Christophe Marabotto

AI Research Engineer

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Driving license B et A
First aid at work

Education

2018–2021 **Master of Science (MSc)**, *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**.
RAPTOR: Development and deployment of Deep Learning models for non-cooperative spacecraft rendezvous missions (Pose Estimation). Design of a synthetic dataset. Optimization and deployment on GPU and FPGA targets.
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 the Vitis AI. Study of semantic preservation.
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 with 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
Machine Learning	PyTorch, Tensorflow, Scikit-Learn
Hardware	Xilinx Kria KV260 et ZCU104 (Ultrascale+), NVIDIA Jetson AGX Orin (GPU), Arduino, Raspberry Pi
Drone	Flight Controller (Mamba F405 MK2, GOKU GN 405S 20A AIO), Flight Control Software (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 Mngt	Agile Scrum (Jira, Confluence)

Others

Sports	Martial Arts (Ju-jitsu, Systema, Boxing and HEMA)
Making	FPV Racing Drone and 3D printing
Art	Music Production, 3D Printing, domotics