Jesús de la Fuente Cedeño

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Experience

Softvision AI — March 2025 - Current
Machine Learning Quantitative Researcher — Prague (Remote)

- Building **mid-frequency** trading strategies on **crypto-asset derivatives**.

SonyAI — Sep 2024 - March 2025
Research Scientist Intern — Barcelona

- Integrated **large language models (LLMs)** with **graph-based machine learning** to enhance knowledge graph embeddings and improve relational reasoning across complex datasets.
- Benchmarked multiple **LLMs for node and edge embedding generation** on entity and relation prediction tasks, evaluating their performance in structured knowledge representation.

DeepFi (Startup) — May 2022 - Oct 2022
Research Scientist Intern — Madrid (Remote)

- Developed a trade-granularity **backtesting framework** to simulate Uniswap v3 liquidity provision strategies, enabling the evaluation of **real-time events** such as impermanent loss.
- Implemented **gradient-boosting** models to predict price events and strategies to dynamically optimize liquidity ranges in Uniswap v3 pools, achieving **superior performance compared to passive strategies**.

Education

Center for Data Science, New York University — Sep 2022 - Sep 2023
Fulbright Fellowship Ph.D. Researcher — New York

Research Topics: Adaptive autoencoders for train-test distribution shift.
Advisor: Carlos Fernandez-Granda (Ph.D. Stanford '14).

Electrical Eng. Department, University of Navarra — Sep 2020 - Feb 2025
Ph.D. candidate in Machine Learning applied to Computational Biology — Spain

Research Topics: Graph Learning, Representation Learning, Bayesian Inference, xAI.
Advisors: Idoia Ochoa (Ph.D. Stanford '16) and Mikel Hernaez (Post-doc Stanford '16).

TECNUN School of Engineering, University of Navarra — Sep 2014 - 2020
B.Eng. & M.Eng: Electrical Engineering — Spain

Highlighted Publications

Interpretable Causal Representation Learning for Biological Data in the Pathway Space — 2024
Interpretable framework with theoretical guarantees

- Poster at AIDrugX, **NeurIPS 2024**. Published at ICLR.

Towards a more inductive world for drug repurposing approaches — 2023
Inductive and transductive node embedding analysis on bipartite graphs

- **Oral presentation** ($\frac{6}{76}$) in AI4D3, **NeurIPS 2023**. Published in Nature Machine Intelligence.

Skills

Languages
Python, R, Linux/Bash, LaTeX, Solidity.

Libraries
PyTorch, SciPy, NumPy, Seaborn, Scikit-learn.

Technologies
Docker, Poetry, Slurm, Hydra, Git, AWS.

Software
SENA-VAE, GraphGuest, Sweetwater, TraRe

Machine Learning
LLMs, **Graph Neural Networks**, Decision Trees, Autoencoders, Knowledge Graphs, Gradient-Boosting, Linear/Logistic Regression, PCA, Ensemble Learning.

Personal
Highly self-disciplined, detail and result-oriented. Creative and self-starter. Able to work on multiple projects simultaneously, with multidisciplinary teams.

Honors and Awards

1. **Kaggle Competitions Expert**. Highest Rank: 997^{th} out of +200,000 competitors.
2. **Kumo AI** Hackathon: Ranking 2^{nd} out of 20 competitors. — April 2024
3. **Ph.D. Fulbright Fellowship**, 1 year at New York University. **Amount: 41,180 $** — Sep 2022
4. Navarra's Government Fellowship, 2 years Ph.D. Funding. **Amount: 68,718 €** — Sep 2021-2023