

Sothea Has

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EDUCATION

- France** **Sorbonne University - Paris 6**
2018 - Present Ph.D student in Statistical Learning under supervision of Mathilde Mougeot and Aurélie Fischer
Research topic *Consensual aggregation and distance measurements for statistical learning. Theoretical contributions and applications to the field of energy.*
 🔗 Combining of supervised & unsupervised machine learning methods for predictions.
 🔗 Kernel-based consensual aggregation of several predictors for predictions.
 🔗 Consensual aggregation of random projected high-dimensional features.
- France** **University Paris Diderot - Paris 7**
2017 - 2018 Master 2 Random Modelling and Data Science (M2MO)
Project Data Science for Company, Massive Data Processing (R-programming).
Exam Statistical Learning, Statistical Modeling, Diffusion Statistics, Stochastic Calculus.
Both Machine Learning (Python), Monte Carlo Method (C++).
- France** **École Nationale Supérieure d'Informatique pour l'Industrie et l'Enterprise - ENSIE**
2016 - 2017 Master 1 Applied Mathematics
Project Time Series, Simulation Methods, Research Project in Finance, Machine Learning.
Exam Stochastic Process, Operation Research, Stochastic Calculus in Finance.
Both Data Analysis, Numerical Methods for PDE, C++.
- Cambodia** **Royal University of Phnom Penh - RUPP**
2014 - 2015 Master 1 of Mathematics
2009 - 2013 Bachelor's Degree of Mathematics

PUBLICATIONS

- April 2021 🔗 KFC: A clusterwise supervised learning procedure based on aggregation of distances. *Published in Journal of Statistical Computation and Simulation, with Aurélie Fischer and Mathilde Mougeot.*
- 2021 🔗 Comparison of Various Machine Learning Methods Applied to the Global Modeling of Event-Driven Pitch Angle Diffusion Coefficients During Geomagnetic Storms.
Research topic *Coupled Feedback Mechanisms in the Magnetosphere-Ionosphere System, abstract accepted in Frontiers, with G. Kluth, J.F. Ripoll, A. Fischer, M. Mougeot, and E. Camporeale.*
- 2021 🔗 A kernel-based consensual aggregation for regression. *Submitted.*
- 2021 🔗 Consensual aggregation of random projected high-dimensional features for regression. *In progress and will be submitted in the middle of May 2021.*

EXPERIENCES

2018 - Present **LPSM (UMR 8001) and UFR Mathematics Université de Paris**

Ph.D research & teaching:

- 📖 Practical class of Data analysis (R-programming).
- 📖 Practical class of Data mining (R-programming).
- 📖 Tutorial class of Statistical modeling.

2018 **LPSM (UMR 8001) Université de Paris**
April - Sep **M2 internship: Predictive Models based on Clustering with Bregman divergences and Local Predictions**

Analysis of sensitivity of K-means clustering with Bregman divergences on several types of datasets, the construction of the corresponding local models and predictions.

2017 **Laboratory of TELECOM SudParis**
June - Sep **M1 internship: Optimization Problem with Simulated Annealing Algorithm**

The algorithm constructs a sequence of Markov chain to estimate the global optimizer of a given function (deterministic or noisy). I modified some tools to improve the performance of the algorithm.

SCHOLARSHIPS & AWARDS

France **LPSM Scholarship**
2018 - Present Ph.D and research grant.

France **ENSIIE Scholarship**
2017 - 2018 Second year of master's degree.

France **Erasmus+ Scholarship**
2016 - 2017 First year of master's degree.

Cambodia **Marubeni Corporation Awards**
2010 - 2013 For highest GPA of 3.94/4.00 in the foundation year at RUPP.

Cambodia **Ministry of Education, Youth and Sport**
2009 - 2013 4-year scholarship for bachelor's degree of mathematics at RUPP.

LANGUAGES & PROGRAMMING

Languages Khmer (Mother tongue), English (fluent) and French (conversational).
Programming R, Matlab, Scilab, Python, C++, \LaTeX .

PERSONAL INTERESTS

Reading Data science, new studies of ML, DL, AI.
Sports Volleyball, basketball and football.
Other interests Music, guitar, a little bit piano and drum, drawing.