

Andrea Maioli

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Experience

Freepoint Commodities

DATA SCIENTIST

Zug, Switzerland

Sep. 2024 - Present

- **Country-level power forecasting:** forecasted country level wind and solar energy production, focusing on coverage calibration and probabilistic methods. Improved upon external vendor forecasts for the 7–15 day horizon, reducing MAE by 8%.
- **Data infrastructure:** led a cross-functional team (meteorologists + IT) to design and deliver a scalable weather datalake (zarr/parquet-based), streamlining data accessibility for analytics.
- **Software standardization:** developed and maintained core Python libraries adopted by cross-functional teams, standardizing data access and reducing onboarding times for new analysts.
- **Strategic cost savings:** built a performance dashboard enabling traders to benchmark vendor accuracy across various lead times and metrics. This led to the cancellation of sub-optimal subscriptions, saving the company ~€200k/y.

DXT Commodities SA

DATA SCIENTIST

Lugano, Switzerland

Mar. 2019 - Jul. 2024

- **Multi-asset forecasting:** forecasted 4Gw renewable portfolio power generation (wind, solar, hydro, consumption), power and gas demand of EU countries.
- **Anomaly detection:** developed an automatic outage and outlier detection for dispatched power plants.
- **Algorithmic trading:** designed and implemented an intraday trading strategy for the Italian power market (up to 6 hours before delivery), achieving a Sharpe ratio of 2.1.
- **MLOps architecture:** Built the end-to-end MLOps infrastructure from the ground up, integrating Cookiecutter, MLflow, Jenkins, and Prefect to automate the model lifecycle.

UniCredit S.p.a

QUANTITATIVE RISK ANALYST IN GROUP FINANCIAL RISK METHODOLOGIES

Milan, Italy

Apr. 2017 - Feb. 2019

Education

Università di Bologna

Bologna, Italy

MASTER IN MATHEMATICAL FINANCE " CORSO ALTA FORMAZIONE FINANZA MATEMATICA"

Specialisation in Stochastic equations and Option pricing. Application of Montecarlo, quasi-Montecarlo and Fourier transform methods.

Paris Saclay

Paris, France

MASTÉR M2 ANALYSE, MODÉLISATION ET SIMULATION - DISPERSIVE EQUATIONS

Thesis: Structure of global solutions for a damped Klein-Gordon equation.

Università di Pisa

Pisa, Italy

BACHELOR DEGREE IN MATHEMATICS

Thesis: Cauchy-Kovalevskaya's theorem

Tech Skills

Programming languages	Python (<code>sklearn</code> , <code>torch</code> , <code>pygam</code> , <code>pandas</code> <code>polars</code> , <code>cvxpy</code> , <code>ONNX</code>), SQL
Dashboard	Streamlit Jedi Master
MLOps	Git, MLflow, Docker, Jenkins, cookiecutter, Prefect, FastAPI
Most used models	GAM (♥), Catboost, Ensemble NeuralNet, NHITS, Conformal predictions
Cloud computing	AWS

Languages

Mother tongue Italian

Fluent English

Beginner Swedish, French

Personal projects

pimpmyplot make matplotlib great again

lpspline nice api for linear spline based model

ezio Altair wrapper to make everyone's life easier

Hobbies

Drummer Funky, Indie rock

Board Games `Power Grid`, `Bang!` (best player in the world)

Opera La Cenerentola, `Gianni Schicchi`

Dreams

Dunk at basketball Work in progress... almost there...

Skateboard Ollie to get on sidewalk.

Bake bread Failed attempts: 5 :-(✓

Kungsleden Complete full Kungsleden trail. ✓