



Final-year AI Engineering student at ENSTA Paris specializing in Generative AI and intelligent AI systems. Built LLM-powered applications, Retrieval-Augmented Generation (RAG) services, cloud-deployed machine learning solutions, and knowledge-driven AI systems through research and industry collaborations with CEA, STMicroelectronics, and École Polytechnique. Passionate about transforming advanced AI models into reliable, production-ready applications.

PROFESSIONAL EXPERIENCE

CEA List (LASTI Team) – Research Intern

Apr 2026 – Present

Supervisor: Prof. Gaël De Chalendar

Palaiseau, France

- Developed a *Neuro-Symbolic AI* pipeline fusing *Foundation Models* with an *enriched Knowledge Graph* to improve semantic scene understanding for autonomous warehouse robots.
- Designed and implemented a *Knowledge Graph enrichment pipeline* achieving 89% enrichment accuracy, improving the reliability of injected semantic knowledge.

CMAF Lab, École Polytechnique – Research Intern

May – Sept 2025

Supervisor: Prof. Eric Moulines

Palaiseau, France

- Developed *CosyVoice2-EU*, an open-source adaptation of a state-of-the-art *Transformer*-based voice cloning model for European languages .
- Achieved performance *exceeding strong open-source baselines* while remaining *competitive with a leading commercial speech synthesis system (ElevenLabs)*, contributing to an *EUSIPCO-accepted paper*.

PROJECTS

Portfolio with RAG-Powered AI Assistant

2026

Frontend  Backend 

Live 

- Built a serverless *RAG*-powered assistant widget for my portfolio site, using *FastAPI* on *AWS Lambda* with hybrid *BM25*/embedding retrieval to answer visitor questions grounded in my own career data.
- Engineered for near-zero operating cost and validated with *413 passing tests*, achieving zero hallucinations across 18 evaluation questions.

NORMA – Normative Ontology for Requirements Modeling & Analysis

2026

- Built a knowledge-graph pipeline transforming automotive regulatory documents (UNECE, EU, ISO 26262) into a versioned, provenance-tracked graph in *Neo4j*, combining a cost-tiered *NER* cascade (*GLiNER*) with local LLM relation extraction (*Ollama*).
- Modeled the domain with a versioned *OWL* ontology and validated the operational graph with *SHACL*, resolving 21,700 violations to reach *100% property coverage*.

AWS CI/CD Deployment Pipeline

2026

- Designed and deployed a fully automated *CI/CD pipeline* on *AWS* to take a web app from Git commit to production with zero manual steps.
- Automated artifact management, build, deployment, and release orchestration using *CodePipeline*, *CodeBuild*, *CodeDeploy*, and *CodeArtifact*.
- Deployed production workloads on *EC2* with *IAM*-secured, git-triggered releases on every GitHub push.

Embodied AI with Vision-Language-Action Models (VLAs)

Oct 2025 – Mar 2026

Academic Project, team of 5, supervised by Prof. Gianni FRANCHI

- Developed an *automated benchmarking framework* to evaluate the AIUTA agent across *multiple LLM backbones (Qwen3-8B, Llama3-8B)* on a *GPU cluster*.

Veo Hackathon | Team of 6

- Developed *AI agents* using *CrewAI* and *MistralAI* to automate candidate screening through resume *SWOT analysis* and video-interview *body-language assessment*.
- Automated candidate communication and report delivery using *Python* and *SMTP*-based email services.

Team Engineering Project

Oct 2024 – May 2025

Team Project

STMicroelectronics

Team Project

- Developed *machine learning models* in *Python* (*Scikit-learn*, *PyTorch*, *Pandas*, *NumPy*) to evaluate similarity between microelectronic components.
- Achieved 98% accuracy, *outperforming the company's internal baseline solution*.
- Collaborated within a multidisciplinary engineering team to design and validate the final solution.

EDUCATION

Engineering cycle, AI Specialization (Double Degree)

ENSTA - ENIT

2023 - Present

2nd year: GPA 3.96/4.3 | 1st year: Ranked 2/50 (ENIT)

Relevant Coursework: Deep Learning, Machine Learning, Language Modeling, Reinforcement Learning, Game Theory & Multi-Agent Control, Probabilistic Reasoning

Preparatory Classes in Mathematics and Physics

Preparatory Institute for Engineering Studies in Tunis (IPEIT)

2021 - 2023

Ranked TOP 4/177 (2nd year) | TOP 3/326 (1st year)

Relevant Coursework: Linear Algebra, Probability Theory, Statistics, Numerical Analysis, Physics, Chemistry, Python Programming, Database Systems (SQL)

TECHNICAL SKILLS

- Languages:** Python, C++
- Generative AI:** LLMs, Retrieval-Augmented Generation (RAG), Vector Embeddings, Ollama, CrewAI, Transformers
- Machine Learning:** PyTorch, TensorFlow, Scikit-learn, CUDA
- Backend & Interfaces:** FastAPI, Flask, Streamlit, Gradio
- Databases:** PostgreSQL, Neo4j, DynamoDB
- Cloud & DevOps:** AWS, Docker, Git, GitHub, CI/CD
- Knowledge & Semantic AI:** Knowledge Graphs, OWL, SHACL, RDF, NER

PUBLICATIONS

- "Europeanizing Modular Zero-Shot TTS: Component-Level Adaptation Framework for French & German." EUSIPCO 2026. [Code](#)

AWARDS & DISTINCTIONS

Scholarship of Excellence (Tunisian Government) · Google MENA ML 2026 (full scholarship, Google DeepMind) · 5x School Ambassador (competitive programming & AI)

MAIN CERTIFICATES (ALL CERTIFICATES)

- Professional Certificate: **Generative AI Engineering** by IBM (16 courses program)
- Professional Certificate: **Data Science** by IBM (6 courses program)
- Professional Certificate: **Foundations of AI** by IBM (3 courses program)

VOLUNTEERING & LEADERSHIP

Tutor – #GENIUS Program, École Polytechnique — weekly science & maths tutoring · Competitive Programming Manager, G²FOSS — organized DSA courses and competitions

LANGUAGES

English (Linguaskill: C1) | French (TCF: C1) | Arabic (native)