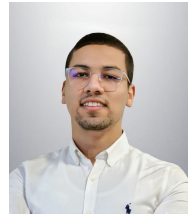# Mohamed Ouchene

Data & AI Engineer – Seeking Full-time Position

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🔗 Mohamed OUCHENE • 🌐 Portfolio
📍 Nancy, France • 🌍 Open to relocation in France, Luxembourg, and internationally
🚗 Driving License B

Profile

Double-degree engineer in digital systems engineering and data science, with a strong foundation in applied mathematics and computer science. Curious, autonomous, and motivated, I am eager to contribute to high-impact AI and optimization projects anywhere in France.

Professional Experience

R&D Engineer in Optimization and AI (Internship) – CESI LINEACT, Nancy, France *March – September 2025*
- Development of multi-objective optimization algorithms for electric vehicle charging under uncertainty, reducing energy costs by 17%.
- Integration of reinforcement learning for real-time scheduling.
- Scientific paper drafting and automation of development workflows.
  Tech: C++, Python, LaTeX, Git

Data Scientist (Internship) – Urbanloop, Nancy, France *June – September 2024*
- Designed a real-time obstacle detection system for autonomous capsules using multi-sensor data fusion.
  Tech: Python (PyTorch, OpenCV), Git

Digital Transformation Engineer (Internship) – Zaio Municipality, Morocco *June – August 2023*
- Built an administrative management interface, reducing processing time for citizen requests.
- Automated and digitized internal processes.
  Tech: VBA, Excel, Power BI

Projects

Predictive Maintenance (Personal Project) *October 2025 – Present*
- Developed a predictive maintenance system simulating industrial sensors, with ML models for anomaly detection and a real-time dashboard.
  Tech: Python, PostgreSQL, MQTT/Kafka, Docker

AI Chatbot (University Project) *October 2024 – March 2025*
- Developed an AI chatbot for educational assistance at ENSEM, reducing support workload.
  Tech: Python (Deep Learning, NLP), JSON, Git

Sign Language Image Classification (University Project) *September – December 2024*
- Built and trained a CNN achieving 95% accuracy on ASL sign recognition.
  Tech: Python (TensorFlow, ML), Git

Employee Data Management System (University Project) *October 2023 – April 2024*
- Created a Python-based interface connected to MySQL for centralized employee data management.
  Tech: Flask, MySQL Connector

Education

University of Lorraine – Master's in Mathematical Engineering for Data Science *2024–2025*
Statistical modeling, machine/deep/reinforcement learning, data visualization.

INP-ENSEM Nancy – Engineering Degree in Digital Systems *2022–2025*
Applied mathematics, algorithms, programming, databases, system engineering, embedded systems, networks, automation, signal & image processing, reliability.

CPGE MPSI – Preparatory Classes for Engineering Schools, Rabat, Morocco *2020–2022*
Mathematics, Physics, Engineering Sciences, and Computer Science.

Skills

Languages: French (bilingual), Arabic (bilingual), English (B2)
Managerial: Project management, problem-solving, autonomy, teamwork
Technical:
Programming: Python, C/C++, Java, Matlab, R
Databases / Cloud: SQL/MySQL, MongoDB, AWS
Frameworks / Tech: Docker, Dataiku, Flask, Microsoft Office, Power BI, LaTeX

Other Activities

Volunteering: Academic guidance and tutoring for high school students.
Interests: Reading (personal development, science), weight training, boxing, football.