

# Ousmane THIONGANE

Electronics Engineer specializing in Computer Vision, AI & Robotics,  
looking for a full-time position.

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## EDUCATION

### Three-year Postgraduate Engineering Degree in Electronics and Computer Science

*Cergy, France*

ENSEA (Ecole Nationale Supérieure de l'Électronique et de ses Applications)

Sep 2022 – Dec 2025

- Major in Computer Science, Signal Processing and Electronics. Specialization in Image Processing & Virtual Reality.
- Manager of the Robotics club; participated to the French Robotics Cup. Revamped a knowledge-sharing wiki.

### Exchange Program in Artificial Intelligence & Robotics

*Rome, Italy*

Sapienza University of Rome

Sep 2024 – Feb 2025

- Coursework:** Artificial Intelligence, Robotics, Computer Vision, Reinforcement Learning and Machine Learning.

## SKILLS

**Programming Languages:** Python (PyTorch, Tensorflow, NumPy, Scikit-learn, Gym, OpenCV), C/C++, Java, HTML/CSS.

**Other Skills:** Image Processing, Machine Learning, ROS 2, Docker, STM32 Cube IDE, Linux, Git/GitHub, PCB Design (KiCAD), VSCode, MATLAB, Photoshop, Autodesk Sketchbook.

## PROJECTS

- Chroma | May 2025 – Present:** Built a website to and share technical knowledge and computer vision materials.
- Checkers-RL | Dec 2024 – Feb 2025:** Designed a reinforcement learning agent capable of solving checkers.
- ArUco Map Locator | Dec 2024- Feb 2025:** Implemented a ROS 2 ArUco-based robot localization system.
- CarControl | Dec 2024 – Feb 2025:** Implemented CNN and PPO algorithm to control a car in CarRacing-v2.
- RoboBox | Dec 2024 – Feb 2025:** Developed a Python module for robotic applications (kinematics, motion).

## EXPERIENCE

### Robotics R&D Engineer

*Bordeaux, France*

Hugging Face x Pollen Robotics

Mar 2025 – Sep 2025

- State of the art on methods for the constrained formulation of the inverse kinematics problem.
- Formulation of a general constrained quadratic optimization problem in the context of teleoperation.
- Software implementation, simulation tests and evaluation on the real robot.

### Systems Engineering Assistant/Physical Anti-Intrusion Solutions

*Osny, France*

IDEMIA

Apr 2024 – Aug 2024

- Defined and documented use scenarios for the product and identified potential threats.
- Realization of a software workflow in Python to process and interpret sensor signals from prototype.

### Product Testing & Qualification Engineering Intern

*Osny, France*

IDEMIA

Jun 2023 – Aug 2023

- Conducted functional qualification tests on biometric terminals. Prepared test reports based on tests plans.
- Processed fingerprint image data and analyzed data frames.

## CERTIFICATIONS

Python for Computer Vision with OpenCV and Deep Learning (Udemy) – 2024

First AID (PSC1) – 2023

## LANGUAGES

**French** – Native

**English** – Proficient, C1 Level | (TOEIC 910/990)

**Spanish** – Working Knowledge, B1 Level

References available on request.