LUCA BIRTAS

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Seeking a 6-month end-of-studies internship / permanent position | Available from April 24th, 2027

WORK EXPERIENCE

Crédit Agricole CIB — **Paris, France**
Exotic Equity Derivatives Trader – Off-Cycle Intern — *03/26 – 08/26*

- Automated vol/correlation axes across a 1,500-stock universe from live book positions, replacing a manual desk process and saving ~4 hrs/week
- Built a volatility projection engine pricing 40+ custom indices and bespoke baskets from constituent vol surfaces and correlation matrices, now used daily for hedge ratio setting
- Monitored live delta/vega/gamma across 5 EMEA/AMER books (mono/multi stock and index, plus single-stock dispersion), flagging exposures for intraday hedge decisions

HSBC — **Paris, France**
Equity Derivatives Structurer – Off-Cycle Intern — *09/25 – 02/26*

- Cut fixed-dividend underlying pricing times by 60%, replacing a Monte Carlo/PDE computation of the stochastic volatility add-on with a Generalized Linear Model proxy
- Priced 4,000+ client RFQs over 6 months, proposing risk-optimized payoff structures and pricing adjustments
- Structured and onboarded three payoff families with sales and trading: newly launched autocall mechanisms, equity/FX contingent options, and light exotics (var/vol swaps, corridors)

Tradeweb Markets — **London, UK**
Fixed Income Data Scientist – Summer Intern — *06/25 – 09/25*

- Built tree-based ML pricing models on 1.5M proprietary RFQ records for repo products and execution strategy
- Developed liquidity metrics and market-impact models from historical flow data to support execution benchmarking

Société Générale CIB — **Paris, France**
Fixed Income Trading Risk Analyst – Off-Cycle Intern — *04/24 – 09/24*

- Built real-time risk monitoring tools (Greeks, VaR, IRC, CRM, LCR) across the full FIC perimeter, surfacing breaches same-morning versus the legacy evening alert and still in use post-internship
- Diagnosed limit breaches with traders, cutting average breach duration from 3.4 to 2.2 days
- Authored desk reports on exceptional market events (BoJ rate hike, French Assemblée dissolution), analyzing intraday rates, credit and FX moves

EDUCATION

CentraleSupélec, Université Paris Saclay — **Paris, France**
MSc in Engineering (Diplôme d'Ingénieur), Major in Computer Science — *09/22 – 05/27 (Expected)*

- **Relevant Coursework:** Statistics, Probability, Machine Learning, Data Science, Computer Vision, Advanced Algorithms
- **Projects:** Second-order Convex Optimization for Neural Network training, Rust implementation of a lightweight Linux shell

ESCP Business School — **Paris, France / Turin, Italy**
Master in Management (Grande École Program), Major in Financial Markets — *09/23 – 05/25*

- **Relevant Coursework:** Financial Derivatives, Structured investment products, Trading Strategies, Econometrics
- **Projects:** Long-short equity portfolio optimization (Excel), market price forecasting with time-series ML models

Classes Préparatoires, Lycée Thiers — **Marseille, France**
Undergraduate Preparatory Program (CPGE) for French Engineering School Entrance Exams — *09/20 – 06/22*

- **Relevant Coursework:** Mathematics, Physics, Computer Science, French Literature, English

EXTRACURRICULAR ACTIVITIES

CS Asie — **Paris, France**
President – Club promoting Asian cultures at CentraleSupélec — *11/22 – 11/23*

- Managed a €10k annual budget and event logistics, delivering cultural events for 500+ students

International Physics Olympiads, ENS Ulm — **Paris, France**
Experimental and theoretical preparation for IPhOs (International Physics Olympiads) — *05/21*

- 12 students selected nationwide upon written examinations

SKILLS & ADDITIONAL

- **Technical:** Python (OOP, pandas, Scikit-Learn, PyTorch), Rust, SQL, VBA, Excel, LaTeX, Bloomberg
- **Languages:** French, Romanian (native), English (fluent – Linguaskill 180+)
- **Interests:** Ski (former regional champion), Literature