

# AI and Mechatronics Engineer

Rayane GETA — Seeking a CDI

📍 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 - Present

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

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

Limoges, France

September 2021 - Present

## Experience

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

- Developed monocular visual odometry for an omnidirectional drone in C++.
- Integrated a deep-neural network for 3D vision and odometry enhancement.
- Designed multi-threaded real-time software architecture with SOLID principles.

Bordeaux, France

April 2024 – August 2024

**CRITT Automatisation & Robotique**, Mechatronic Engineer Intern

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

Albi, France

May 2023 – August 2023

## Skills

**Coding Languages** C/C++, JAVA, Python, Javascript, Matlab

**DevOps** Git, Docker, Google Colab

**AI Frameworks** Pytorch, Tensorflow, Jetson Inference

**Languages** English, French, Spanish.

**Control System** Matlab, Simulink, Amesim, CoppeliaSim

**Soft Skills** Teamwork, Self-Learning, Critical

**Mechanical Design** Solidworks, Catia, 3DEXperience

Thinking, Problem Solving, Communication Skills.

## Main Projects

### Pan-Tilt Tracker

- Created a motorized smartphone holder with auto-tracking for capturing my dance sessions.
- Developed the Android app for video capture and tracking. Designed and assembled 3D-printed parts.

### Multicam

- Deployed a multi-camera system for people tracking and monitoring using YOLO.
- Programmed C++ firmware for ESP32-Cam and implemented network management for seamless operation.

### Vehicle simulator game

- Developed a vehicle simulator game using Unity, with custom drivetrain and wheel physics simulations.
- Implemented classic AI algorithms for virtual opponents, leveraging geometry-based methods.

Additional projects and informations can be found in my portfolio: [rayane-maker.github.io](https://rayane-maker.github.io)

## Hobbies and Activities

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