Manel Soler Sanz

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AI ENGINEER DATA SCIENTIST PHYSICIST

With a strong background in Physics and a Master's in Data Science, I specialize in developing and implementing advanced AI solutions, with a focus on Multi-Agent Systems, Large Language Models (LLMs), and Retrieval-Augmented Generation (RAG) or Chatbots. For a more comprehensive overview of my work and interests, please visit my personal website: https://sosanzma.github.io/

TECHNICAL SKILLS

Languages	: Python (3+ years), R, Matlab, C++
Frameworks	: TensorFlow, PyTorch, Keras, Linux, Windows, AWS, Jenkins, Airflow, Azure
Libraries	: scikit-learn, pandas, pyspark, Langchain, Hugging Face Transformers
Databases	: MongoDB, SQL, Vector DB
Dev Tools	: Docker, Git, Pycharm, VisualStudio, Cursor
AI/ML	: Multi-Agent Systems, LLMs, RAG, Deep Learning, ML Model Deployment

EXPERIENCE

AI Engineer

VRAIN - Valencian Research Institute for Artificial Intelligence

- Developing advanced Multi-Agent Systems for AI applications
- Implementing and fine-tuning Large Language Models (LLMs) for specific tasks
- Researching and applying Retrieval-Augmented Generation (RAG) techniques
- Collaborating on cutting-edge AI research projects
- Technologies used: Llamaindex, Hugging Face Transformers, Langchain, Amelia
- GitHub Repository: Link

Data Scientist (13 months)

Solver Intelligent Analytics

- Developed and deployed Deep Learning models (RNNs, CNNs, attention layers) for various business applications
- Implemented real-time ML models using cloud services (AWS), focusing on scalable architectures
- Led a route optimization project using advanced clustering algorithms and deep reinforcement learning
- Applied state-of-the-art Deep Learning techniques to time series forecasting and resource planning
- Technologies used: TensorFlow, PyTorch, AWS, Pyspark, Jenkins, Airflow, MLFlow

Junior Data Scientist (6 months)

Solver Intelligent Analytics

- Developed time series prediction models using traditional ML and basic Deep Learning techniques
- Gained hands-on experience in ML model deployment using Airflow and Jenkins
- Assisted in prototyping ML-based solutions for various client projects

EDUCATION

Universitat de Valencia

Master of Data Science

- Advanced coursework in Deep Learning, including neural network architectures, optimization algorithms, and regularization techniques
- Master's thesis: Implementation of causal discovery methods for time series, applying deep learning techniques. <u>Source Code</u>

Feb 2024 – Present Valencia, Spain

Jan 2023 – Feb 2024 Valencia, Spain

Agosto 2022 - Jan 2023

Valencia, Spain

Valencia, Spain Sep 2021 – Feb 2023

Universitat de Valencia

Bachelor of Physics

- Specialization in theoretical physics. Thesis focused on NLP and symbolic AI
- Degree thesis: Symbolic artificial intelligence: first order differential equations
- Article published on IFIC's website about final thesis

SELF-DRIVEN LEARNING & PROJECTS

AI-Powered Personal Projects

Open Source Development

- Developed multiple AI-driven projects showcasing practical applications of NLP and LLMs
- Implemented advanced techniques including RAG, vector databases, and multi-agent systems
- Utilized key technologies: Langchain, Hugging Face Transformers, Deep Lake, OpenAI API
- Projects include:
- QA ChatBot with Source Verification: GitHub
- LearnSherpa AI (Book Discovery Assistant): GitHub

Completed Courses

- * Retrieval Augmented Generation for Production with LangChain & LlamaIndex
- * LangChain & Vector Databases in Production
- * Docker, from beginner to expert
- * Amazon AWS: Complete Course Certified Solutions Architect
- * Deep Learning Specialization Coursera (Andrew Ng)

LANGUAGES 🔯

English · Proficient Spanish · Native Catalan · Native German · Beginner 2024 – Present Valencia, Spain