

# Sothea Has

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## EDUCATION

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- France** **Sorbonne University Pierre and Marie Curie - Paris 6**  
2018 - Present **Ph.D student of 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 on 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

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- 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 on random projected high-dimensional features for regression.**  
*In progress.*

## EXPERIENCES

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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

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2018 - Present **LPSM Scholarship**  
Ph.D and research funds.

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

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

## LANGUAGES & PROGRAMMING

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

## PERSONAL INTERESTS

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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.