# Grégoire Mialon

École Normale Supérieure Département Informatique Paris, France

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### Research

2018 - Now INRIA / École Normale Supérieure (Paris, France) - PhD student

Member of Sierra team and Thoth team.

Building machine learning models that learn with few data. Advisors: Pr. Julien Mairal, Pr. Alexandre d'Aspremont.

2016 (5 months) Massachussets Institute of Technology (Boston, USA) - Research Intern

Nuclear Science and Engineering, Offshore Floating Nuclear Plant group. Built a fast model for predicting damage resulting from ship collisions

using finite elements and high performance computing. Tutors: Pr. Neil Todreas, Pr. Koroush Shirvan.

### Education

2017 - 2018 ENS Paris-Saclay (France) - Msc. Mathematics, Vision and Learning (MVA)

Statistical Learning Theory, Deep Learning, Natural Language Processing (NLP).

2013 - 2017 École polytechnique (Palaiseau, France) - Graduate Student

Majored in Theoretical Physics and Economics. Minored in Business Studies and Entrepreneurship.

2010 - 2013 Lycée du Parc (Lyon, France) - Preparatory Classes: Bachelor level

PCSI-PC\*: courses in Mathematics, Physics to prepare top-level science universities.

## Job experience

2018 - 2020 Université Paris-Dauphine (France) - Teacher (M2 MASH)

Python for Data Science and Machine Learning.

2017 - 2018 eXplain (Paris, France) - Data Scientist, NLP

eXplain (ex-Liegey Muller Pons) is a company focusing on electoral campaign technology. The company closely worked for the last two winners of the french presidential elections.

Developed and sold an automated press analysis product (relying on NLP).

Managers: Pr. Vincent Pons, Arthur Muller (founders).

2016 - 2017 Lycée Saint-Louis (Paris, France) - Teaching Assistant in Preparatory Classes

Tutored and tested weekly three students in physics for nationwide examination.

2015 (3 months) Ministry for Foreign Affairs (Paris, France) - Civil Servant Intern

Drafted notes on terrorism for diplomats and political leaders on a mission.

Tutor: Emmanuel Cocher.

2013 - 2014 92ème Régiment d'Infanterie (Clermont-Ferrand, France) - Officer cadet

Assistant to the platoon leader. Trained young soldiers. Received commando training.

# Papers

- G. Mialon, A. d'Aspremont and J. Mairal. Screening Data Points for Empirical Risk Minimization via Ellipsoidal Regions and Safe Loss Functions (AISTATS 2020).

- A. Bietti\*, G. Mialon\*, D. Chen and J. Mairal. A Kernel Perspective for Regularizing Deep Neural Networks (ICML 2019).

## Past projects

#### During Msc. MVA:

- Data Challenge: Predicting cancer from DNA for Stéphane Mallat's Curse of Dimensionality course 2018 (ranked first decile).
- Built a Tweet normalizer and a Parser for Emmanuel Dupoux's NLP course.
- Primal and dual solvers for the SVM problem for Alexandre d'Aspremont's Convex Optimization course.

See GitHub for implementations and course homework. Research work coming soon.

#### **During Graduate Level:**

- Data Challenge: RAMP Drug Test Challenge 2017 (ranked first decile).
- Data Challenge: AXA Data Challenge 2016 (ranked first quartile).

# Awards and Fellowships

EDF Énergies nouvelles Fellowship, 2016 - for pursuing research at MIT. Outstanding Investment, 2016 - École polytechnique, for organizing rowing tournaments and wine-tasting events, and involvment in X-Microfinance.

# Languages and Skills

French (mother tongue), English (TOEIC: 965/990), German (advanced). Python (advanced), Rowing (involved in student contests).