ALEXANDRE CLIN DEFFARGES

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Skills

- Python, Github, PyTorch, C ++, React
- Deep Learning, Reinforcement Learning, Computer Vision
- Robotic
- Technical knowledge about manufacturing process
- Communication within a team
- Ability to organize and adapt

Studies

- *ETHZ, Zurich, Switzerland - Master's degree in Robotic, 2023-2025*
- *Tokyo* Institute of Technology, *Tokyo, Japan - Global year exchange, 2022 - 2023*
- *EPFL, Lausanne, Switzerland - Bachelor's degree in microtechnology, 2020 - 2022 Grade : 5,23*
- Sainte-Croix, *Neuilly, France, Scientific Baccalaureate, 2020 With highest honors*

PROFILE

I am a student with a passion for innovation, AI and robotics. I benefit from experience acquired during various internships and trainings. I have a taste for challenge and like to get out of my comfort zone to learn new skills.

EXPERIENCES

Learning Recovery Maneuvers for Robotic Parkour

Zurich , Switzerland, 15/02/2024 - 15/06/2024

As a semester project, I had to train a policy, using Reinforcement Learning in order to teach the robot ANYmal (https://www.anybotics.com/robotics/anymal/) to know how to fall and reduce it's damage.

Robotic Hand project

Zurich, Switzerland, 09/2023 - 01/2024

For a project at ETHZ, I develop with my team of 5 people an articulated robotic hand from scratch. Our goal is to create a functional robotic hand capable of grasping and manipulating objects within a budget of 250CHF. For this project, I apply my skills in robot design and simulation, robot fabrication, reinforcement learning, control and rigorous testing.

Internship at the Space Domain, Swiss Army

Lausanne, Switzerland, 05/2023 - 08/2023

Throughout my internship under the guidance of Gabriel Laupre, I worked as a consultant for the company Solenix, focusing on projects within the Space Domain for the Swiss Army. My main role involved calculating satellite deltaV and consumed fuel using historical data. I applied various techniques, including signal processing and machine learning, utilizing both Python and Java for the computations and the development. (https://space-campus.ch/) (https://www.solenix.ch/)

Global exchange at Tokyo Institute of Technology

Tokyo, Japan, 09/2022 - 05/2023

During my third year of bachelor, I had the opportunity to study at Tokyo Institute of Technology. This year of immersion allowed me to get out of my comfort zone and to acquire skills of adaptation, organization, communication and decision making.

Internship of manufacturing

ETML, École technique École des métiers, Lausanne, 07/2022 - 08/2022

During this manufacturing internship, I learned the entire process of drilling, milling, turning, brazing and sawing. These skills were learned by making many different object parts using different machines.

BISO Oscillateur Project

EPFL, Lausanne, 01/2022 - 06/2022

In the framework of a micro-engineering project with Professor Simon Henein, I designed a two-degree-of-freedom oscillator, insensitive to the direction of gravity, as well as to translational and rotational accelerations. This oscillator is intended to serve as a time base for a mechanical clock.