

# ALASSANE DIALLO

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## EDUCATION

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### ECOLE CENTRALE-PARIS Paris, France

*Master Degree in Applied Mathematics, High Honor, 2017-2021*

• Relevant courses: Advanced Statistics, Deep learning, Reinforcement learning, Portfolio Optimization, Algorithmic trading, Natural Language Processing, Bayesian Statistics.

### University PARIS Diderot, Paris, France

*Master of Science in Financial Engineering (M2MO), Distinction, 2020-2021*

• Relevant Coursework: Fixed Income, Quantitative Analysis, Machine learning for finance, Financial Risk Modeling. Partial Differential Equations, Stochastic Modeling, Financial Engineering, Reinforcement learning, Natural language Processing.

### GRENOBLE ALPES UNIVERSITY

*Bachelor of Mathematics and Physics Top 1% (GP A: 4.0/4.0) 2014-2017*

• Awarded the National Merit Scholarship by the Malian Ministry of Higher Education and Scientific Research.  
• Relevant Course: Statistical Quantum physics, C++, Mechanics, Computer Science for physics, Electromagnetism.

## COMPETENCES

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Programming languages : C++, Python, VBA, Latex, Databases: MYSQL.

Control System: Git/Github, Software Tools: Turtoise, Postman, Eikon.

Office: Excel, Word, Powerpoint, Languages Spoken: French (Mother tongue), English (Fluent).

### Knowledge Financial Market:

- Pricing of interest rate derivatives: swap, cap, floor .
- Knowledge of Forex: spot, forward, swap.
- Pricing of options and structured products.

## EXPERIENCE

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### LONDON STOCK EXCHANGE GROUP, Paris, France

#### Quantitative Analyst, 2021-Present

- In charge of the validation of rate/forex models of the QPS (Quantitative Pricing Service) pricer within the Refinitiv model validation team, and the development/maintenance in python of the pricing library of the validation team of the model.
- Validation of interest rate products (ILB, FRB, FRN, FRFF).
- Validation of FX structured products (FX TARN, FX TARF, FX-swap, FX-option).
- Extension of the pricing library of the model validation team in python and development of python program for mass testing automation using multithreading method and asynchronous programming.

**Skills: Python, Postman, Turtoise, Excel, Git/Github, Forex, and Interest rate Markets.**

### QUANTEAM, Paris, France

#### Quantitative Analyst, 2021-Present

- Working on Deep reinforcement learning algorithm and Bayesian deep reinforcement learning methods for market making and portfolio Optimization within the Quant Practice Team.
- Contribute to the writing of Quant documents and articles.

**Skills: Python, Paper readings, C++, PyTorch, Latex, Git/Github, AI research, Market making, Portfolio Optimization.**

### ESTIMANCY, Paris, France

#### Deep learning/NLP intern 2021-2022

- Propose NLP methods based on Deep Learning for measuring user requirements.
- Perform bibliographic research on Deep Learning methods used for entity extraction (NER). Studied and implementing different algorithms including CNN (Convolutional Neural Network) for entity extraction, LSTM .
- RNN (Recurrent Neural Network), BI-LSTM (Bidirectional long, short-term memory), CRF (conditional random field), BERT .

**Skills: Deep learning, NLP, Python, Pytorch, AI research, Paper implementations.**

### MAZARS, Paris, France

#### Quantitative Researcher, Paris, France 2020

Implementation of a credit risk management model called JLT for enriching the pricing library.

- Reading research articles on credit risk around the JLT model.
- Implementation calibration, and Validation of the JLT Model on Python.
- Study of model sensitivities by variation of risk premium parameters Technical environment: Python.

**Skills: Python, Credit risk modelling, team work.**

### LPSM, Paris, France

#### Quantitative Analyst/AI Intern, May 2020-Sep-2020

- Development of Deep Reinforcement Learning Model for Financial Assets Portfolio Optimization
- Tasks involved: Reading research articles on the artificial intelligence applied to portfolio optimization.
- Study of deep learning / Reinforcement learning algorithms including Deep Deterministic policy gradient and Deep Q network

**Skills: Python, Deep Reinforcement Learning, Portfolio optimization, PyTorch.**