# Ismail CHAKRA

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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

08/2022 - 09/2022

Marrakech, Morocco

### PROFESSIONAL EXPERIENCE

AI Internship 02/2024 - 08/2025 Atos 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 Internship 02/2024 - 06/2024 MG2 Engineering 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 Internship** 07/2023 - 09/2023 Remote

3D Smart Factory

- 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

Web Development Internship Menara Prefa

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

Tools: Node.js, JWT, HTML/CSS, Bootsrap, 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 2022 - present

Participant

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

UN Big Data Hackathon 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