

Yassir CHERGUI | Data Science & AI Engineer | Master Student

Meknès, Morocco

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Availability: Immediate (Seeking 4-6 month PFE Internship)

Master's student in Data Science & AI with strong hands-on experience in Computer Vision, Generative AI, and MLOps. I have designed and deployed end-to-end AI systems including real-time object detection, LLM fine-tuning (Mistral 7B), multimodal vision-language models (BLIP), and production-ready ML pipelines. Currently seeking a 4-6 month End-of-Studies Internship (PFE) in AI/ML engineering.

Technical Skills

- **AI & Machine Learning:** PyTorch, TensorFlow, Keras, Scikit-Learn, XGBoost, Transformers (Hugging Face).
- **Generative AI & NLP:** LLMs (Mistral, Llama), RAG (Retrieval-Augmented Generation), PEFT/LoRA, LangChain, BERT, HateBERT.
- **Computer Vision:** YOLOv8, CNNs, OpenCV, Medical Imaging (MRI), Explainable AI (Grad-CAM).
- **Development & MLOps:** Python, Django, Flask, Spring Boot, Angular, Flutter, Docker, Azure, GitHub Actions, Linux, Git.

Soft Skills

- Strong problem-solving mindset applied to complex ML and system design challenges.
- Ability to work autonomously on end-to-end AI projects, from data preparation to deployment.
- Effective collaboration and technical communication in academic and project-based teams.

Key Projects

- **Urban Security – Real-time Weapon Detection System** *YOLOv8, Django, PyTorch*
 - Developed an end-to-end real-time detection pipeline achieving >30 FPS with high performance metrics (*F1-Score: 0.9960, mAP: 0.9612*).
 - Handled data annotation, model training, and deployment via a robust REST API.
- **Fine-Tuning Mistral 7B (E-commerce Assistant)** *LLM, PEFT/LoRA, RAG*
 - Built an intelligent assistant using Parameter-Efficient Fine-Tuning (PEFT) on Mistral 7B, achieving *80.36% Mean Token Accuracy*.
 - Implemented a complete pipeline: data preprocessing, vectorization, and multi-label classification.
- **AG News Classification MLOps** *Azure, Docker, FastAPI, GitHub Actions*
 - Engineered a production-ready NLP pipeline achieving *91.34% accuracy* on the AG News dataset using Linear SVM and TF-IDF.

- Implemented automated CI/CD via GitHub Actions for seamless Docker container deployment to Azure Container Instances (ACI).
- **Image Captioning Fine-tuning** *BLIP, PyTorch, Transformers*
- Fine-tuned the Salesforce BLIP model on the 31k+ image Flickr30k dataset, achieving a *0.4320 ROUGE score*.
 - Optimized training efficiency on dual T4 GPUs and implemented automated evaluation using ROUGE/BLEU metrics.
- **Alzheimer MRI Classification – Benchmark Record Broken** *TensorFlow, XAI, RAG*
- Designed a custom CNN architecture that outperformed official benchmarks, achieving *99% classification accuracy*.
 - Integrated Grad-CAM for model explainability and RAG for medical context retrieval.
- **Hate Speech Detection** *HateBERT, NLP*
- Implemented robust multi-class fine-tuning evaluated by ROC and F1 Score for toxic content detection.
 - Final performance metric: *F1-Weighted Score of 0.9357*.

Certifications

- **AWS Generative AI Applications** – Coursera & AWS [[View Certificate](#)]
- **IBM Machine Learning Professional Certificate** – IBM & Coursera [[View Certificate](#)]
- **OCI AI Foundations Associate** – Oracle University [[View Certificate](#)]
- **Intermediate Machine Learning** – Kaggle [[View Certificate](#)]

Competitions & Interests

- **Kaggle Competitor:** Passionate about solving complex data challenges on Kaggle. actively participating in challenges related to Medical Imaging (PathMNIST, Alzheimer MRI) and NLP.
- **Interests:** AI Engineering, Gen AI, RAG, LLM, Fine-Tuning, MCP (Model Context Protocol), End-to-End System Design.

Education

Université Moulay Ismail <i>Master of Excellence in Data Science & AI</i> Currently in S3. S1 & S2 Grade: Good (Bien)	Meknès 2024–2026
Université Moulay Ismail <i>Bachelor (Licence) in SMI (Science Math Info)</i> Honors: Assez Bien (S5: Bien, S6: Très Bien)	Meknès 2024
High School <i>Baccalaureate in Mathematical Sciences A</i>	Meknès 2020

Languages

English: Professional Proficiency ▪ **French:** Professional Proficiency ▪ **Arabic:** Native