

Farouk ABDALLAH

Seeking opportunities in the field of AI; Computer Vision, Generative AI, LLMs, MLOps. Available from August/September 2025.

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📍 Grenoble, France

👤 Farouk Abdallah

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🎓 EDUCATION

Master's in Algorithmics and Modeling of Interface Sciences., University Paris-Saclay

Sep 2022 – Oct 2023 | Versailles, France
Reinforcement Learning (RL), Optimization, J2EE.

Engineer and Master's in Computer Science (Computer Systems), National Higher School of Computer Science.

Sep 2017 – Sep 2022 | Alger, Algérie
Engineering, Deep Learning, Data Analysis.

💼 PROFESSIONAL EXPERIENCE

LLM Research Engineer, Laboratoire d'Informatique de Grenoble

Feb 2024 – Jul 2025 | Grenoble, France
Developing LLMs for healthcare, recruitment, and finance, co-authoring a publication on audio summarization, and contributing to a confidential patent.

LangChain, LangGraph, Hugging Face, LoRA, FastAPI.

Data scientist, Assystem

Apr 2023 – Oct 2023 | la Défense (Paris), France
Implementing a solution for extracting multi-level information from resumes.

Document AI, LayoutLM, BERT, LLMs, Object Detection.

Research Engineer on Edge IA, LAMIH CNRS

Jan 2022 – Jun 2022 | Valenciennes, France
Optimizing road marking detection algorithms for self-driving cars using collaborative inference between devices.

Self-driving cars, Lane detection, Edge AI, NAS.

🧠 SKILLS

Programming language

R, Python, JavaScript, Java, C, C++

Framework IA

Hugging face, PyTorch, Tensorflow, MMCV, Pandas, Numpy, Scikit-learn, Keras, Wandb, Opencv

Framework LLM

Hugging face, LangChain, LangGraph, Unsloth AI, Ollama, FAISS, Peft, TRL, accelerate

Software development.

FastAPI, Flask, TorchServe, Java EE, MySQL, Docker, Git, Redis, RabbitMQ, CI/CD, RestAPI

Framework Database

MySQL, Redis, MongoDB, SQLite

Cloud computing

AWS SageMaker, Google cloud platform, Azure

System

Linux, Bash

🌐 LANGUAGES

Arabic (Native) | French (C2) | English (C1)

📁 PROJECTS

Building Scalable AI Chatbots Across Domains

Feb 2024 – present

- Fine-tuned **Llama 3.1** to develop chatbots tailored for **medical teleconsultation, interviewer, and educational orientation**.
- Designed a scalable, multi-use conversational AI framework to support diverse domains.
- Collaborating on a **research article** focused on **audio summarization** techniques.
- Working toward a **patent license** to protect and commercialize innovative chatbot solutions.

LangGraph, LangChain, FastAPI, LangServe, Llama, Ollama.

Improving Algorithms for Road Marking Detection in Self-Driving Cars

Jan 2022 – Jun 2022

- Conduct a study on **the execution time and power consumption** for each layer of a neural network.
- Implement a collaborative inference algorithm for a CNN model between two **Edge** devices (Jetson TX2 and Jetson AGX).
- Perform a benchmark by comparing around twenty road marking detection models.

Python, Pytorch, CuDNN, C, CUDA, Bash, Nvmodel.

Resume Layout Analysis, (Github link).

Apr 2023 – Oct 2023

- Design and implementation of a layout detection model for resumes using **MMCV**.
- Integration of a semi-automatic CV annotation feature in Pawls
- Utilize a multi-modal model (**LayoutLM**) for classifying resume sections with the **NER** (Named Entity Recognition) technique.
- Test an image-to-text model and adapt it for resumes.

PyTorch, Hugging face, Wandb, TorchServe, Redis RabbitMQ.

Adaptive Retrieval-Augmented Generation with LangGraph

Sep 2024 – Oct 2024

- Built adaptive RAG pipelines for dynamic document retrieval and context generation.
- Used LangGraph to orchestrate query-specific retrieval with local vector embeddings.
- Designed scalable, modular architecture with memory management for interactive use cases.

LangGraph, Tavily, Ollama, Gradio, RAG,

📜 CERTIFICATES

Generative AI with Large Language Models (Link)

Prompt engineering, Instruction finetuning and PEFT techniques, RL with human feedback, ReACT framework

LangChain for LLM Application Development (Link)

AI Frameworks, Agents, Prompt Engineering RAG

AI Agents in LangGraph (Link)

AI Frameworks, Agents, Document Processing, Search and Retrieval.

Intro to deep learning with Pytorch (UDACITY)

Pytorch, CNN, Style transfer, RNN

Machine learning algorithms: SUPERVISED LEARNING TIP TO TAIL (Certificate link)

KNN, SVM, Decision Trees, Random Forest

Natural language processing in Tensorflow (link)

Sentiment in text, word embeddings, Sequence models