

# Joana Sofia Baião Vieira

☎ +351 919 818 111 | ✉ joanabaiao99@gmail.com | 🌐 joanabaiao.github.io | 🐙 joanabaiao | 🌐 joanasbvieira

## EXPERIENCE

### Bosch

Remote

#### Data Scientist

Feb. 2023 - Present

- Developed machine learning models to predict employee turnover across five Bosch locations. Implemented the models in Python using scikit-learn and Keras for algorithm development, and SHAP to provide interpretable insights into predictions.
- Applied time series forecasting for key HR metrics (headcount, average age and exit ratio) using SARIMA and TES models. Incorporated these time series models into interactive Python visualisations using Power BI.
- Automated data processing steps for the HR Data Science and Data Analytics teams.
- Currently working on route optimisation to improve transport services for company employees. Using Google OR-Tools for efficient route planning and Folium to create interactive visualisations.

### CISUC

Coimbra, Portugal

#### Research Fellow

Nov. 2020 - Oct. 2022

- Developed a Machine Learning algorithm that can predict the course of multiple sclerosis in a specific time window, considering results from a single visit and sequences of consecutive visits (time series). The pipeline was implemented in Python using the Scikit Learn and Keras libraries.
- Exploration of explainability methods to analyse the overall behaviour of the developed Machine Learning models and specific predictions for particular patients.

### jeKnowledge (Junior Enterprise)

Coimbra, Portugal

#### CEO

May 2021 - May 2022

- Led a Junior Enterprise with 55 students, developing and supervising 68 [projects](#) (development, data science and design).
- Increased internal and external growth and the quality of the work developed, with a 224.76% surge in business volume, a 70.83% increase in projects, and a 6.83% rise in client feedback.

#### Innovation Consultant

Apr 2019 - May 2021

- Project Manager of [jeK Magazine](#) 1st-4th editions and Porto Blockchain Conference 1st edition.
- Logistics team of the data science hackathon [Data, Set, Go!](#).
- Coordinated tech-related events: bluesessions, AI Sunsets, [Shift APPens](#), [works](#), [jeKnowledge Academy](#), and Coimbra.blockchain.

### CFisUC

Coimbra, Portugal

#### Research Fellow

July. 2020 - Oct. 2020

- Designed an algorithm using Python that automatically calculates the number of vessels, their diameter and the number of bifurcations from 3D views of a vascular network.

## EDUCATION

### University of Coimbra

Coimbra, Portugal

#### Integrated Master's in Biomedical Engineering

Sep. 2017 - Oct. 2022

- Bachelor's degree in Biomedical Engineering
- Master's degree in Clinical Informatics and Bioinformatics.
- Relevant coursework: Medical informatics, Machine Learning, Statistics and Databases

## PROFESSIONAL CERTIFICATES

### Coursera

- |                                                                                          |           |
|------------------------------------------------------------------------------------------|-----------|
| • Natural Language Processing with Probabilistic Models                                  | Nov. 2023 |
| • Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization | Oct. 2023 |
| • Natural Language Processing with Classification and Vector Spaces                      | Sep. 2023 |
| • Neural Networks and Deep Learning                                                      | Sep. 2023 |

## SKILLS AND TECHNOLOGIES

Languages and Technologies	Python (e.g. Pandas, NumPy, Scikit Learn, Matplotlib, Seaborn, Keras), Matlab, SQL, Power BI, Java, HTML/CSS
Languages	Portuguese, English