MARCO CORPA CRIADO

Quantitative Finance | Risk Analysis | Data Science

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Location: Madrid, Spain | Open to relocation worldwide

Mathematically trained professional with a strong foundation in statistics, stochastic modelling, and computational finance. Currently completing the MIAX Master's programme at BME (Bolsas y Mercados Españoles), with hands-on project experience in quantitative risk management (VaR/CVaR), fixed income portfolio simulation, and machine learning applied to financial data. Eager to contribute analytical rigour and quantitative skills to a challenging role in quantitative finance, risk analysis, or data science within a leading global financial institution.

Education

Master's in Financial Markets (MIAX) — Oct 2025 – Feb 2027 *(Expected)*

BME – Bolsas y Mercados Españoles · Madrid, Spain

Quantitative risk management, fixed income analysis, derivatives pricing, algorithmic trading, and portfolio optimisation.

B.Sc. in Mathematics and Statistics — Sep 2021 – Jun 2025

Universidad Complutense de Madrid (UCM) · Madrid, Spain

Key Projects

LASSO Regularisation in Multiple Regression with Multicollinearity · *Bachelor's Thesis (TFG)*

- Developed a computational implementation of the LASSO regularisation method, demonstrating its effectiveness for automated variable selection in high-dimensional linear models affected by strong predictor multicollinearity.
- Benchmarked LASSO against Ridge regression and OLS via cross-validation, evidencing superior sparsity and out-of-sample predictive accuracy across simulated and real datasets.
- Tools: Python (NumPy, Pandas, Scikit-learn, Statsmodels), R.

Housing Price Forecasting via Time Series Modelling (ARIMA)

- Built an end-to-end ARIMA forecasting pipeline for residential real estate prices: data wrangling, stationarity testing (ADF/KPSS), ACF/PACF identification, MLE parameter estimation, and rolling out-of-sample validation.
- Tools: Python (Statsmodels, Pandas, Matplotlib, Seaborn).

Quantitative Risk Management & Fixed Income Portfolio Simulation · *Master MIAX (BME)*

- Implemented Value-at-Risk (VaR) and Conditional Value-at-Risk (CVaR) under Monte Carlo simulation and Historical Simulation, including back-testing via the Kupiec unconditional coverage test.
- Designed a fixed income portfolio simulation engine for a diversified bond universe, pricing instruments via discounted cash flows and computing duration, convexity, and DV01 for interest rate sensitivity analysis.
- Tools: Python (NumPy, Pandas, SciPy, Matplotlib).

Technical Skills

Programming	Python · R · MATLAB
Libraries	NumPy · Pandas · Scikit-learn · Statsmodels · SciPy · Matplotlib
Quant Methods	Time Series · LASSO / Ridge / OLS · Monte Carlo · VaR / CVaR · Machine Learning · Stochastic Modelling
Finance	Fixed Income · Derivatives Pricing · Portfolio Optimisation · Risk Management
Tools	Git / GitHub · LaTeX · Microsoft Office (Excel, Word)

Languages

Spanish	Native
English	Upper-Intermediate (B2)

Certifications & Professional Development

CFA Level I Candidate – CFA Institute · Currently in preparation

- Actively studying for the CFA Level I examination, building expertise in equity analysis, fixed income, derivatives, financial reporting, and portfolio management.

Core Competencies

- Analytical thinking & problem solving
- Data analysis & quantitative modelling
- Teamwork & collaborative project delivery
- Clear communication of technical results