

Mathieu ASTRUC

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Objective: Graduating Engineer seeking a full-time position

Available: Sep. / Oct. 2026

EXPERIENCE

Airbus Helicopters Mar. 2026 – Sep. 2026
AI Intern – End of studies project – In progress France

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

- **Embodied AI & Multimodal HRI:** Developed a full interaction system for a humanoid robot, integrating gesture-based HRI with a RAG-powered conversational agent for domain-specific dialogue.
- **System Optimization:** Accelerated inference via GPU pipelines and designed a human-in-the-loop (HITL) framework for edge-case queries.

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

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

PROJECTS

Publication – Real-Time Hand Gesture Recognition for Human Robot Interaction 2025 – 26
- Lead author. Designed a real-time gesture recognition pipeline for human-robot interaction. Accepted at **HCI International 2026 Montreal**.

Comat Specific – AI-Driven Industrial OCR Pipeline Jan. 2025 – May 2025
- Built a Deep Learning-based OCR pipeline to translate legacy hand-drawn 2D sketches into structured, machine-readable data, modernizing industrial workflows.

Research Paper Study – Cognitive Dependence of Students on Virtual Assistants 2025
- Analyzed the impact of AI-powered virtual assistants on student autonomy, critical thinking and learning outcomes, allies or threats to independent learning?

EDUCATION

Universidad Politecnica de Madrid Sep. 2025 – Feb. 2026
Exchange Semester – Advanced IT and Data Sciences Spain
- **Relevant coursework:** Machine learning, cloud computing, programming, large-scale data processing architectures.

Esaip – Master of Engineering, Artificial Intelligence and Data Science Sep. 2021 – Sep. 2026
Engineer's Degree (5-year program) France
- Grade: ECTS A (highest, Top 10%)

SeAMK – University of Applied Sciences Jan. 2024 – May 2024
Exchange Semester – IT and Engineering Finland
- **Relevant coursework:** C++, C#, embedded systems, OOP, AI, electronics, Unity and TwinCAT.

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

SKILLS

Programming Languages Python, C#, C++, Bash, SQL

ML / DL PyTorch, TensorFlow, Hugging Face, Scikit-learn

Topics LLMs, RAG, Computer Vision, Embodied AI, HRI, OCR, Multimodal Systems

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

PASSIONS

Basketball (former high-level athlete), content creation, tech & AI enthusiast, entrepreneurship