

# JOSÉ BONANÇA PEDREIRA

Master's Degree Student

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## EDUCATION

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### Universidade Autónoma de Lisboa | BS, Computer Science and Engineering

2018 - 2021

- Studied subjects such as Object-oriented programming, Robotics, Web Development, Artificial Intelligence and Database Applications.
- The most notable project was the final bachelor's degree project (essentially a smaller thesis) where I developed a user-centric mobile application for managing/creating shopping lists. I got a score of 17/20 the highest score of that year.

### NOVA School of Science and Technology | MSc, Computer Science and Engineering

2021 - Present

- In the degree I completed courses like Web Search and Data Mining, Visualisation and Data Analytics, Games and Simulation, Machine Learning and Deep Learning.

## PROFESSIONAL EXPERIENCE

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### Software Developer Internship | Linde

Dez 2022 - Dez 2023

- Worked as a full-stack developer in the Artificial Intelligence department. Linde AI.
- Help in development of the front end for multiple websites and developed the backend for a conversational agent.

## PROJECTS

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### HYBpy | Python, React.js, FireBase, Flask

Apr 2023 - Present

*Master thesis*

- Master's thesis developing HYBpy, an open-source, user-friendly framework for hybrid models. Awarded a final score of 17/20.
- Combines ML algorithms with mechanistic models.
- Features a web-based interface built with React.js, a Flask backend and Firebase database.
- Supports predictive modeling, process monitoring, and model predictive control, enhancing process systems engineering and systems biology.
- Delivered a lecture on HYBpy at ECCE-ECAB 2025, showcasing its applications in hybrid modeling for process systems engineering. <https://ecce-ecab2025.eu/>
- Presented as a poster in ESBES 2024 Symposium. <https://www.esbes2024.org/>
- The website of the tool is [www.hybpy.com](http://www.hybpy.com)

### Wha-Wha | JavaScript, React-Native, FireBase

*Bachelor's Degree Final Project*

Mar 2021 - May 2021

- Created a phone app that allows the user to create lists, modify/add items to a shopping list by using their voice. Used Google Firebase to implement the back-end of the user logins and data.

### Zeus Platforming Game | Unity, C#, Blender

Mar 2022

*Games and Simulation Project*

- The main mechanic is that the user wasn't able to move while he is off the ground, and the character could only jump by throwing a "thunder" at the ground near his feet that emitted an explosion, tossing the player in the opposite direction.

## ACHIEVEMENTS & CERTIFICATIONS

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- Machine Learning Specialization.
- The Complete React Native + Hooks Course.
- SQL for Data Science.
- Introduction to Data Science in Python
- Become a Python Master
- Game Theory