

Mathieu ASTRUC

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EXPERIENCE

Airbus Helicopters Mar. 2026 – Sep. 2026
AI Engineer Intern - In progress France

NTNU - Norwegian University of Science and Technology May. 2025 - Aug. 2025
Researcher Norway

- **Embodied AI & Multimodal HRI:** Developed a comprehensive interaction system for a humanoid robot, integrating gesture-based Human-Robot Interaction (HRI) with an advanced RAG-powered conversational agent for domain-specific dialogue.
- **System Optimization:** Accelerated model inference using GPU pipelines to minimize latency, while designing a robust human-in-the-loop (HITL) framework for edge-case queries.
- *Publication: Lead author of a paper accepted at HCI International 2026.*

Comat Specific Jan. 2025 - May. 2025
ML Engineer - Mission France

- Designed an AI-driven solution to modernize industrial workflows: built a Deep Learning-based OCR pipeline to accurately translate legacy, hand-drawn 2D sketches into structured, machine-readable data.

Banque de France May 2024 – Aug. 2024
Data Engineer Intern France

- **Large-Scale Data Extraction:** Automated complex web scraping workflows using Python and Selenium to aggregate massive volumes of unstructured data from diverse sources.
- **Multimodal AI Pipeline:** Integrated OCR, Speech-to-Text (S2T) models, and LLMs to transcribe, digitize, and structure raw audio and visual data, directly feeding a Retrieval-Augmented Generation (RAG) system.

EDUCATION

Universidad Politecnica de Madrid Sep. 2025 – Feb. 2026
Exchange semester: Advanced IT and Data Sciences Spain

- Machine learning, cloud computing, programming, and large-scale data processing architectures.

Esaip - Ecole d'ingénieurs Sep. 2021 – Sep. 2026
Engineer's Degree (5-year program) – Specialization: AI & Big Data France

- Grade: ECTS A (highest, Top 10%)

SeAMK - University of Applied Sciences Jan. 2024 – May. 2024
Exchange semester: IT and Engineering Finland

- C++, C#, embedded systems, object-oriented programming, AI, electronics, Unity and TwinCAT.

Lycée Jean Perrin Sep 2018 – Jul 2021
French Baccalaureate (Physics & Maths) – High-Level Athlete (Basketball) France

SKILLS

Programming & Development : Python, C#, C++, Linux shell, Version control (GitHub/GitLab)

AI & Machine Learning : Deep Learning, Reinforcement Learning, LLMs, RAG, Computer Vision

Frameworks & Tools : PyTorch, TensorFlow, Hugging Face

Languages : French (native), English (fluent), Spanish (intermediate)