
Employment History

Jan 2025 – present **Data Scientist / Data Engineer**, *Complexa Labs*, Italy

- Designing and building an in-house adaptive **regime-aware trading engine**: multifractal cascade and Kalman-style filtering feed a regime classifier driving a portfolio of regime-gated strategies with Bayesian online weight allocation.
- Delivering quantitative consulting for enterprise clients (€1B+ revenue) across staffing, financial services, automotive SaaS, and public research.
- For a **€3B+ staffing group**: end-to-end Customer Lifetime Value pipeline — mixture-cure survival, quantile regression for margin uncertainty, GBM ensembles, calibrated A/B framework with stratified re-randomisation and CATE analysis.
- Follow-on causal **Next-Best-Product recommender** for the same client — state-space model with cross-product effects identified via staggered Callaway–Sant’Anna DiD and threshold-based RDD, online inference via a Rao–Blackwellised particle filter.
- Macroeconomic scenario simulator for a **financial consultancy**: 500+ interdependent variables, non-linear constrained optimisation routing across IPOPT, CMA-ES, and differential evolution.
- NLP and document-processing microservices for an **automotive retail platform**; Spark-native re-architecture of a critical pandas ingestion pipeline on MongoDB/Azure, with FastAPI + Celery orchestration.
- Epidemiological Health Impact Assessment for a **national research institute**: Poisson and panel fixed-effects modelling of PM10/PM2.5/NO₂ mortality burden, causal forest and Double ML on perception-survey data.

Jan 2024 – Nov 2024 **Data Scientist**, *acmetric B.V.*, Amsterdam (NL)

- Developed and maintained a pricing and demand-forecasting engine for a **global sportswear group** using Causal-AI techniques.
- Designed and shipped a churn / litigation prediction model for a **major Latin American airline** using gradient-boosting machines — productionised.

Nov 2022 – Dec 2023 **Data Scientist**, *MOOS Solutions B.V.*, Amsterdam (NL)

- Built and maintained an AI engine for real-time inventory insights using Mixture-of-Experts techniques — productionised.
- Conducted exploratory data analysis and visualisation to support decision-making across operational teams.

Education

Jul 2023 **Summer School in Deep Learning**, *Tinbergen Institute*, Amsterdam

Intensive PhD-level programme with Eran Raviv, PhD — focus on **Generative AI**.

2021 – 2022 **M.Sc. Econometrics & Operations Research**, *Vrije Universiteit Amsterdam*

Thesis: *Price volatility and climatic extremes: distinguishing signal from noise*. Final mark 8.0/10.

2019 – 2021 **M.Sc. Economics (Econometrics track)**, *University of Bologna*

Thesis: *Hedging against climate change: a Hawkes process approach*. Final mark 110/110 cum laude.

2015 – 2018 **B.Sc. Economics & Management**, *University of Trento*

Honours programme, Department of Economics. Final mark 110/110 cum laude.

Skills

Languages **Italian** (native), **English** (C1/C2, TOEFL 107/120), **French** (B1), **German** (A2).

Modelling Survival analysis (mixture cure), quantile regression, GBM ensembles, causal forest, Double ML, DiD (Callaway–Sant’Anna), RDD, particle filtering, state-space models, multifractal cascades, MSM/UKF, Bayesian online learning, NLP / LLMs.

Engineering **Python**, **R**, **MATLAB**, **LaTeX** (proficient); SQL, MongoDB, Docker, FastAPI, Celery, PySpark, PyTorch, AWS, Azure, GCP, Databricks (intermediate); Julia (basic).

Awards & Certifications

2021 TOEFL iBT — Overall 107/120, C1 (CEFR).

2019 Merit Scholarship, Italian National Social Insurance Agency (INPS) — 2019 edition.

2018 Merit Scholarship, University of Trento — 2018 edition.