OTHMANE MACHROUH

(+33) 6 65 37 89 35 ⋄ othmachrouh@gmail.com

EDUCATION

Panthéon Sorbonne University - Paris, France   *September 2020 - June 2021*
Masters in Applied Mathematics

Advanced Statistics and Probabilities, Econometrics, Optimization, C++ and Python programming, Algorithms and Data Structures, Statistical and Machine Learning, Financial Mathematics, Financial Time Series, Portfolio Theory, Stochastic Calculus

Minor: *Finance*

Pierre and Marie Curie University - Paris, France   *September 2017 - June 2020*
Bachelor's degree in Mathematics

Linear Algebra, Topology, Probability theory, Statistics, Partial and ordinary differential equations, Markov Chains, Measure theory, Group Theory and Abstract Algebra, Python, Algorithms

Activities : *Tutoring for freshmen and sophomores. Active member of KryptoSphere, a student association specialized in the blockchain technology & crypto-assets (meetups, trainings).*

EXPERIENCE

National Center for Scientific Research (CNRS) - Paris, France   *June 2020 - September 2020*
Statistician, Internship

· Checking the consistency between internal and external data.
· Performing statistical data analysis and engineering.
· Automating statistical processes and data mining/scrapping.

MWA.ma - Remote   *May 2019 - August 2019*
Software Engineer, Internship

· Assist in the rewriting of the authentification system as well as building the voting platform for the competition.
· Participate in taking architectural decisions about the project.
· Technologies used : Python, PostgreSQL, Docker, Git...

Synergie Media - Agadir, Morocoo   *June 2018 - August 2018*
Software Engineer, Internship

· Collaborating with the agency on a number of clients projects.
· Working in close association with product designers to find the most optimal solution (A/B tests, Product research...)
· Technologies used: HTML, SCSS, Bootstrap, ReactJS, Sketch, Git

PROJECTS

Research Project: *Options Pricing using Deep Learning Methods*

Under the supervision of Professor Eduardo Abi Jaber at Paris 1 University. Working on applying deep learning methods to non-markovian option pricing models (rough-volatility type) to improve their accuracy, robustness and efficiency.

School Project: *Financial Time Series Analysis*

Analysis of financial time series data using ARIMA, SARIMA and Deep Learning models to make predictions, then comparing the different models and their efficiency in identifying patterns in time series data and in forecasting future values.

Backtesting tool

Creation of a tool that can backtest trading strategies using either a dataset or directly through an API (in the case of cryptocurrencies only, using the Binance API), and that returns results such as return, volatily, sharpe ratio, drawdowns etc.

SKILLS

Computer Languages	Python, R, Numpy, SciPy, Pandas, Git, SQL/NoSQL, TensorFlow, PyTorch
Skills	Data Analysis, Machine Learning, Quantitative Research, Statistical Analysis
Languages	French (fluent), English (fluent), Arabic (native)