

# 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.**  
*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 Vitis AI (AMD). 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 **Ipsos 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,  $\LaTeX$
- 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 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 AI research management, Agile Scrum

## Others

- Sports Ju-jitsu, Systema, Boxing and HEMA
- Making FPV Racing Drone and 3D printing
- Art Music Production, 3D Printing, do-motics