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Marwane Bourdim

Mathematics MSc Student, Université de Paris

Education

Université de Paris, Paris, France
2nd year of a Master's degree, Mathematics, Statistics and Machine Learning, *2021-2022*

Sorbonne Université, Paris, France
2nd year of a Master's degree, Mathematical Modeling applied to biology & medecine, *2020-2021*

Université de Paris, Paris, France
1rst year of a Master's degree, Applied Mathematics, *2019-2020*

Université de Paris, Paris, France
Bachelor of Science, Pure Mathematics, *2018-2019*

Lycée Jacques Decour, Paris, France
Classes Préparatoirese, Mathematics and Physics, *2016-2018*

Research Interests

Stochastic processes, Scientific computing, Systems biology, Synthetic biology
Optimal transport, Autonomous learning, Artificial Intelligence

Research Projects

Mathematical and computational modeling of the Covid-19 pandemic in France with a spatio-temporal stochastic framework,
Supervisors : Prof. Dirk Drasdo and Postdoc. Jules Dichamp *April '21 - September '21*

- Studied the influence of stochasticity and the configuration of the spatial graph on the epidemic dynamic, making use of Markov Processes, Master equations and the Gillespie algorithm.
- Implementing a human mobility model in Python.
- Co-wrote a forecoming scientific article.

Computer Skills

Languages: C++, Python, R, Bash, LaTeX
Packages and libraries: Pytorch, Pandas, Bioconductor

Languages Spoken

French (native), English (fluent), Spanish (conversational), German (can read).

Extra Interests

Philosophy of science, Economics, drawing, Art History...