Mathurin Massias

Machine Learning PhD student at Inria Saclay (Parietal Team)

PHONE NUMBER: +33 (0) 6 50 01 00 73
EMAIL: mathurin.massias@gmail.com
WEBSITE: https://mathurinm.github.io

Skills

MATHEMATICS: Convex optimisation, sparsity, proximal methods, high dimension
COMPUTER SCIENCE: Python (excellent), R (good), Matlab (good)
Github: http://github.com/mathurinm
StackOverflow: https://stackoverflow.com/users/2902280/p-camilleri
LANGUAGES: English (fluent, 5 months stay in India in 2013), Spanish (basics)

Professional experience

SEPT. 2016 - DEC. 2019 (3 YEARS)
INRIA (Université Paris-Saclay, France): PhD student in the Parietal team, supervised by A. Gramfort and J. Salmon
High dimensional sparse regression, with coloured heteroscedastic noise
Machine Learning: Convex and non-convex optimisation, Inverse problems, Sparsity, High dimension
Technical framework: Python (Cython, numpy, sklearn)
Publications: [1, 2, 3, 4, 5, 6]

FEB. 2019 - MAY 2019 (3 MONTHS)
U. of Tokyo/RIKEN (Japan), Deep Learning Theory team: intern, supervised by T. Suzuki
Work on gradient Langevin dynamics for non-convex regression in RKHS
Machine Learning: Stochastic differential equations, Markov chains, Ergodicity
Publications: currently writing

JUNE 2015 - JUNE 2016 (1 YEAR)
CARDIOLOGS (Paris, France): Data scientist
Design and implementation of automatic heart disease screening algorithms.
Supervised learning on a dataset of 300,000 ECGs.
Machine Learning: Convolutional neural networks, Recurrent neural networks
Technical framework: Python (numpy), Tensorflow, Caffe, Theano/nolearn/lasagne

OCT. 2014 - MAR. 2015 (6 MONTHS)
DREEM-DEVICES (Paris, France): Part-time data scientist
Classification and dimensionality reduction on EEG signals.
Machine Learning: Signal processing, Clustering (K-Means, Meanshift, GMM, HMM)
Technical framework: Python (numpy, sklearn)

Education

SEPT. 2016 - SEPT. 2019
Parietal Team, INRIA Saclay, Université Paris-Saclay (Saclay, France): PhD student
Title: Sparse high dimensional regression in the presence of heteroscedastic noise
Advisors: Alexandre Gramfort, Joseph Salmon

SEPT. 2014 - APR. 2015
ENS Cachan (Cachan, France): MSc in Machine Learning (MVA)
Summa cum laude (average grade: 16.8/20)

SEPT. 2011 - APR. 2015
Ecole Centrale Paris (Paris, France): Engineering degree
Major in Applied Mathematics and Data Science
Average grade: 16.3/20

JAN. 2013 - MAY 2013
Indian Institute of Science (Bengalore, India): Exchange semester
Pure Mathematics Department

Interests

Modern history, Antic history (latin language)
Photography

Publications

[1] Q. Bertrand*, **M. Massias***, A. Gramfort, and J. Salmon. Concomitant Lasso with repetitions: beyond averaging multiple realizations of heteroscedastic noise. *Arxiv preprint arXiv:1902.02509*, 2019.

[2] **M. Massias**, A. Gramfort, and J. Salmon. Celer: a fast solver for the Lasso with dual extrapolation. In *ICML*, 2018.

[3] **M. Massias**, O. Fercoq, A. Gramfort, and J. Salmon. Heteroscedastic multitask concomitant Lasso for sparse multimodal regression. In *AISTATS*, 2018.

[4] **M. Massias**, J. Salmon, and A. Gramfort. Gap safe screening rules for faster complex-valued multi-task group Lasso. *SPARS*, 2017.

[5] **M. Massias**, , A. Gramfort, and J. Salmon. Résolution rapide de problèmes de type Lasso: des règles de safe screening aux working sets. *GRETSI*, 2017.

[6] **M. Massias**, A. Gramfort, and J. Salmon. From safe screening rules to working sets for faster Lasso-type solvers. *Arxiv preprint arXiv:1703.07285*, 2017.