Jordan LEKEUFACK SOPZE

Oakland, CA
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Work Experience

The Voleon Group, *Research Intern.* — May 2024 – Aug. 2024, *Berkeley, CA.*

- Worked on a linear regression model to learn forecasts realization
- Improved the forecasts predictions by 5-10% in terms of correlation.

Pinterest Inc, *Pinterest Lab Intern.* — May 2023 – Dec. 2023, *New York, US.*

- Trained a reward model to predict the total engagement of users on the homepage. Improved previous models' precision by 10%.
- Used the model to predict the result of past online A/B tests. Obtained a correlation of 0.9 with actual results of the tests.
- Building a recommender system using reinforcement learning based on the reward model.

Bloomberg LP, *Quant Research Intern* — Jun. 2022 – Aug. 2022, *New York, US.*

- Applied multi-agent reinforcement learning methods to calibrate derivative pricing models.
- Proposed a new Markovian path-dependent volatility model that jointly calibrates to the S&P 500 and the VIX. – supervised by Prof. Julien Guyon.

Bloomberg LP, *Quant Research Intern.* — Apr. 2020 – Dec. 2020, *New York, US.*

- Developed a method to estimate the VIX with the SPX with a R2 of 0.9.
- Implemented a gradient descent method to jointly calibrate the S&P 500 and the VIX with a path-dependent method.

BNP Paribas, Data Lab, *Data Scientist Intern.* — Nov. 2019 – Apr. 2020, *London, UK.*

- Worked on a tool to predict the influence of news on the returns using deep learning models.

BNP Paribas, AMM Team, *Quant Trader Intern.* — Apr. 2019 – Oct. 2019, *London, UK.*

- **Research Internship Award by Ecole Polytechnique.**
- Implemented a robust clustering method for stocks listed on the SXXP.

Crédit Agricole, *Data Scientist Intern.* — June 2018 – Aug. 2018, *Montrouge, France.*

Lycée Joliot Curie, *Teaching Assistant.* — Sept. 2016 – Apr. 2017, *Nanterre, France.*

Education

UC Berkeley, *Ph.D. in Statistics.* — Sept. 2020 – Ongoing, *Berkeley, US.*

- Working on applying conformal predictions and other confidence sets to decision making. Supervised by Michael I. Jordan.
- Coursework: High-Dimensional Non-Asymptotic Statistics (Martin Wainwright), Convex Optimization (Laurent El Ghaoui), Reinforcement Learning (Sergey Levine), Advanced Topics in Machine Learning and Economics (Michael I. Jordan), Causal Inference, Natural Language Processing (Dan Klein)
- Teaching experience: TA for STAT 134 (Concepts of Probability) in Fall 2021, STAT 201B (Introduction to Statistics at an Advanced Level) in Fall 2022.

Ecole Polytechnique, one of France's top-ranking schools of science and engineering. — Sept. 2016 – Apr. 2019, *Palaiseau, France.*

Master of Science in Applied Mathematics. **Cumulated GPA: 3.8/4.0**

- Stochastic Calculus for Finance (Nizar Touzi), R for Statistics, Monte-Carlo Methods (E. Gobet), Regression, Time series (M. Rosenbaum), Machine Learning, Martingales, PDE, Markov Chains.

GRE Quantitative: 170/170

Lycée « Aux Lazaristes », Most Intensive Math-focus French Undergraduate Program — Sept.2014 – July 2016, *Lyon, France.*

- Ranked first among international students.

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Publications

Lekeufack, J. et al., Conformal Decision Theory: Safe Autonomous Decisions from Imperfect Predictions, *ICRA 2024* — 2024

Guyon, J. and Lekeufack, J. Volatility is (Mostly) Path-Dependant, *Quantitative Finance* — 2023

Talks

SIAM Conference on Financial Mathematics and Engineering — June 2023, Philadelphia, US.

- Presenting the paper "Volatility is (mostly) path-dependent" at the mini symposium on volatility organized by Prof. Julien Guyon.

Consortium for Data Analytics in Risk Seminar — March 2023, Berkeley, US.

- Presenting the paper "Volatility is (Mostly) Path-Dependant".

Bloomberg Quant Seminar Series — July 2020 (Online)

- Lightning Talk: Estimating the VIX from the S&P 500 Path.

Leadership Activities

X-Afrique — Apr. 2017 – Apr. 2019, Paris, France.

Vice-President of the student association which promotes African culture in Polytechnique and discusses Africa's issues.

- Travelled across Africa to inspire and help youth to apply to further Education in France.
- Organising a forum on African entrepreneurship matching investors with young start-ups. 1000+ attendants in 2019.
- Managing a team of 25+ members.

Awards

- Bloomberg Quant Finance Fellow. — Spring 2022
- Finalist for the Two-Sigma Diversity Fellowship. — 2022
- Research Internship Award, Ecole Polytechnique. — 2020

Skills & Interests

Languages French: native speaker. English: experienced user.

Computer Science
- Advanced in Python (Numpy, Pandas, Scikit-Learn, Keras, PyTorch).
- Intermediate in R, knowledge in C++.

Hobbies Basketball, Strong interest in Africa culture and development issues, Dance.