



# MAXIMILIANO ROJAS LEMA

Electronioc Enigeening / Master of Engineering Sciences

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Know me more and explore my projets here: www.magical-engineering.com

## SKILLS

R&D in Robotics

R&D in Machine Learning

Python

SQL

3D CAD Design (Fusion 360)

Robot Prototyping

PCB Design

Robot Simulation (Isaac Sim)

Deep Learning

Machine Learning

Teamwork

## LANGUAGES

Spanish: Native

English: intermediate / Fluent

## HOBBIES

Reading: Science fiction and biographies.

Sport: BodyCombat

Music: Learning piano

## EXPERIENCE

### Assistant Robotics Developer | PUCV

Dec 2022 – Jan 2023

Chile

- Designed a humanoid robot for interaction with children with autism spectrum disorder (PUCV university research project).

### Assistant Electronic Developer | Valparaíso Makerspace

Sep 2020 – Dec 2020

Chile

- Designed didactic experiences for introducing electronics.
- Technical assistant for Fondecyt (I+D) project: "New challenges for education in Chile: Support for the independent life of adults with intellectual or developmental disabilities" (1190789).

## EDUCATION

### Scientific Journal Article Published Q2 WoS | PUCV

2022

International

- Special Issue "Automation Control and Robotics in Human-Machine Cooperation".
- "Easy-to-Use Deep Reinforcement Learning Library for AI-Based Mobile Robots for Isaac Sim" Applied Sciences 12, no. 17: 8429.
- <https://www.mdpi.com/2076-3417/12/17/8429>

### Master's Degree in Engineering Sciences, Electrical Engineering Mention | PUCV

2020 – 2022

Chile

- Thesis: "Easy-to-Use Deep Reinforcement Learning Library for AI-Based Mobile Robots".
- Grade: 7.0 (scale 1 to 7).
- Recognition: Summa Cumme Laude.

### Degree in Electronic Civil Engineering | PUCV

2015 – 2021

Chile

- Thesis: "Creation of a Service Robot Platform for Deep Learning and Robotics Applications".
- Grade: 7.0 (scale 1 to 7).
- <https://hackaday.io/project/181886-2021-aina-humanoid-plataform-ros-robot>.

## Assistant Student | Laboratory of Instrumentation and Electronic Systems (LABSEI) PUCV

📅 2018 - 2020

📍 Chile

- **Control prototype for robotic surgery simulation.**
  - <https://hackaday.io/project/172262-2019-robotic-surgery-tool-and-simulation>
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## Assistant Student | PUCV AI and Robotics Laboratory

📅 2015 - 2017

📍 Chile

- **Bluetooth control for ROS.**
- <https://hackaday.io/project/171786-2020-ros-bluetooth-controller-prototype>
- **SMD circuit charger for 3.3V batteries.**
- <https://hackaday.io/project/171723-2020-make-every-3v3-device-rechargeable>
- **Robotic hand controlled by cameras.**
- <https://hackaday.io/project/172118-2016-robotic-hand-leap-motion>