

Bastien Batardière

26 years old

Available from April 2025

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Work Experience

- Since 2025 **INRAe, AgroParisTech, Université Paris-Saclay**
Developer and maintainer of the `pyPLNmodels` package.
- 2021-2024 **INRAe, AgroParisTech, Université Paris-Saclay – P.h.D.**
Machine learning for Multivariate Analysis of high-dimensional count data — under the supervision of Julien Chiquet and Joon Kwon.
- Teaching assistant in statistics and machine learning during academic years 2021-2023.
- Summer 2021 **INRAe, AgroParisTech, Université Paris-Saclay – Internship in statistical learning (5 months)**
Multivariate Poisson lognormal models – optimization, inference and applications in high dimension
- 2019 – 2020 **Paris Dauphine University – Coaching for second year students in Mathematics**
Linear Algebra and Analysis
- Summer 2019 **Malakoff Humanis – Internship in the actuarial services (3 months)**
Piloted a study on revaluation benefits
- Summer 2018 **MMA IARD – Summer job (2 months)**
Update of professional contracts

Education

- 2020 – 2021 **Ecole Normale Supérieure Paris-Saclay – MVA**
Second year of Master's degree in Mathematics, Vision and Learning – Optimization, Statistics, Deep learning, Computer vision
- 2019 – 2020 **Paris Dauphine University – Advanced Mathematics**
First year of Master's degree (ranked 3/12) – Functional analysis, Optimization, Stochastic process, Statistics
- 2016 – 2019 **Paris Dauphine University – Mathematics - Economy - Finance**
Bachelor with high honors (ranked 7/130) – Analysis, Algebra, Probability, Finance, Statistics

Skills

- Programming Python, R, C++, bash
Languages French (native), English (fluent)

Packages

`pyPLNmodels`¹ – *Analyzing multivariate high-dimensional count data* — Developer and maintainer

Publications

- *Zero-inflation in the Multivariate Poisson Lognormal Family*
Bastien Batardière, Julien Chiquet, François Gindraud, Mahendra Mariadassou
- *Finite-sum optimization: Adaptivity to smoothness and loopless variance reduction*
Bastien Batardière, Joon Kwon
- *Importance sampling-based gradient method for dimension reduction in Poisson log-normal model*
Bastien Batardière, Julien Chiquet, Joon Kwon, Julien Stoehr
- *Evaluating Parameter Uncertainty in the Poisson Lognormal Model with Corrected Variational Estimators*
Bastien Batardière, Julien Chiquet, Mahendra Mariadassou
- *pyPLNmodels: A Python package to analyze multivariate high-dimensional count data*
Bastien Batardière, Joon Kwon, Julien Chiquet

¹<https://github.com/PLN-team/pyPLNmodels>

