David Mesquita Scarin

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ABOUT MYSELF

Second year student in the MSc. in Artifical Intelligence at FEUP/FCUP (University of Porto). I am currently developing my master's thesis and am mainly interested in research and development opportunities regarding deep learning and deep reinforcement learning. I have strong interpersonal and communication skills and enjoy working in a team. On a personal level, I am passionate about philosophy, science and art.

EDUCATION & TRAINING

01/09/2021 - 31/07/2024 - PORTO, PORTUGAL

BSC. IN ARTIFICIAL INTELLIGENCE AND DATA SCIENCE- FACULTY OF SCIENCES OF THE UNIVERSITY OF PORTO

Field(s) of study: Computer Science | **Type of credits:** ECTS | **Number of credits:** 180 | **Website:** https://sigarra.up.pt/fcup/en/WEB_PAGE.INICIAL

16/09/2024 - Current - PORTO, PORTUGAL

MSC. IN ARTIFICIAL INTELLIGENCE- FACULTY OF ENGINEERING OF THE UNIVERSITY OF PORTO

The combination of the BSc. in Artificial Intelligence and Data Science along with the MSc. degree in Artificial Intelligence delivers a solid foundation in the theoretical fundamentals of mathematics, statistics and computing as well as a specialization in the state-of-the-art methods and skills of the modern AI field. In these courses I mainly covered the fundamentals of:

- ***Deep Learning*** | computer vision, generative models, natural language processing, multimodal learning, graph neural networks
- ***Reinforcement Learning*** | autonomous agents, multi-agent systems, robotics
- ***Modelling and Simulation*** | data-driven modeling and decision making

- classical learning systems / predictive data analysis
- data visualization, management and communication
- optimization theory
- parallel computing

In terms of technical skills, I am familiar with these frameworks and libraries:

- ***Deep Learning*** | PyTorch, Tensorflow, Keras
- ***Machine Learning/Data Science*** | scikit-learn, numpy, pandas
- ***Engineering/DevOps*** | Docker, Git, Jupyter

Currently, I am starting my thesis titled "Beyond MLPs: Evaluating Kolmogorov-Arnold Networks for modeling physical data", which encompasses my particular interest in physics-based deep learning and leveraging machine learning for scientific problems based on experimental data. I am also interested, in particular, in the fields of computer vision and geometric deep learning.

Field(s) of study: Computer Science, Natural sciences, mathematics and statistics | **Thesis:** Beyond MLPs: Evaluating Kolmogorov-Arnold Networks for modeling physical data | **Website:** https://sigarra.up.pt/feup/en/CUR_GERAL.CUR_VIEW?pv_curso_id=30901&pv_ano_lectivo=2024

HONOURS AND AWARDS

08/02/2025 Pascal

1st Place in PQHack2025

PQHack2025 was a hackathon that took place in the Faculty of Sciences at the University of Porto. Teams of students from various backgrounds competed to solve problems related to quantum circuits and machine learning. Our team "SZS" was awarded first place in this competition.

Team members: David Scarin, Carlos Felgueiras, Lucas Almeida

Links https://pqhack.org/

CONFERENCES & SEMINARS

09/11/2024 Porto

Sword AI Summit

Attended the Sword AI Summit, where Sword Health hosted a series of seminars on the latest developments in Artificial Intelligence and the surrounding industry.

Links https://aisummit.swordhealth.com/

14/04/2025 Faculty of Sciences of the University of Porto

QuantumDay@PT

Attended QuantumDay, a series of seminars and talks dedicated to quantum technology and science in celebration of the International Year of Quantum Science and Technology.

Links https://www.up.pt/eventos/event/quantum-dayvarri-l-l

WORK EXPERIENCE

03/2024 - 06/2024 - PORTO, PORTUGAL

CURRICULAR INTERNSHIP 3DECIDE

My main responsabilities consisted of the development of a project which aimed at developing a specialized conversational chatbot, leveraging the OpenAI API and GPT technology to deliver intelligent, context-aware user interactions.

This internship opportunity was part of the "Projeto/Estágio" Curricular Unit.

COMPETITIONS

05/04/2025

NEEEL IT 2025

Participated in a Hackathon hosted by the NEEEC (Nucleus of Eletrical Engineering students of the Faculty of Engineering of the University of Porto). The goal of each team was to build and code their own two-wheeled robot to perform a line-following challenge.

Links https://neeecfeup.pt/neeeilit