

## Skills

**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.

## Education

**ENSTA (National Institute of Advanced Technologies of Brittany)**, Master of Science  
• **Relevant Coursework:** Software Engineering, Deep Learning, Machine Learning, Computer Vision, Radar and Remote Sensing, Linear and Nonlinear Optimization  
Brest, France  
August 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 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 Automatiser & 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

## Main Projects

**National Student Entrepreneur (SNEE)**  
• Developing an application catering to dancers and choreographers' needs.  
• Recognized by Pepite Bretagne for my entrepreneurial initiative.  
• Gained access to resources, mentoring, and networks to support project development.

**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)