Double-degree Mechatronics and AI Engineer

Rayane GETA — Seeking a robotics/IA engineer position

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Education

ENSTA (National Institute of Advanced Technologies), Master of Science — Brest, France / September 2023 - 2025
- **Relevant Coursework:** Computer Vision, Radar and Remote Sensing, Software Engineering, Machine Learning, Linear and Nonlinear Optimization

ENSIL-ENSCI (National Graduate Engineering School of Limoges), Master of Science — Limoges, France / September 2021 - 2025
- **Relevant Coursework:** Control Systems, Robotics, Mechanical Design.

Professional Experience

Institut de Robòtica i Informàtica Industrial (IRI), Robotics and AI Engineer Intern — Barcelona, Spain / May 2025 – Nov. 2025
- Extended an assistive robotic feeding system to handle diverse unseen food types using ROS1 and BehaviorTree.CPP.
- Built a semi-automated food manipulation sandbox enabling simultaneous demonstration learning and systematic dataset generation.
- Designed embedded vision pipelines for food segmentation, texture classification plate detection, and overflow analysis leveraging classical computer vision and CNN (design and training).
- Implemented custom collision detection/response system enabling safe collaborative robot behavior and touch sensing.

Aerix Systems, Embedded System and AI Engineer Intern — Bordeaux, France / April 2024 – Aug. 2024
- Developed monocular visual odometry for an omnidirectional drone in C++.
- Designed multi-threaded real-time odometry software architecture.
- Integrated a deep-neural network for 3D vision and odometry enhancement.
- Documented the software with Doxygen.

CRITT Automatisation & Robotique, Mechatronic Engineer Intern — Albi, France / May 2023 – Aug. 2023
- Designed, machined and assembled mechanical parts for industrial machines.
- Developed HMI software and programmed PLCs using Siemens TIA Portal.

Academic and Personal Projects

Multicam - School group project
- Supervised development of a multi-camera (ESP32-Cam) system for multi-people safety monitoring using YOLOv8.
- Implemented custom voting based multi-person tracker robust to occlusions.

More projects spanning robotics, AI, and software development in my portfolio: rayane-maker.github.io

Skills

Coding Languages C/C++, JAVA, Python, Javascript, Matlab
Frameworks ROS, BehaviorTree.CPP, Pytorch, Tensorflow
Control System Matlab, Simulink, Amesim, CoppeliaSim
Mechanical Design Solidworks, 3DExperience, Catia

DevOps Git, Docker, Google Colab
Languages English, French, Spanish.
Soft Skills Teamwork, Self-Learning, Critical Thinking, Problem Solving, Communication Skills.

Hobbies and Activities

- Hip Hop Dance (2015 - Present, Public performances, Styles : Animation, Popping, Krump)
- Shell Eco-marathon (2022, Main Pilot, Location: Assen, Netherlands)