

LOAN BERNAT

— <https://loanbrnt.github.io> —

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Toulouse, France

Currently preparing a Master's Degree in Engineering (Robotics and Interactive System) with a background in research and development in Artificial Intelligence, Robotics and Simulating. Self-taught, curious, motivated and having a very high learning and adaptation capacity.

Looking for a thesis to start in September 2024 around the use of Machine Learning in Video Games. Possibility to do a 6-months internship before the start of the thesis.

EDUCATION

- **Master's Degree in Engineering** 2021 - 2024
Paul Sabatier University 3 - UPSSITECH, Toulouse, France
 - Robotics and Interactive System. Major in Artificial Intelligence
- **Preparatory course to prepare for Engineering School** 2019 - 2021
Paul Sabatier University 3, Toulouse, France
 - Major in Maths and Informatics
- **BACCALAUREAT : Major in Engineering Science** 2019
Saint Joseph, Toulouse, France
 - With honors

PERSONAL PROJECTS

Machine learning for studying animal behaviour with Unreal Engine 5

Calculator by drawing recognition

Multiplayer Game development

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PROFESSIONAL EXPERIENCE

- **Research & Development Intern : Conception of a complex robotic task with SAWYER Robot** APRIL 2023 - JULY 2023
University of Ostfalia, Wolfenbüttel, Germany
 - Was in charge of the development of a bartender application using **Node-Red, Docker, Flask, ROS** and **Tensorflow**.
 - Implemented **Computer Vision**, Interaction with others robots (waiters) and Interaction with Human.
 - Designed a set of functions to create an environment for bachelor students to carry out practical work.
- **Research & Development : 3D modelling and simulating of a tracked agricultural robot** SEPTEMBER 2022 - APRIL 2023
Agreenculture, Toulouse, France
 - Responsible for creating and modelling a 3D physical model of the robot with **Unreal Engine 5.1** and **Blender**.
 - Created a 3D-simulation environment for testing news algorithms without having to be in the field.
 - Participated in the creation of an interface enabling Agreenculture to test their own control and artificial intelligence algorithms on the robot.
- **Association job : President of students' association** MARS 2022 - MARS 2023
UPSSITECH, Toulouse, France
 - Was in charge of 27 volunteers as well as the image of the student life at UPSSITECH (400+ students).
 - Responsible of meetings organisation, budget management, oral presentation, global management.

PROFESSIONAL SKILLS

Programmation in Python, C, C++, Java and Matlab

Git, Tensorflow, Socket.io, Flask, Gym

Unreal Engine

Machine / Deep / Reinforcement Learning

Robot control and motion planning

Image / Signal processing and detection

LANGUAGE

French (Native)

English Intermediate - B2 TOEIC

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