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Arthur Bernard

Data Scientist in Quantitative Finance

Key skills

- Proficiency in **statistics** and **econometrics softwares**: Octave/Matlab (Advanced), R (Advanced), SAS (Beginner), STATA (Beginner).
- Operating systems: Windows and **Unix**.
- Languages: French (**native speaker**), English (**professional skill**, language of instruction of Master's Degree).

MOOC's

- Learn to program with **Python**, OpenClassRooms.
- **Machine learning**, by Andrew Ng, Coursera.
- **Deep learning**, by Andrew Ng, Coursera.
- And other diverse courses (**Linux**, **C++**, etc.).

Programming

- Highly advanced: **Python** (proficiency in NumPy, Pandas, Cython, PyTorch, Keras, Sickit-Learn, Asyncio, Multi-process/thread), etc.
- Advanced: **Shell**, VBA, Matlab/Octave, LaTeX.
- In progress: **C++**.
- Basic knowledge: R, SAS.

Interests

- Artificial intelligence.
- Crypto-currencies/Blockchains.

Experiences

- Jan. 2019 – **Research in Quantitative Finance** at *Napoleon Crypto*, Paris
Present R&D of trading strategies using neural networks to **multivariate prediction**, **execution order algorithms**, development of **back-testing** and **financial analysis** tools, and webscraping data.
- Jun. 2018 – **Intern in Quantitative Finance** at *Napoleon Crypto*, Paris
Dec. 2018 Research of quantitative strategies and **portfolio allocation** algorithms and creation of a **data-science competition** proposed to the Collège de France.
- Sept. 2013 – **Administrator (volunteer)** at *Mutuelle des Etudiants de Provence*,
May 2018 Marseille
Approval of budgets, financial investments, internal policy, etc.

Personal projects

- 2018 – 2019 **Machine/deep learning tools adapted to finance**
Development of python and cython package to create **neural networks**, **backtest strategies**, analysis with **econometric models** and **financial indicators**, etc. Published on PyPI as *fyfinance*.
- 2017 – 2018 **Webscraping package**
Development of a python package to **download data** and **update database** from some crypto-currency's exchanges. Published on PyPI as *dccd*.
- 2016 – 2019 **Trading bot algorithms on crypto currencies**
Development and maintenance of trading bots with python and bash scripts. Starting in 2016 with **arbitrage strategy**, and more recently create **strategies with neural network**. A part is available on my GitHub in the repository *Strategy_Manager*.

Education

- 2017 – 2018 Master's Degree in **Econometrics of Banking and Financial markets** at *Aix-Marseille School of Economics*, Marseille
Courses: Stochastic finance, financial econometrics, financial engineering, econometrics of exchange rates, neural network, etc.
Projects: Intraday analysis of BTCUSD versus EURUSD, etc.
Master thesis: Analysis of dynamics of Bitcoin.
- 2013 – 2016 Bachelor's degree in **Economics and Management** at *Aix-Marseille Université*, Marseille
Specialization: Finance.
Courses: Time series econometrics, financial markets, statistics, optimization, informatic (SQL and VBA), etc.
- 2012 A-Level in **Science** at *High-School Marie Madeleine Fourcade*, Gardanne

Miscellaneous

- 2019 **Data-science competition** at *ENS Challenge Data*
7th in the temporary ranking, about prediction of daily stock movements on the US market, proposed by Capital Fund Management.
- 2014 – 2016 **Founder and general secretary of student association**
Organisation and management of team projects.
- Present **Hobbies**
Cooking, travelling (Norway, Scotland, Eastern countries, etc.), swimming (competition) and theater.