

## EDUCATION

**University Paris Dauphine-PSL***Master 2, Mathematics Research Master's degree –MASEF, Financial Mathematics Major*

Paris, France

2020-2021

*Python projects:*

- *American, European Options, and Worst-Of Autocallables Pricing, using Monte Carlo and Finite Difference Methods.*
- *Asian, Lookback, and Digital Options Pricing, using: "Multilevel Monte Carlo Path Simulation." Michael B. Giles, Oxford Man Institute of Quantitative Finance. (2008)*

**University Paris Dauphine-PSL***Master 1, Mathematics – Statistics Major*

Paris, France

2019-2020

*Master's thesis: "Correlation between toponymy and geography of French municipalities" (Implemented in R), supervisor Robin Ryder**C++ project: Vector, Matrix & Tensor classes implementation***University Paris Dauphine-PSL***Bachelor of Science, Mathematics– Probability Major*

Paris, France

2016-2019

*Python project: Double Pendulum Chaos Motion**R project: Random Variables Simulation Methods, Variance Reduction Methods***University of Greenwich***Master of Science, Banking & Finance (Distinction)*

London, United Kingdom

2015-2016

*Master's thesis: "Political risk and foreign exchange market: an exploration of the brexit impact on the sterling", supervisor Lianfeng Quan***IPAG Business School***Master 2, Financial Markets*

Paris, France

2011-2016

*Master 1, Corporate Finance***Waterford Institute of Technology***Erasmus, Economy*

Waterford, Ireland

2013-2014

**Lycée Charles Baudelaire***Scientific Baccalauréat, Mathematics Major (Honors)*

Paris, France

2011

## RESEARCH PROJECTS

**Multilevel Monte Carlo Path Simulation***Implemented with Python the Multilevel Monte Carlo method and reproduced Michael B. Giles' results*

2020-2021

- *Multilevel Monte Carlo improves the classic Monte Carlo method by reducing the computational complexity*
- *For a same level of precision, the multilevel method runs 10 to more than 1000 times faster*
- *Priced Asian, Lookback, Digital, and European Options*
- *Implemented Black-Scholes and Heston models, Milstein and Euler discretization schemes*

**Worst-Of Autocallable***Implemented with Python a 2 assets worst-of autocallable pricer (Eurostoxx50 & CAC40)*

2020-2021

- *Each asset has its own coupon value, its own paying and redemption barriers*
- *Used historical correlation, implied volatility, Black-Scholes model*

**Correlation between toponymy and geography of French municipalities***Implemented with R different machine learning algorithms to predict French cities' location using only their toponymy*

2019-2020

- *Data: 35000x10*
- *Logistic regression to predict regions, random forests for latitude/ longitude*
- *Models prediction accuracy exceeded 90% in some areas of France*

## SKILLS

**Language:** French (Mother tongue), English (Fluent), Persian (Fluent), Spanish (Professional proficiency)**IT:** R, C++, Python, LaTeX, Microsoft Excel, Microsoft Word, Microsoft PowerPoint**Academic:** Equity Derivatives, Stochastic calculus, Monte Carlo methods, Black Scholes model, Machine Learning in finance**Esport:** Mobile Legends (100 million active players): Luo Yi Champion, 293 World Rank, Top 10 France, 1<sup>st</sup> Paris

## WORK EXPERIENCE

**Killik & Co Analyst***Front Office Analyst at KILLIK & Co, first French intern in the firm*

London, United Kingdom

Apr.-Sept. 2015

- *Assisted 4 stockbrokers who trade and advise on a wide range of instruments including equities, corporate bonds, gilts, funds, derivatives and CFDs*
- *Produced monthly reports of the 10 branches' trades. Implemented macros on excel to deal with heavy spreadsheets*
- *Conducted portfolio analysis and reviewed asset class weighting with a focus on Investment trusts and Unit trusts*
- *Formulated reports and did presentations of investment opportunities and prominent equities identified from personal research and study of research notes*
- *Regularly attended meetings with companies or fund managers to get updates or IPO presentations*