Fernandes Lopes João Manuel

Recent Master's graduate in Autonomous Systems and Robotics, I am a multilingual junior engineer passionate about technical innovation. Immediately available, I aim to apply my skills in robotics, AI, and embedded systems to contribute to the development of your solutions.

PROJECTS

Drone Défense Hackathon
November 2025 - 3 days

Selected as one of 200 finalists from over 800 applicants to compete in the Armed Forces 'Delivery in Crisis' challenge at AdoptAI's Hackathon. Finished 3rd by engineering a comprehensive drone logistics system that featured mission allocation algorithms, real-time trajectory planning, and a supervisory dashboard for field units.

Project Drone Carrier
February 2025 To April 2025

Designed and built an embedded system for the air-to-air deployment of DJI Tello Edu drones using a DJI Matrice 300. This project included custom PCB design, the engineering of a dedicated transport pod, and the management of drone autonomy.

Project RoboCup
March 2024 To June 2024

Participated in the RoboCup SSL by tackling the Vision BlackOut challenge. Engineered a shift from standard global vision guidance to a local perception model, leveraging onboard cameras to autonomously coordinate the robot football team.

Portfolio : https://joao-fernandes-lopes.emi.u-bordeaux.fr/Portfolio/

PROFESSIONAL EXPERIENCE

I2M, Talence — *R&D Internship*
April 2025 To September 2025

Developed an electronic component identification algorithm achieving 91% accuracy across 8 distinct component types (including cables). Trained on a custom-built dataset and integrated with a robotic arm, the system leveraged Industry 4.0 technologies (X-RAY, LiDAR, IR) to drive circular economy automation within a robotic disassembly cell.

LibNGo, Talence — *Web Developer*
June 2022 To July 2022

Contributed to the development of the official company website by creating 12 new pages and migrating the application to a new framework (Svelte to React).

Construction Sector, Gironde — *Family Business*
May 2018 To July 2022

As a seasonal summer worker, I performed various tasks including demolition, landscaping, painting, electrical work and gained hands-on experience in customer service.

EDUCATION
September 2022 To April 2025

MSc in Computer Science – Autonomous Systems, Perception, Interaction & Control (ASPIC) | Graduated with High Honors
University Of Bordeaux, Bordeaux

CONTACTS

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SKILLS

- Programming Languages :
  - C, C++, Python, Java, Arduino
- Artificial Intelligence :
  - Machine Learning, PyTorch, TensorFlow, Scikit-learn, YOLO, OpenCV
- Robotics and Mechatronics
- ROS2, Gazebo, PixHawk
- Electronic & Embedded Systems :
  - Microcontrollers, Communications Protocols, Sensor Integration

LANGUAGES

- English: Professional Proficiency (C1+)
- Portuguese: Professional Proficiency (C2)
- French: Professional Proficiency (C1+)
- Spanish: Intermediate Proficiency (B2)

HOBBIES & ACHIEVEMENTS

- Semi-Professional Esports: Coaching and Competition
  - ECG5 regional tournament 1st place – 2022
  - Amazon University Esports Tournament 2nd place – 2022
- Sports
  - Amateur Gymnastics
  - Powerlifting
- Film and Animation Enthusiast