BÁRBARA SANTOS

Artificial Intelligence and Data Science Student

CONTACTS

Porto, Portugal

pro@barbarasan.com

barbarasan.com

@barbarasan

@barbara-san

ABOUT ME

Curious and adaptable, I am especially interested in whatever brings my problem solving skills to the table. In the world of AI, my heart lies with reinforcement and deep learning, but outside of academics, I enjoy the mental workout that games like sudoku provide. I am on a constant journey of self-improvement, motivated by the desire to make a meaningful impact.

SKILLS

Programming and Web Dev

- **Python**, **Java**, C++
- **Data Structures**
- Object-Oriented Programming
- HTML, CSS

AI technologies

- **Convolutional and Recurrent Neural Networks**
- Reinforcement Learning
- **TensorFlow**, Scikit-Learn

Languages

- **English** (fluent)
- Portuguese (Native)

EXTRACURRICULAR

MONITORING COMITEE STUDENT MEMBER Sep 2021 - Present

"IMPULSO JOVENS STEAM" MERIT SCHOLARSHIP 2024

Relative to academic performance during 2nd year of university.

EXPERIENCE

UNIVERSITY OF PORTO Sep 2023 - Dec 2023

MONITOR | ASSISTANT PROFESSOR

During the first semester of the 2023-24 academic year, I had the honor of being invited to work as a monitor for the Data Structures course. In this role, I actively engaged with the students, providing support by revising code in Java and clarifying doubts related to the course material. This experience not only enhanced my understanding of Data Structures but also honed my communication skills.

EDUCATION

UNIVERSITY OF PORTO Sep 2021 - July 2024

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE BSC.

AlphaZero Algorithm Implementation for Small Board Games

Collaborated on refining and implementing a tweaked AlphaZero algorithm for compact game boards in Go and Attaxx, optimizing performance for small-scale environments.

Neural Networks for Audio Classification

Executed an individual project on audio classification using a CNN and a RNN. Applied transfer learning for the RNN input and experimented with CNN architectures.

Pacman Reinforcement Learning with Gymnasium

Collaborated on implementing a Pacman agent using Gymnasium, applying reinforcement learning techniques to optimize behavior with various rewards and penalties.

Data and Model Performance Analysis

Participated in multiple machine learning projects, focusing on data analysis, pre-processing, and implementing learning models like Decision Trees and AdaBoost.

Simple Tree-Search and Adversarial-Search AI Agents

Contributed to the implementation of various AI algorithms, including A*-search, Minimax with Alpha-Beta cuts, and MCTS, for puzzle-solving and adversarial games.