Christophe Marabotto

AI Research Engineer

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A and B Driving license
First aid at work

Education

2018–2021 **Diplôme d'ingénieur**, *EPITA, specialized in Data Science and Artificial Intelligence (SCIA)*, Paris, France.
Main subjects: Mathematics, Algorithmics and Data Science.

2016–2018 **Preparatory Classes (PCSI/PSI)**, *Lycée Alphonse Daudet*, Nîmes, France.
Main subjects: Mathematics, Physics and Engineering Sciences.

Experience

2021-Present **IRT Saint Exupéry**, *Sophia Antipolis, France*, **AI Research Engineer**.
AIxIA: Artificial Intelligence for Interference Analysis - Ongoing.
PM acting: coordination of activities. Leading development of explainable language-based approaches for interference identification on multi-core processors.
RAKEL: Robust and Accurate Knowledge Extraction by LLM - Ongoing.
Hallucination Detection for NOTAM Classification.
RAPTOR: Development of Deep Learning models for non-cooperative spacecraft rendezvous missions (Pose Estimation). Design of a synthetic dataset. Optimization and deployment on space-grade hardware.
Confiance.ai (Grand Défi "Securing, certifying and enhancing the reliability of systems based on artificial intelligence"): Development of a test bench for optimizing and evaluating neural networks on FPGAs using Vitis AI (AMD). Study of semantic preservation for AI certification.
LIDRO.ai (LIghtweight DROne for Artificial Intelligence): Design of an FPV drone for Deep Learning applications under INAV.

2021 **Airbus Defence and Space**, *Sophia Antipolis, France*, **Data Scientist**, End-of-studies Internship (6 months).
Semantic segmentation of high-resolution satellite images using Deep Learning with an Agile team.

2020-2021 **Ipso Santé**, *Paris, France*, End-of-study project.
Unsupervised clustering of medical reports using Topic Modelling techniques in a team of 4.

2019-2020 **Hexaglobe**, *Paris, France*, **Data Scientist**, Internship (5 months).
Anomaly detection using Deep Learning for a streaming service for both marketing analysis and breakdown prediction using Keras, Kafka and Google Cloud Platform.

Languages

French	Native
English	Full professional proficiency
Spanish	Professional working proficiency

Technical skills

Maths	Numerical Optimization, Statistics, Image Processing, Signal Processing
Programming	Python, C++, C, Java, CUDA, Scala, Shell Scripting, LaTeX
ML	PyTorch, Tensorflow, Scikit-Learn
Use Cases	Pose Estimation, Object Detection, Semantic Segmentation, Classification and Anomaly Detection
Hardware	Xilinx Kria KV260 and ZCU104 (Ultrascale+), NVIDIA Jetson AGX Orin (GPU), Arduino, Raspberry Pi
Drone	Betaflight, INAV
Tools	Pandas, OpenCV, Matplotlib/Plotly, Valgrind, QGis, Docker, gRPC, Tableau, Flask, Git, Office
Cloud Computing	Google Cloud Platform, Amazon Web Services, Microsoft Azure
Project	AI research management, Agile Scrum

Others

Sports	Historical European Martial Arts
Art	Photography, Music Production and Blacksmithing