

# JOÃO LOUSADA

🏠 2nd Sep 1997    @ joao.b.lousada@tecnico.ulisboa.pt    ☎ +351 935 180 425  
🌐 <https://github.com/jlousada315>    in [linkedin.com/in/joão-lousada-bb7103149](https://www.linkedin.com/in/joão-lousada-bb7103149)

📍 Lisbon, Portugal

## EXPERIENCE

### Quantitative Research Master Thesis Internship

#### BNP Paribas

📅 Sep 2019 – Nov 2020

📍 Lisbon, Portugal

- Description: Improving Continuous Integration test strategy, using real-world data
- Methodology: Implement Neural Network Embedding to prioritize test cases by their risk of failing, detecting faults earlier.
- Objectives: Reduce lag between commit and feedback of project status and improve productivity
- Impact: Save time, resources and assign responsibilities to developers when a mistake is made
- Bonus: Co-supervision and insights from professional engineers, keeping close ties between corporate and academia environment
- Two academic papers resulted from this work. One of which with completely original content.

### Intern Researcher

#### LIP

📅 June 2017 – Sep 2017

📍 Lisbon, Portugal

- Description: Modelling the 1D-flux of cosmic rays in the solar system
- Methodology: Develop a Simulation software in C++, to solve Partial Differential Equations
- Objective: (dis)Proving a theory, based on experiment, with data collected from NASA Spacecraft
- Outcome: After peer review, Scientific Paper publication in PRL (Physical Review Letters)
- Bonus: Contribute to push boundaries of science with relevant work.

## CERTIFICATES

### Deep Learning A-Z - Hands on Artificial Neural Networks

#### SuperDataScience - Online Course

📅 Apr 2020 – No Expiration Date

### R Programming A-Z - R For Data Science With Real Exercises!

#### SuperDataScience - Online Course

📅 Apr 2020 – No Expiration Date

### NLP - Natural Language Processing with Python

#### Jose Portilla

📅 May 2020 – No Expiration Date

## PROJECTS

### NNE-TCP - Neural Network Embeddings for Test Case Prioritization

<https://github.com/jlousada315/NNE-TCP>

📅 April 2020 - Ongoing

## EDUCATION

### M.Sc. in Engineering Physics

#### Instituto Superior Técnico, Universidade de Lisboa

📅 Sept 2015 – Oct 2020

Thesis title: Test Case Prioritization Optimization with Machine Learning: a Case Study at BNP Paribas.

Mark: 20/20

## SOFTSKILLS

Adaptability

Autonomy

Work-Life Balance

Self-Motivated

## PUBLICATIONS

### Testing Diffusion of Cosmic Rays in the Heliosphere with Proton and Helium Data from AMS

#### Physical Review Letters

📅 <https://doi.org/10.1103/PhysRevLett.121.251104>

### Neural Network Embeddings for Test Case Prioritization

#### arXiv

📅 <https://arxiv.org/abs/2012.11364>

### Reinforcement Learning for Test Case Prioritization

#### arXiv

📅 <https://arxiv.org/abs/2012.11364>

## STRENGTHS

#### • Hard-Skills

Critical Thinking

Document Writing

Data Analysis

Scientific Reasoning

#### • Scientific Fields of Interest

Machine Learning

Data Science

Artificial Intelligence

Deep Learning

Physics

#### • Development

Python

LaTeX

Keras

C++

Java

R

Scikit-Learn

Mathematica

Git

CI