Raphael Catenacci

Nice – 06000
+33 7 81 83 42 75 • raphael.catenacci@ensae.fr • Raphael Catenacci
RCATENACCI

Education

Engineering School of the Polytechnic Institute — **Palaiseau, France**
ENSAE Paris — *2023 – 2027*

- Relevant Courses: Financials Mathematics, Stochastic Processes, Machine Learning Fundamentals, Financial Instruments, Time Series, Statistical Simulations and Monte Carlo Methods, Python for Data Science (Scikit-Learn, Geopandas, API and Webscrapping).

International Center of Valbonne — **Sophia Antipolis, France**
Scientific Preparatory Classes — *2021 – 2023*

- Specialization in Mathematics and Physics

Professional Experience

Jukoï Capital — **Monaco**
Quant Researcher off-cycle — *Jun 2025 – July 2026*

- Developed a fully automated, provider-agnostic financial data infrastructure for scalable market data ingestion and processing. Leveraging local LLMs to simplify and structure macroeconomic and alternative data ingestion workflows. (Languages: Python, JavaScript, HTML)
- Implemented sampling, meta-labeling, and sample-weighting methodologies on datasets to identify stationary-memory optimal solution and maximize predictive signal power prior to machine learning model deployment.
- Automated the financial instrument lifecycle management process, including corporate actions handling, pricing updates, event processing, and portfolio synchronization.
- Implemented risk calculations, stress testing, exposure measurement, and pricing models for trading portfolios, with seamless integration into a web-based financial application.

AXA France — **Paris**
Data Scientist Intern — *Jun – Sep 2024*

- Developed algorithms within the financial compliance team.
- Built an artificial neural network using the Transformers library and utilisation of Azure Cloud. Used Pandas, Scikit-Learn, and Pytorch for Machine Learning.

Skills

Programming: **Python** (Advanced), JavaScript, HTML, CSS, SQL, R, SAS, VBA

Software: Microsoft Office, LaTeX

Languages: French (native), English (Fluent) – MaltaLingua School of English certificate

Projects

2025: **Applied Statistics project for ENGIE**: Developed a CatBOOST Machine Learning model to forecast French national gas consumption. Performed fine-tuning of hyperparameters and leveraged AutoML tools to optimize model performance and accuracy.

2025: **Financial Machine Learning Automatic Trading Algorithm**: Designed and implemented various trading strategies using machine learning techniques. Conducted performance evaluation with the calculation of key financial metrics such as Sharpe Ratios, drawdowns, and other risk-adjusted performance indicators.

2024: **Real Estate Price forecast**: Forecasting real estate prices using Machine Learning algorithms and public datasets.

2024: **Python Project**: Optimizing routes by matrix arrangement using the A-star algorithm.

2023: **Economics Thesis**: Analyzing the impacts of the pension system on the French economy.

2023: **Statistics Thesis**: Data study on French wealth distribution using SAS.

2022–2023: **TIPE**: Developed a functional Li-Fi communication system.

Extra-Curricular Activities and interests

Sports: **BMX Racing (2019 UCI World Ranking U18: 9th)**

Mathematics: Participation in the 2021 **French general mathematics competition**

Associations: **Member** of ENSAE Junior Enterprise, **President** of ENSAE Sports Office in 2024-2025

Activities: Street Workout, Climbing, Scuba Diving