Joana Sofia Baião Vieira

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PROFESSIONAL EXPERIENCE

Bosch   Remote
Data Scientist   *Feb. 2023 - Present*
- Developed prediction models to forecast employee turnover across Bosch locations in Portugal. Implemented the models in Python using scikit-learn and Keras for algorithm development.
- Applied time series forecasting techniques to analyse crucial HR metrics such as headcount, average age, and exit ratio across all Bosch locations globally. Integrated these dynamic models into interactive Python visualisations in Power BI, providing actionable insights for informed and strategic decision-making.
- Automated multiple data processing and anonymization steps for HR Data Analytics teams using Python, achieving a substantial 16-hour reduction in manual workload per month.
- Performed data mining on data from job boards, identifying key skills for targeted positions and analysing skill similarities across diverse roles, using Natural Language Processing (NLP) techniques and neural networks.
- Currently working on a route optimisation project that aims to ensure efficient transportation to the Stuttgart offices by creating shuttle bus routes for more than 30k employees.

CISUC   Coimbra, Portugal
Data Scientist (Research Fellow)   *Nov. 2020 - Oct. 2022*
- Developed a Machine Learning algorithm that predicts the course of Multiple Sclerosis in a specific time window using real-world clinical data. The pipeline was implemented in Python using the Scikit Learn and Keras libraries.
- This study achieved a remarkable +100% increase in F1-score compared to the base study, demonstrating a significant advancement in disease course prediction.
- Explored explainability methods (SHAP, LIME and PDPs) to analyse and clarify the underlying behaviour of the developed ML models, providing valuable insights for improved interpretation by clinicians and researchers.

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.
- Coordinated tech-related events: bluesessions, AI Sunsets, Shift APPens, .works, jeKnowledge Academy, and Coimbra.blockchain.

CFisUC   Coimbra, Portugal
Algorithm Developer (Research Fellow)   *July. 2020 - Oct. 2020*
- Developed a Python algorithm designed to reconstruct 3D medical images from 2D projections of vascular networks. This algorithm autonomously computes crucial metrics from the generated 3D views, including the number of vessels, their diameter, and the number of bifurcations.

SKILLS AND TECHNOLOGIES

Technologies	Python (Pandas, NumPy, SciPy, Scikit-learn, TensorFlow, PyTorch, Keras, Matplotlib), R, SQL, Matlab, Java, HTML/CSS, PowerBI, Excel, Git, Docker
Languages	Portuguese (Native), English (Fluent), German (Basic - Currently learning A1)

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

Specialisation Course in Computational Biology   *July 2020 - Oct. 2020*
- The course covered the application of computational methods (computational structural biology, simulation, and modelling) in the investigation of biological systems.

Online certifications:
- AI for Medicine Specialisation: Medical Diagnosis, Prognosis, and Treatment   *Dec. 2023*
- Natural Language Processing Specialisation   *Mar. 2024*