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LANGUAGES

- Portuguese
- English

SKILLS

- Machine Learning, Computer Vision, Natural Language Processing (NLP)

  Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Agents

  Data Analysis, Feature Engineering, Statistical Analysis
- NumPy, Pandas, Matplotlib, Streamlit, Scikit-learn
- TensorFlow, PyTorch
- Python, SQL
- Basic experience with C#/C++

SOFT SKILLS

- Strong collaboration and teamwork
- Detail-oriented and analytical
- Critical thinking

Miguel Fernandes

Dynamic Machine Learning Engineer with a robust background in Biomedical and Data Science. Proven expertise in developing innovative solutions in computer vision and medical device technology. Adept at leveraging interdisciplinary skills to solve complex challenges and deliver tangible results.

EXPERIENCE

Machine Learning Engineer
Jun, 2023 – Aug, 2024

JTA, The Data Scientists – Porto, Portugal

- Specialized in developing unsupervised learning techniques for curvilinear structure segmentation in image processing.
- Optimized machine learning models for improved performance and efficiency while enhancing in-house tools to increase scalability across various applications.

AI Rater and Evaluator
Sept, 2021 – Feb, 2023

RWS Group – Remote part-time

- Conducted detailed evaluations of user queries, voice notes, and web content to improve machine learning algorithms for Google-related products.
- Analyzed and provided feedback on various ML tasks, including content classification, data annotation, and transcription, contributing to the refinement of AI systems.
- Worked with text and multimedia data, ensuring accurate processing and categorization to enhance user experience and model performance.

Research Fellow in Medical Devices
Sept, 2021 – May, 2022

Orthos XXI, Wiseware, Coimbra Health School and Coimbra Institute of Engineering – Coimbra, Portugal

- Developed and patented a rehabilitation **device** with ERDF funding, incorporating an EZS motor and ESP32 microcontroller with an embedded webserver to control it.
- Created a Android application for physiotherapy session management and designed a patient monitoring system to improve treatment effectiveness.

EDUCATION

MSc in Computer Science & Engineering

Coimbra Institute of Coimbra – Coimbra, Portugal

- Master of Science (MSc) degree in Computer Science & Engineering with a specialization in Intelligent Data Analysis.

BSc in Biomedical and Bioelectronics Engineering

Coimbra Institute of Coimbra – Coimbra, Portugal

- Bachelor of Science (BSc) in Biomedical and Bioelectronics Engineering.

PROJECTS

- **Employ-AI-bility:** a Streamlit-based chatbot that uses LangChain, HuggingFace embeddings, and a LLM to answer questions about a CV, featuring document retrieval and conversational memory, which job recruiters can talk to.
- **Breaking-bad-nlp:** a Streamlit web app that uses natural language processing and machine learning to classify themes in the BB tv show (or any tv series), visualizing results with Matplotlib and Seaborn.
- **Parkinson's Gait Analysis Tool:** Developed a C# desktop application with an integrated database for Parkinson's patient gait analysis. Created a webserver on an ESP32 microcontroller, handling real-time data transmission to the desktop application for comprehensive analysis and patient tracking across multiple sessions.