

Matteo Ferrara

Contact information provided upon request

EDUCATION

Università Cattolica del Sacro Cuore

Milan, Italy

MSc Banking and Finance (English taught)

April 2023

- GPA: 29/30 (First Class)
- Relevant Courses: Econometrics, Derivatives, Applied Statistics, Monetary Economics, Risk Management

Università Cattolica del Sacro Cuore

Milan, Italy

BSc Banking, Finance and Insurance Sciences

2017-2020

- Final Grade: 110/110 cum Laude (First Class)
- Dissertation: “Deep Portfolio: Managing Portfolios with Artificial Intelligence”

ITIS G. Feltrinelli

Milan, Italy

Highschool - Scientific concentration

2012-2017

- Final Grade: 90/100
- Dean’s list in 2015, 2016 and 2017

EXPERIENCE

ITIS G. Feltrinelli

Milan, Italy

School tutor

2015-2017

- One of the 10 honor students selected to be part of the school official tutoring program
- Created summaries and other didactic material to facilitate teaching and tutoring activities
- Tutored individually a first-year student and a second-year student

PERSONAL PROJECTS

Option Pricer | *Python*

- Created a Python program to price plain vanilla options and futures-style options on a variety of underlying assets
- Pricing methods included: Black-Scholes model, Bachelier model, Binomial Trees and Monte Carlo Simulation
- Fully-vectorized Monte Carlo simulation under GBM, Variance-Gamma process and Merton Jump process
- Link to project: github.com/Matteo-Ferrara/option-pricer

Gamma Exposure Tracker | *Python*

- Developed a Python script to compute current dealer’s Gamma exposure on index options listed on CBOE
- Scraped option data from CBOE website using Python requests and json libraries
- Incorporated several data visualization techniques including a 3D-surface
- Link to project: github.com/Matteo-Ferrara/gex-tracker

Backtester | *Python*

- Designed a rudimentary framework to backtest algorithmic trading strategies using Pandas and Numpy
- Simulated a number of trend following strategies and computed relative risk and performance metrics
- Generated synthetic data, using a MLE-fitted Geometric Brownian Motion, to test robustness of strategies
- Link to project: github.com/Matteo-Ferrara/backtester

Interest Rates Modeling | *Python*

- Performed Change-Point analysis on LIBOR, USGG10YR and US 30-YR Fixed Rate Mortgage historical data
- Calibrated Ornstein-Uhlenbeck and Cox-Ingersoll-Ross models using OLS estimation
- Evaluated the goodness of fit by overlaying density functions and performing Kolmogorov-Smirnov tests
- Link to project: github.com/Matteo-Ferrara/ir-modeling

ADDITIONAL INFORMATION

Languages: Italian (mother tongue), English (fluent), French (basic)

Technical Skills: MS Office, Python, Bloomberg Terminal, R (basic)

Professional interests: Trading, Portfolio Management | Options, Fixed Income, Credit, Structured Products

Other interests: Hiking, Cinema, Formula 1, Soccer, Chess, Cooking

Legal status: Italian citizen, visa sponsorship needed outside of EU