# Joaquim Leitão

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| Scopus Profile



My main goal is to work on data science and machine learning applications to solve business problems.

## **Experience**

NOS Porto, Portugal

TECH LEAD DATA SCIENTIST

Jan 2024–Present

- Responsible for the technical part of an offer generation projet (propose new packages/additives/etc for individual customers)
- · Monitor, plan and implement developments in the project from a technical side
- Advocate for good software development practices and code consistency across different developers

DATA SCIENTIST Sept 2023–Jan 2024

- Ensuring periodic deliveries with updated predictions/inference from a trained model
- Exploratory data analysis and planning aiming to propose pilot project

Nokia Amadora, Portugal

LEAD DATA SCIENTIST

March 2023–Sept 2023

- Lead Data Scientist for one key area in the team
- · Predictive modelling, image processing and classification, task scheduling, natural language processing (NLP)
- · Collaboration with researchers from Nokia Bell Labs, receiving solution handover and prototype industrialization

DATA SCIENTIST Nov 2021 – March 2023

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#### Fundação para a Ciência e Tecnologia

SCIENTIFIC RESEARCH GRANT

Uncertainty-aware resource allocation (stochastic programming, mixed-integer linear programming)

- Historical dataset collection (SQL, Python, data cleaning, inspection and normalisation)
- Probabilistic model development, tuning and evaluation (Gaussian processes, Quantile regression, Cross-Validation)
- Merit award: Engineer Lecturers Award, Ordem dos Engenheiros Região Centro (2019)

#### **Department of Informatics Engineering, University of Coimbra**

INVITED ASSISTANT PROFESSOR

• Data Analysis and Transformations (linear and non-linear systems, time-frequency analysis and time series analysis)

• Introduction to Programming using Java

#### **Department of Civil Engineering, University of Coimbra**

SCIENTIFIC RESEARCH GRANT

Automate data collection, processing and visualization (Django, PostgreSQL, JavaScript, Data Normalisation, PCA)

• Pattern discovery and evaluation (Hierarchical and K-means clustering, dynamic time warping)

#### **Department of Informatics Engineering, University of Coimbra**

SCIENTIFIC RESEARCH GRANT

- Development and validation of rule-based control systems
- Best Paper Award: 4<sup>th</sup> Experiment@ International Conference (2017)

#### SCIENTIFIC RESEARCH GRANT

• Offline and online time-series outlier detection and accommodation (MATLAB, Python)

- Remote laboratory for introduction to programming and control systems courses (Java, Apache Struts 2)
- PyDAQmx-Interface, remote control of three-tank system (Python 2.7, National Instruments 6008, 6009 boards)

Coimbra, Portugal

Jun 2017-Jul 202.

Coimbra, Portugal

Nov 2014–Mar 2015 Feb 2017–Aug 2019

reb 2017-Aug 2019

Coimbra, Portugal

Feb 2017-May 2017

Coimbra, Portugal

Sept 2015–Feb 2016

Aug 2014-Aug 2015

## **Education**

#### **University of Coimbra - Faculty of Sciences and Technology**

Ph.D. IN INFORMATION SCIENCE AND TECHNOLOGY

Coimbra, Portugal Sep 2016-Jun 2021

Coimbra, Portugal

Sep 2014-Jun 2016

Coimbra, Portugal

Sep 2011-Jun 2014

• Thesis: "Adaptive Supervisory Framework for Cyber-Physical Systems"

· Final Classification: Summa Cum Laude (Highest Praise)

#### **University of Coimbra - Faculty of Sciences and Technology**

M.Sc. in Informatics Engineering

· Final Classification: 17/20

- Thesis: "Flood Management in Urban Drainage"
- Relevant Coursework:
  - Artificial Intelligence, Machine Learning, Pattern Recognition
  - Evolutionary Computation, Systems Modelling and Analysis, Experimental Methodologies

#### **University of Coimbra - Faculty of Sciences and Technology**

**B.Sc. IN INFORMATICS ENGINEERING** 

• Final Classification: 17/20

- Merit award: Top 3% students (2012 and 2013)
- Relevant Coursework:
  - Algebra, Mathematical Analysis, Statistics
  - Programming, Databases, Distributed Systems

# **Complementary Education**

#### Coursera (Online Course)

NATURAL LANGUAGE PROCESSING WITH PROBABILISTIC MODELS

April 2023

#### Coursera (Online Course)

NATURAL LANGUAGE PROCESSING WITH CLASSIFICATION AND VECTOR SPACES

February 2023

#### **Udemy (Online Course)**

FEATURE SELECTION FOR MACHINE LEARNING

Jun 2020

#### **Udemy (Online Course)**

FEATURE ENGINEERING FOR MACHINE LEARNING

Mar 2020

## **Skills**

#### MACHINE LEARNING

- · Regression, Classification, Supervised Learning, Unsupervised Learning, Optimisation, Time series, Mathematical Analysis
- Feature Engineering, Feature Selection, Data Cleansing, Normalisation and Visualization, Hypothesis Testing, Cross-Validation
- SVMs, ANNs, Deep Learning, Gaussian Processes, Random Forests, Capsule Networks, Hierarchical and K-Means Clustering, PCA, LDA

#### **PROGRAMMING**

- · Python (Numpy, Scipy, Pandas, Scikit-Learn, TensorFlow, Matplotlib, Seaborn, Statsmodels, Jupyter)
- R, Scala, MATLAB, SQL, Bash, C/C++
- Java, JavaScript, Git, S3, DVC, HTML, CSS

## **Languages**\_

#### LANGUAGES

- Native Language: Portuguese
- Foreign Language: English
  - Certificate in Advanced English (C1)
  - First Certificate in English (B2)

# **Event Organisation**

2020	Organisation member, EDUCON 2020 – IEEE Global Engineering Education Conference	Porto, Portugal
2019	Organisation member, 5 <sup>th</sup> Experiment@ International Conference	Madeira, Portugal
2018	<b>Organisation member</b> , 13 <sup>th</sup> APCA International Conference on Automation Control and Soft Computing	Azores, Portugal
2017	Organisation member, 4 <sup>th</sup> Experiment@ International Conference	Madeira, Portugal
2013	Organisation member, 2 <sup>nd</sup> Experiment@ International Conference	Madeira, Portugal

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- 2020 IEEE Access,
- 2019 American Journal of Water Science and Engineering,
- 2017 **22<sup>nd</sup> IberoAmerican Congress on Pattern Recognition**,
- $2017 \qquad \textbf{18}^{\textbf{th}} \ \textbf{International Conference on Engineering Applications of Neural Networks},$