

# Quan Hong TRAN

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Results-driven ML Engineer with **2+ years of experience** in the Data Science industry across diverse domains. **Skilled in NLP, particularly in fine-tuning models and developing AI agents**, MLOps, and modern AI/ML frameworks, and actively seeking ML engineering roles in innovative tech companies.

## Experience

**Machine Learning Engineer Apprentice**, HephIA – Paris, France

Oct 2022 – Sep 2024

- **AI Legal Assistant & NLP:**

- Fine-tuned and deployed **transformer-based NLP models** using **Transformers** framework to extract **legal entities** and **anonymize sensitive data**, achieving a **true positive rate of over 90%**.
- Designed and implemented **AI agent systems** with **LangChain**, **LangGraph** to **automate legal tasks**, reducing task time by **20%** and boosting **productivity**.
- Built and deployed **RAG pipelines** with **LangChain** and **vector databases (FAISS, ChromaDB, MongoDB)**, collaborating with **cross-functional teams** to deliver **robust, customized internal search solutions**.
- Implemented **MLOps pipelines** with **MLflow**, **AWS**, and **Docker** to **monitor, evaluate**, and ensure **reproducibility** and **data integrity** across **model experiments** and **deployments**.

- **Unsupervised Learning Platform:**

- Integrated **unsupervised learning modules** into the **production codebase** using **Python**, **Scala**, and **Spark**
- Analyzed **client's datasets** with **Scikit-learn** and **Pandas** to identify **outliers** and **data pattern**
- Contributed to **testing cycles** and **CI/CD workflows**, maintaining clear **Sphinx documentation** and providing **peer feedback** to improve **code quality** and **user experience**.

**Data Scientist Intern**, HephIA – Paris, France

Mar 2022 – Sep 2022

- Designed **custom visualizations** of **airplane engine data** using **Self-Organizing Maps (SOM)** with **Bokeh**, **Matplotlib**, and **Seaborn** to reveal hidden **patterns** in **performance metrics**.
- Integrated these **visualizations** into **HephIA's analytical product** with **PySpark** and **Python**.

## Projects

### Easyform - RAISE Summit's Hackathon

Our hackathon track, organized by Qualcomm and RAISE Summit, challenged participants to build innovative edge AI solutions. Our team achieved:

- **Won third place** in our track for this practical and secure Edge AI solution.
- Built Easyform, a privacy-first local app that **extracts personal information** from a context directory and **auto-fills forms** using a quantized **LLaMA model** on Qualcomm's **Snapdragon X Elite NPU**, with **Groq** leveraged for ultra-fast online inference when needed.

## Education

**Université Paris Cité | Master**

Oct 2022 – Sep 2024

- Machine Learning pour la Science des Données (**15.2/20**)
- **Coursework:** Deep Learning, NLP, Computer Vision, Reinforcement Learning, ...

**University of Science and Technology of Hanoi | Bachelor**

Oct 2019 – Sep 2022

- Information, Communication and Technology, **top 3 of my batch (17.08/20 - graduated with Distinction)**
- Received **Erasmus+ Scholarship (2022)** and **USTH's Academic Scholarship (2019-2022)**

## Skills

**Languages:** English, French, Vietnamese

**Programming Languages:** Python, C++, Scala, SQL

**Frameworks:** PyTorch, Hugging Face (Transformers), Scikit-learn, LangChain, LangGraph, EasyOCR, ...

**MLOps & Cloud:** AWS, Docker, MLflow, CI/CD, Git

**Data & Databases:** MongoDB, FAISS, ChromaDB, Apache Spark, Pandas

**Visualization & Other:** Bokeh, Matplotlib, Tesseract, EasyOCR, Sphinx