El Mahdi Khribch

Education

2022-   **Ph.D. in Statistics and Data Analytics**, *Essec Business School*, Paris, France.
Supervised by Pr. Pierre Jacob

2021   **Master of Science: MVA**, *ENS Paris-Saclay*, Paris, France.
Relevant Coursework: Computational optimal transport, Convex optimization, Kernel Methods for machine learning, Computational Satistics

2020   **Master of Science: Statistical Sciences**, *Oxford University*, Oxford, UK.
Relevant Coursework: Advanced Simulation Methods, Algorithmic Foundations of Learning, Advanced Topics in Statistical Machine Learning, Bayes Methods, Graphical models

2019   **Year Abroad**, *Harvard University*, Cambridge, USA.
Relevant Coursework: Monte Carlo Methods, Non-Parametric Statistics, Time Series Analysis

2018   **Master of Science: Master of science and executive engineering**, *Mines-ParisTech*, Paris, France.
Relevant Coursework: Stochastic Processes, Probability Theory, Statistical Physics, Micro and Macroeconomics, Dynamic Systems and Control

Research Experience

Dissertation Thesis

2021   **On PAC Bayesian bounds: Faster rates in hostile grounds**, *Master's Dissertation*, Paris, France.
Extended a PAC Bayes inequalities and mutual information bounds to a class of heavy-tailed losses getting state-of-the-art fast rates.

Dissertation Thesis

2021   **On mixing Times of Metropolized Algorithm with Optimization Step (MAO): A New Framework**, *Master's Dissertation*, Oxford, UK.
Developed a new Algorithm from the class of Metropolis-Hasting Sampling Algorithms targeting a class of thin tailed distributions and derived non-asymptotic upper bounds on mixing times achieving state of the art results extending previous results obtained for MALA.

Research Assistant

2019   **Pricing American Options: The Feed Forward Neural Network approach**, *Research Assistant*, Harvard Department of Statistics.
Used Feed Forward Networks to approximate Stopping times and ran a Gaussian Process Regression to Solve the Backpropagation Problem.

Teaching Experience

2024   **Teaching Assitant**, *ENSAE*.
Simulation and Monte-Carlo Methods.

2023   **Teaching Assitant**, *ENSAE*.
Introduction to Stochastic Processes.

2023 **Teaching Assitant**, *ENPC*.
High dimensional Statistics course.

Skills

Softwares: Pyhton, R, LATEX, Java (Intermediate), Tensorflow, Pytorch

Languages

English: Bilingual

French: Native Speaker

Arabic: Native Speaker

Spanish: Intermediate (European Union Reference Level B1)

Additional Information

Interests: Football, Basketball(Played in College level regional league)

Art: Cinema, Theater

Literature: Poetry, Member of debating club PSL University

Photography: Amateur photographer interested in modern architecture and natural landscapes