Yassir **CHERGUI** | Data Science & AI Engineer | Master Student

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

Languages

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