JOÃO LOUSADA

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EXPERIENCE

Quantitative Research Master Thesis Internship

BNP Paribas

June 2019 – Oct 2020 Lisbon, Portugal

- Description: Improving Continuous Integration test strategy, using real-world data and Machine Learning
- 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 original content.

Research Intern

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

PORTFOLIO

Public evidence of my Data Science skills

jlousada315.github.io

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

- Development

Python | LaTeX | Keras | C++ | Java | R | Scikit-Learn | Mathematica | Git | CI

- Hard-Skills

Critical Thinking | Document Writing | Data Analysis | Scientific Reasoning

- Scientific Fields of Interest

Machine Learning | Data Science | Artificial Intelligence | Deep Learning | Physics