

DUARTE MOURA

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 duarte-moura/

 duartemoura

 Madrid, Spain

EXPERIENCE

Machine Learning Research Grant



INESC-TEC

 Dec 2024  Porto, PT (Remote)

- Contributing to the AI for Lungs project, developing computer vision and deep learning models for lung cancer detection
- Participating in interdisciplinary research combining medical imaging analysis with advanced ML techniques

Associate Solutions Architect

Amazon Web Services


 Sept 2022 – Dec 2024  Madrid, ES

- Led AI/ML cloud solutions consultancy for EMEA public sector using services like Amazon SageMaker and Bedrock.
- Architected high-performance ML infrastructure, optimizing training and deployment costs for research centers across Europe.
- Developed healthcare ML proofs of concept, like a doctor-to-patient conversation transcription pipeline and an LLM Medical Recommendation System.
- Core member of AWS AI/ML technical field community, driving cloud-based innovation across sectors.

EDUCATION

M.Sc. in Machine Learning for Health


Universidad Carlos III de Madrid

 Sept 2024 – June 2025 (Expected)

- Key Courses:** Deep Learning, Machine Learning, Computer Vision, Biosignals and Bioimages, Neuroimaging, Natural Language Processing, Statistical Signal Processing
- Program Focus:**
 - Research-focused program emphasizing Machine Learning applications in healthcare

B.Sc. in Electronics Engineering

Instituto Superior Técnico de Lisboa

 Sept 2019 – June 2022

- Key Courses:** Control Systems, PCB Design, Calculus I, II, and III, Linear Algebra, Probability and Statistics, Physics
- Projects:**
 - Virtual greenhouse simulation involving threads, concurrent programming, and socket communication using C
 - Control systems design and analysis using MATLAB
- Highlights:**
 - Strong foundation in electronics and control systems
 - Hands-on experience in PCB design and virtual simulation
 - Applied advanced mathematics in real-world problem-solving contexts

PROJECTS

LLM Medical Recommendation System

- Developed an AI medical assistant using Claude 3 LLM on serverless infrastructure for enhanced patient care efficiency
- Published a **blog post** on healthcare AI integration and deployed solution on **GitHub**

AI-driven Traffic Management for Safer Cities

- Implemented Deep Reinforcement Learning model with SUMO for optimized traffic signal operations
- Created **workshop** presenting at **AWS Re:Invent 2024**

Generathor - LLM Question-Answer Pair Generator

- Developing** pipeline using LLMs to generate question-answer pairs for domain-specific fine-tuning of smaller models

SKILLS

Python	C	SQL	MATLAB	PyTorch
Numpy	scikit-learn	Pandas	AWS	
OpenCV	Terraform	CloudFormation		

CERTIFICATIONS

AWS Certifications:

Cloud Practitioner
AI Practitioner
Solutions Architect Associate
SysOps Administrator
Solutions Architect Professional
Machine Learning Engineer
Machine Learning Specialty
Security Specialty

Other Certifications:

Biology Meets Programming
IELTS (8.5/9)

LANGUAGES

Portuguese	Native
English	Fluent
Spanish	Fluent