Manel Soler Sanz

Location: Valencia, Spain

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Physicist | Data Scientist

With a background in Physics and a Master's in Data Science, I am at the crossroads of data science and artificial intelligence. My journey has taken me from projects in an AI consultancy to research and development in AI. My passion for continuous learning is evident in my CV, reflecting the diverse skills I have mastered through self-directed study. Check out my personal projects to verify it .

Technical Skills

Languages	:	Python, R, Mathlab, C++
Frameworks	:	Linux, Windows, AWS, Jenkins, Airflow, Azure
Libraries	:	Keras, Pytorch, scikit-learn, pandas, pyspark, Langchain
Databases	:	MongoDB, SQL, Vector DB
Dev Tools	:	Docker, Git, Pycharm, VisualStudio, Power BI

Experience

AI Researcher — Feb 2024 – Present
VRAIN - Valencian Research Institute for Artificial Intelligence — *Valencia, Spain*

- Multi-Agent Systems
- Smart Data Models
- LLM fine-tunning
- **GitHub Repository:** Link

Data Scientist — Jan 2023 – Feb 2024
Solver Intelligent Analytics — *Valencia, Spain*

- **Most tools used : AWS, Pyspark, Jenkins, Airflow, MLFow**
- **Attribution Project**: Developed and deployed a project using recurrent neural networks and attention layers for attribution purposes for Meliá Hotels International. Successfully deployed with AWS, Jenkins, and Airflow.
- **Call Center Prioritization Project**: Developed a real-time call prioritization model for a major hotel chain's (Meliá Hotels International) call center. Implemented models in production with using DynamoDB.
- **Personnel Load Planning**: Developed solutions for personnel load planning for WFS (Worldwide Flight Services).
- **Route Clustering Project**: Promoted to lead developer project for Pan Bimbo's route clustering project, optimizing delivery routes using advanced clustering algorithms.

Junior Data Scientist — Sept 2022 – Jan 2023
Solver Intelligent Analytics — *Valencia, Spain*

- **Git, Python, Linux**
- **Time Series Prediction Project**: Worked on demand prediction using regression models like SARIMAX, XGBoost, and Lasso. Deployed using Airflow and Jenkins.

Teacher — Jan 2019 – Aug 2020
GoStudent — *Remote*

- Taught mathematics and physics to 6 students aged 13-18.

Education

Universitat de Valencia — Valencia, Spain
Master of Data Science — *Sep 2021 – Feb 2023*

- Specialization in theoretical physics
- Python and R proficiency
- Master's thesis: Implementation and development of causal discovery methods for time series in the CauseMe framework. Source Code

Der Johannes Gutenberg-Universität Mainz Mainz, Germany
Bachelor of Physics - Erasmus *Sep 2019 – Jul 2020*

- Main courses: Elektrodynamik (German), Quantum Mechanics (German), Mathematik für Physik III (German)
- German level improved from A2 to B1.2

Universitat de Valencia Valencia, Spain
Bachelor of Physics *Sep 2016 – Jul 2021*

- Specialization in theoretical physics. Thesis specialized in NPL
- Degree thesis: *Symbolic artificial intelligence: first order differential equations*. Awarded for the best multidisciplinary thesis
- Article published on the IFIC's website about my final thesis

UNED Remote
Philosophy (Part-time) *Sep 2023 – Present*

- Studying Philosophy part-time at the UNED

Self-Driven Learning & Projects

QA Bot with souce Verfication Jan 2024 – Present
Personal Project *Valencia, Spain*

- Developed a Python QA-bot powered with LLMs
- Question-Answer (QA) system that extracts information from a set of articles and verifies the sources of the answers
- Using Deep Lake as DB and Langcahin
- **GitHub Repository:** link

Talktube project April 2024
Personal Project *Valencia, Spain*

- Implemented and utilized Langchain and Deeplake techniques for machine learning models.
- Developed functionality to automatically generate accurate transcripts from YouTube videos.
- Integrated Retrieval-Augmented Generation (RAG) techniques to enhance the QA process.
- Enabled QA with large language models (LLMs) for precise answers based on video transcriptions.
- **GitHub Repository:** link

Interactive PDF/eBook Reader In Progress
Personal Project *Valencia, Spain*

- Developing a PDF book reader that enables interaction with a language model (LLM) about the book content.
- Utilizes Langchain and Deeplake for robust data processing and model integration.
- Aims to provide users with an enhanced reading and learning experience by facilitating dynamic conversations about the book.
- Expected to improve understanding and engagement with textual content through interactive AI. **GitHub Repository not public yet:**

Completed Courses

- LangChain & Verctor Databases in Production
- Docker, de principiante a experto
- Amazon AWS: Curso Completo Arquitecto Soluciones Certificado
- Linux for Developers

Languages

English · Proficient
Spanish · Native
Catalan · Native
German · Beginner