



Contact



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Phnom Penh, Cambodia

Education

● Postdoctoral researcher

CNRS and ENS, Paris, France

Topic: Applied ML in Atmospheric Science
2024

● PhD in Applied Math

Sorbonne Université, Paris, France

Topic: Theoretical & Applied ML
2022

● Master M2MO

Université Paris Diderot, Paris, France

Main focus: Financial Math & Data Science
2018

● Engineer of Applied Math

ENSIIE, Evry, France

Main focus: Financial Math & Data Science
2018

● Bachelor of Pure Math

Royal University of Phnom Penh, Cambodia

Main focus: Pure mathematics
2014

Language

Khmer: mother tongue

English: fluent

French: conversational

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PhD in Applied Mathematics

Summary

I am a **senior lecturer researcher** at the Department of Applied Math and Statistics (AMS) of ITC, Phnom Penh. I specialize in theoretical and applied machine learning (ML), statistics, stochastic modeling, and data science. My postdoctoral research focused on applying **Transfer Learning Neural Networks** for reconstructing balloon-observed gravity waves within atmospheric science. I can handle various types of data, and I am proficient in **Python** (including library development), **PyTorch**, **R**, **C++**, and **MATLAB**...

Experience

● Postdoctoral researcher

Sep 2022 - Present

Laboratoire de Météorologie Dynamique - ENS

- Reconstructing balloon-observed gravity wave momentum fluxes using ML and inputs from ERA5.
- Extracting important features for the reconstruction.
- Physical interpretation.
- Analyzing SGD algorithm using continuous-time **stochastic processes**.

● PhD research

Aug 2018 - Aug 2022

LPSM - Sobronne Université

- Combine supervised and unsupervised methods for energy modeling.
- Consensual & high-dimensional aggregation methods.
- Build “**gradientcobra**” python library.

● Teaching

UFR Mathématiques - Paris 7

Sep 2018 - Mar 2024

- Data Analysis with **R** and **Rstudio**.
- Data Mining with **R** and **Rstudio**.
- Exploratory Data Analysis with **R** and **Rstudio**.
- Algorithm and Programming with **Python**.
- Big Data Technologies with **Python** and **Spark**.
- Statistical Inference and Data Modeling.

Institute of Technology of Cambodia

Sep 2024 - Present

- Statistics (Year 3)
- Exploratory Data Analysis & Unsupervised Learning (Year 5)
- Advanced Machine Learning (Master 2)
- EDA & Unsupervised Learning (Master 1)

Publication

- Estimating balloon-observed gravity wave momentum fluxes using ML & input from ERA5. *Published in JGR - Atmosphere, 2024.*
- Gradient COBRA: A kernel-based consensual aggregation for regression. *Published in Journal of Data Science, Statistics and Visualization, 2023.*
- A consensual aggregation of randomly projected high-dimensional features of predictions. *Available in HAL, 2022.*
- Machine learning methods applied to the global modeling of event-driven pitch angle diffusion coefficients during high-speed streams. *Published in Frontiers Physics, 2022.*
- KFC: A clusterwise supervised learning procedure based on aggregation of distances. *Published in Journal of Statistical Computation and Simulation, 2021.*