

# Double-degree Mechatronics and AI Engineer

## Rayane GETA — Seeking a robotics/IA engineer position

📍 Open to relocation

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rayane-maker.github.io

## Education

### ENSTA (National Institute of Advanced Technologies), Master of Science

- **Relevant Coursework:** Computer Vision, Radar and Remote Sensing, Software Engineering, Machine Learning, Linear and Nonlinear Optimization

Brest, France  
September 2023 - 2025

### ENSIL-ENSCI (National Graduate Engineering School of Limoges), Master of Science

- **Relevant Coursework:** Control Systems, Robotics, Mechanical Design.

Limoges, France  
September 2021 - 2025

## Professional Experience

### Institut de Robòtica i Informàtica Industrial (IRI), Robotics and AI Engineer Intern

- 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.

Barcelona, Spain  
May 2025 – Nov. 2025

### Aerix Systems, Embedded System and AI Engineer Intern

- 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.

Bordeaux, France  
April 2024 – Aug. 2024

### CRITT Automatisation & Robotique, Mechatronic Engineer Intern

- Designed, machined and assembled mechanical parts for industrial machines.
- Developed HMI software and programmed PLCs using Siemens TIA Portal.

Albi, France  
May 2023 – Aug. 2023

## 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](https://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, Catia, 3DEXperience

**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)