

# Ismail CHAKRANE

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## EDUCATION

### Master's Degree (M2) in Artificial Intelligence

Faculty of Science and Technology – Claude Bernard University Lyon 1

09/2024 – 08/2025  
Lyon, France

### State Engineer's Degree in Digital Engineering, specializing in Data Science and Artificial Intelligence

National School of Arts and Crafts – Mohammed V University

09/2021 – 07/2024  
Rabat, Morocco

### University Diploma of Technology in Computer Engineering

École Normale Supérieure – Cadi Ayyad University

09/2019 – 07/2021  
Marrakech, Morocco

### High School Diploma in Physical Sciences, French Option

Lycée Qualifiant Le Maghreb Arabe

09/2016 – 07/2019  
Marrakech, Morocco

## PROFESSIONAL EXPERIENCE

### AI Intern

Atos

02/2024 – 08/2025  
Lyon, France

- Designed a unified machine learning model for thoracic medical image analysis, integrating classification, segmentation, and diagnosis tasks related to pulmonary diseases.

**Tools:** Python, Pytorch, Albumentations, OpenCV, Numpy, scikit-learn, Pandas

### AI Intern

MG2 Engineering

02/2024 – 06/2024  
Casablanca, Morocco

- Data cleaning and preprocessing pipeline.
- Built a content-based recommendation system.
- Implemented a collaborative filtering recommendation approach.
- Integrated both techniques into a weighted hybrid recommendation system optimized for training suggestions.
- Proposed the integration of a Retrieval-Augmented Generation (RAG) model using Llama2 to handle managers prompts.

**Tools:** Python, FastAPI, Surprise, Numpy Pandas, scikit-learn, Ollama, LangChain

### MLOps Intern

3D Smart Factory

07/2023 – 09/2023  
Remote

- Applied data augmentation techniques to enrich 3D dental dataset.
- Trained the MeshSegNet model for 3D segmentation of dental arch objects.
- Deployed the model into an interactive web-based application.

**Tools:** Python, PyTorch, OpenCV, Albumentations, Numpy, Pandas, VTK.js, FastAPI, scikit-learn, Pygco, React.js

### Software Engineer Intern

Menara Prefa

08/2022 – 09/2022  
Marrakech, Morocco

- Designed and developed a web application for client delivery order tracking.

**Tools:** Node.js, JWT, HTML/CSS, Bootstrap, MySQL

## TECHNICAL SKILLS

- Languages: Python, JavaScript, HTML/CSS, LaTeX
- Frameworks and Libraries: FastAPI, Node.js, Django, Vue.js, scikit-learn, PyTorch, Optuna, LangChain, Ollama, Numpy, Pandas, Seaborn, Matplotlib, OpenCV, Albumentations
- Database Management: MySQL
- Version Control and Collaboration: Git, GitHub, Jira, Miro
- Operating Systems: Linux (Void Linux)

## COMPETITIONS AND CHALLENGES

### picoCTF

Participant

2022 – present

- Player on picoCTF, participating in cybersecurity and Capture The Flag (CTF) challenges.

### UN Big Data Hackathon

Participant

11/2022

Remote

- Prediction of the Earth's average temperature using the LSTM model and visualization of results with Power BI.

## LANGUAGES

- Arabic: Native Language
- English: C1 -EFSET
- French: B2 -TCF