

## EDUCATION

Sapienza University of Rome  
Sep 2023 – Current

### MS Economics and Finance – Actual GPA: 4

- Focus on quantitative methods and financial econometrics
- Expected thesis on Asset Pricing via Machine Learning

Sapienza University of Rome  
Sep 2020 – Oct 2023

### BS Economics

- Focus on Economic Theory
- Thesis: Dedollarization of the International Monetary System  
Supervisor: Prof. Marco Di Pietro

## ACADEMIC PROJECTS

Forecasting Macro Trends  
with Factor Models

### Estimation of the factors by PCA in case of missing values

- FRED-MD dataset (McCracken & Ng)
- Identified 7 factors explaining 47.36% of total variance up to March 2025
- One-step-ahead forecast of Inflation and Industrial Production

Portfolio Construction

### Markowitz Model to find the Optimal Portfolio

- Four sectors of the financial markets were selected and independently optimized to extract the highest returning stocks within each sector
- The stocks selected from each individual portfolio were pooled into a single one, which was then re-optimized
- The Health sector carried the highest weight in recent years

Volatility Forecasting

### Comparison of models for Euro Stoxx 50 volatility

- GARCH model chosen as benchmark for volatility prediction
- Multilayer Perceptron outperformed all models in out-of-sample forecasting

Identifying Macroeconomic  
Shocks

### Quantitative assessment of macroeconomic shocks using VAR and LP

- Explored multiple identification strategies based on influential macroeconomic papers

Statistical Models

### Human Development analysis through statistical methods

- Applied linear regression and Lasso with cross-validation to select optimal tuning parameter
- Performed classification using logistic regression, LDA, and K-nearest neighbors

## PERSONAL PROJECTS

Mean-Reverting  
Trading Strategy

### Mean-reverting logic based on rolling Z-scores of both price and ATR

- Developed custom technical indicators to detect entry and exit points
- Optimization performed on a train set to avoid overfitting in final results
- Fully automated logic

Contrarian Trading Strategy

### Based on statistical patterns

- Exploits short-term reversal patterns during low-volatility phases trading against the prevailing trend
- Fully automated logic

## OTHER WORK EXPERIENCES

Beachfront-Waiter  
Summer 2020 – 2024

### Seasonal Job restaurants-beach

- Worked in fast-paced environments during peak tourist seasons
- Developed interpersonal skills, stress management and team coordination
- Supported multilingual customers, improving adaptability and communication

## SKILLS & INTERESTS

Technical Skills

- Skilled in Python and R for projects and data analysis, though not a fulltime developer. Comfortable using AI tools to write and adapt code when needed

Leadership & Teamwork

- Curious and resilient, with initiative and a strong sense of responsibility. Strong communicator and listener. Leads when needed, always a team player

Languages

- Italian (native), English (fluent), Spanish (intermediate), French (intermediate)

Interests

- Trading system development and strategy backtesting, free-diving, literature, soccer (both playing and watching)