

Anass Aghbalou

PhD researcher at Telecom Paristech

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Education

- 2013–2015 **Classe preparatoire Moulay Al Hassan (MP), Tanger, Morocco.**
Intensive preparation for French Engineering schools: Mathematics, Physics, Engineering Science, Computer science.
- 2015–2018 **Master of science in Engineering, Ecole Centrale de Lyon, Lyon, France.**
Applied mathematics, Statistics, Physics and Computer science.
- 2018–2019 **Master of science in statistics and finance, Paris Dauphine University, Paris, France.**
Mathematics, Finance, Machine learning, Deep learning, Generalized linear models.

WORK EXPERIENCE

- Dec 2020 **Phd Student in machine learning, Engineering school: Telecom Paristech, Paris.**
- Improved hyperparameter selection through unbiased cross-validation techniques.
 - Investigated the robustness and stability of regularized hypothesis transfer learning.
 - Enhanced cost-sensitive learning for imbalanced classification problems.
- Jan-Dec 2020 **Research engineer in machine learning, Engineering school: Telecom Paristech, Paris.**
- Applied bootstrap techniques to study the dependence between features for anomaly detection.
 - Contributed to the development of "SIR Extreme," a dimensionality reduction algorithm designed for extreme regions.
- Oct-Dec 2020 **Data Scientist, Natixis Payment Solutions, Paris.**
- Developed a machine learning-based fraud detection solution to minimize bank transfer fraud.
 - Clustered large datasets of bank transfers to analyze fraud partitions.
 - Utilized various resampling methods to address class imbalance problems.
- Avr-Sept 2018 **Modeling engineering and process control Intern, RIO TINTO, St Jean de Maurienne.**
- Modeled magnetohydrodynamics effects in electrolytic cells.
- Mai-Aout 2017 **Data Scientist Intern, Nomad Education, Paris.**
- Developed and deployed data processing and visualization programs.
 - Refined categorization using machine learning classification algorithms.

Publications

- Bernoulli 2022 Tail inverse regression for dimension reduction with extreme response.
- AISTATS 2023 On the bias of K-fold cross validation with stable learners.
- ICML 2023 Hypothesis transfer learning with surrogate classification losses: generalization bounds through algorithmic stability.

Preprint

Cross validation for rare events, <https://arxiv.org/abs/2202.00488>.

Technical and IT skills

- Languages PYTHON, R, MATLAB, SAS, MYSQL, C++.
- Frameworks PANDAS, SCIKIT-LEARN, PYTORCH, TENSORFLOW, KERAS.
- Techniques Machine Learning, Deep Learning, optimization, applied analysis, model selection, applied statistics, big data and data visualization.

Languages

French : Bilingual

English : Fluent

Arabic : Mother tongue

Interests

Cinema

Football

Swimming

Travel