as part of a modernization initiative

- **Stellantis / Alten** Rabat, Morocco
Software Engineer *Apr. 2023 – Apr. 2024*
 - **Role Overview:** Development and maintenance of software for internal use.
 - **Project Highlights:** Key responsibilities include:
 - * Providing support and creating documentation for end users of internal software.
 - * Managing and updating the software code-base in line with new specifications and standards.
 - * Managing staging and production environments to ensure stable software deployment.
- **Stellantis / Alten** Rabat, Morocco
Matlab Developer *Oct. 2021 – Mar. 2022*
 - **Role Overview:** Developed an internal tool for engine calibration analysis using Matlab, including API integration and client-server architecture design and deployment.
- **Stellantis - Morocco Technical Center** Casablanca, Morocco
R&D Engineer *Mar. 2021 – July 2021*
 - **Role Overview:** Internship focused on improving post-processing of emission tests. Conducted studies on exhaust systems, analyzed emissions test data, optimized post-processing for dyno tests and RDE data, and developed software for workflow integration.
- **ONCF - National Railway Office** Casablanca, Morocco
Maintenance Engineer *June 2019 – Sept. 2019*
 - **Role Overview:** Internship involving a maintenance study of power transformers, focusing on operational efficiency and reliability.

ACHIEVEMENTS

- **2020:** Participated in the CTF Maroc cybersecurity competition, secured 2nd place in the ARB'20 robotics competition themed "Industry 4.0".
- **2019:** Qualified for and participated in the JNJD of INPT (collegiate programming contest)
- **2018:** Took part in the qualifying rounds of the MCPC (Moroccan Collegiate Programming Contest)

COMPETENCIES & SKILLS

- **Programming & Software Engineering:** Proficient in Python, with additional experience in C, C++, and Java. Strong foundation in object-oriented and functional programming, with hands-on experience in asynchronous programming using Python's asyncio. Comfortable designing algorithms and building scalable systems. Familiar with back-end frameworks such as Flask, Django, and Node.js, and some exposure to front-end development.
- **DevOps, Cloud Computing, & System Scalability:** Experienced in setting up and managing CI/CD pipelines using GitHub Actions and custom workflows. Proficient in containerization and orchestration with Docker and Kubernetes, with hands-on experience using Helm, FluxCD, and GitOps workflows. Familiar with Kubernetes operators and infrastructure as code tools like Terraform. Have some experience working with cloud platforms such as AWS (EKS, ECR, S3 ...), Azure and Google Cloud Platform. Skilled in designing scalable, fault-tolerant systems and deploying microservices architectures. Also worked with distributed data processing frameworks like Apache Flink and Spark.
- **Data Engineering, Analysis, & Machine Learning:** Experienced in data engineering, analysis, and machine learning. Familiar with big data tools like Hadoop and Spark. Proficient in designing data models, building ETL pipelines, and working with both SQL and NoSQL databases. Hands-on experience with data analysis and machine learning using Python libraries such as Pandas, NumPy, Scikit-learn, and PyTorch. Also worked on data-driven control systems and computer vision applications.
- **Embedded Systems, IoT, & Hardware Interfaces:** Experienced in embedded systems development with ARM, AVR, and PIC microcontrollers. Able to integrate sensors and work with IoT technologies, as well as real-time operating systems (RTOS). Comfortable with hardware interface protocols including I2C, SPI, UART, USB, CAN, and FlexRay. Some experience in PCB design and FPGA development using VHDL and Verilog. Familiar with wireless communication standards such as Bluetooth, ZigBee, and Wi-Fi.
- **Comprehensive System Design & Engineering Processes:** Strong foundation in systems engineering, with experience across the full product development lifecycle from concept through deployment. Worked within Agile, Scrum, and Lean environments to support efficient project execution. Skilled in requirement analysis, system modeling, risk assessment, and quality assurance. Comfortable with technical documentation, software testing, and validation. Familiar with cybersecurity principles and software security architecture.

LANGUAGE SKILLS

- **French:** Fluent - Professional working proficiency | **English:** Fluent - Professional working proficiency