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

Universitá 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.

Universitá di Pisa
Pisa, Italy
BACHELOR DEGREE IN MATHEMATICS
Thesis: Cauchy-Kovaleskaya's theorem

Tech Skills

Programming languages	Python (`sklearn, torch, pygam,` ~~`pandas`~~ `polars, cvxpy`) , 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
slurp	nice api for non linear spline 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.~~ ✓