

# José Neves

## Profile

A curious person who loves to fall in love with a project and the feeling that there's always something more to learn, to improve, to grow to. In the last two years, I've been applying that philosophy of life to the study of applied mathematics in machine learning, deep learning, and reinforcement learning while hoping one day to leave my mark in the area.

## Employment History

### **Particle Physics Internship at Laboratório de Instrumentação e Física Experimental de Partículas, Lisbon (July 2018)**

I studied the violation of lepton universality in  $t\bar{t}$  events using pp collision data with a Ph.D. student. The internship was initially a summer internship that was prolonged because the project was awesome, and I didn't want to leave.

### **Junior AI and Computer Vision Engineer, Quantum Leap, Lisbon (January 2022 - July 2022)**

I was in front of an intelligent surveillance system project called FaceGuard that aimed to provide security without endangering the right to privacy of the people that the system was designed to protect. While on this job, I worked with and accelerated tracking models (PMBM and Centroid Tracking), I used YOLOv5 for Object Detection, worked with Variational Autoencoders and encryption algorithms like AES and Rubyk's, and deployed models on a single board computer with connected IP cams and an AI-Inference module.

### **Researcher, INESC-ID, Lisbon (May 2023 - September 2023)**

Developed research in the field of automated radiology, exploring the potential benefits of integrating expert eye-tracking data with deep learning models to improve X-ray analysis, diagnostic processes and prediction explainability.

## Education

**Bachelor's Degree, Physics, Faculdade de Ciências da Universidade de Lisboa** (September 2016 - July 2020)

**Master's Degree, Applied Mathematics, Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa** (September 2020 - May 2023)

**Phd, Computer Science, Instituto Superior Técnico** (September 2023 - Today)

## ★ Projects

### **Building a Reinforcement Learning Agent for a Platform Game with a Parameterized Action Space**

Designed and trained a reinforcement learning agent for an OpenAI Platform Game Environment with a parameterized action space.

### **Automated Trading System with Reinforcement Learning**

The impact of Automated Trading Systems (ATS) on financial markets is growing every year and the trades generated by an algorithm now account for the majority of orders that arrive at stock exchanges. In this project, we explore how to find a trading strategy via Reinforcement Learning that allows finding an optimal strategy for a sequential decision problem by directly interacting with the environment.

### **Winton Stock Market Challenge**

In this project, Winton challenges you to take on the very difficult task of predicting the future (stock returns). Given historical stock performance and a host of masked features, can you predict intra and end of day returns without being deceived by all the noise?

## **Extracurricular Activities**

### **Sea Scouts** (September 2008 - September 2022)

I became a sea scout at 10 years old. The personal growth it brought to me throughout those 14 years, it's just immeasurable. In the last two years, I focused on creating and managing nautical adventures for kids between 10 and 14 years old.

## **Skills**

Pytorch, Tensorflow, Python, C++, MySQL, Keras, Scikit-Learn, R

Reinforcement Learning, Computer Vision, Time-Series Analysis

## **Links**

<https://github.com/JoseLuisNeves>

<https://www.linkedin.com/in/jos%C3%A9-neves-426353206>