José Bonança Pedreira

Master's Degree Student
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Education

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

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

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.
- Presented as a poster in ESBES 2024 Symposium. `https://www.esbes2024.org/`
- The website of the tool is `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.

Cell Cycle | Python Dez 2021

Machine Learning Final Project

- Examine a set of bacterial cell images using machine learning techniques, including feature extraction, features selection and clustering, in order to help the biologists organize similar images.
- Used three different methods: Principal Component Analysis (PCA); t-Distributed Stochastic Neighbor Embedding (t-SNE); Isometric mapping with Isomap

Achievements & Certifications

- 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