

# AI and Mechatronics Engineer

## Rayane GETA — Seeking a CDI

📍 Open to relocation    ✉ rayane.geta@gmail.com    ☎ +33763570092    💼 rayane-geta    🌐 rayane-maker.github.io

### Education

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**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

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**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 Automatisat​​ion & 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

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

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

**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.

### Main Projects

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**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

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