

Alvaro Fernandez Moreno

London, UK • alfernandezmo@gmail.com

EDUCATION

UNIVERSITY COLLEGE LONDON (UCL)

London, U.K.

Master of Science Machine Learning (Expected GPA: Distinction)

2023 - 2024

- Elected Modules: Supervised Learning | Probabilistic and Unsupervised Learning | Bayesian Deep Learning | Machine Vision | Inverse problems in Imaging | Applied Deep Learning | Reinforcement Learning (Google DeepMind) | Statistical Natural Language Processing.

UNIVERSIDAD REY JUAN CARLOS

Madrid, Spain

Bachelor's Degree in Mathematics (GPA: 7.97/10)

2018 - 2023

- Dissertation: An overview of Bayesian inference.

Bachelor's Degree in Computer Science (GPA: 8.1/10)

2018 - 2023

- Dissertation: Developing a python library for Hidden Markov Models with application to recession prediction.
- Dean's List: Probability, IT Security, Operational and Statistical Methods.

EXPERIENCE

Medtronic Digital Surgery

London, U.K.

ML Research Scientist Intern

May 2024 - September 2024

- Research on quantifying uncertainty in medical instrument detection by comparing and applying deep ensembles, GPs, and single forward-pass models.
- Tools: Python, Pytorch, YOLOv8, Computer Vision.

Serfiex S.A. | Risk Management

Madrid, Spain

Software Engineer

June 2021 - September 2023

- Awarded 300k€ by the Spanish Ministry of Science for novel machine learning research on bond valuation and spread estimation.
- Implemented Monte Carlo simulation methods for valuing exotic options.
- Designed non-linear optimization models for Assets & Liabilities Management.
- Tools: C++, C#, Python, SQL.

Adriano Technologies, S.L.

Madrid, Spain

Co-founder

April 2020 - Current

CLUV is a Mobile Application for ticket sales and capacity management. I developed the application using Ionic (Angular) and the server-side is implemented on Node.js. I also raised awareness of the app by getting new venues to publish on the app, and improved the structure and scaling of the app's architecture (Database design, implementation of CDN, Infrastructure testing).

- Tools: Google Firebase, AWS, NodeJS, Angular, JavaScript, Python, SQL.

SKILLS & PROJECTS

Relevant Projects:

- Investigated interchangeability of model pruning and fine-tuning for NLP tasks. Designed an iterative procedure alternating pruning and fine tuning to adapt compressed language models.
- Deployed a RAG model that automatically generates a cover letter using Docker.
- Created a multi-agent system that learned to play a strategy game through reinforcement learning.
- Passionate about developing new ideas: <https://medium.com/@balalo.fernandez>

Technical: Python, C++, Linux and C#.

LANGUAGES

Spanish: Native | **English:** Fluent | **French:** Fluent | **German:** Basic