

Grégoire Mialon

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Research

- 2018 - *Now* **Inria & École Normale Supérieure (Paris, France)** - PhD student
- Member of Sierra team and Thoth team.
 - Main focus: learning with neural networks when labelled data is scarce.
 - Also working on Natural Language Processing (NLP) and Causal Inference.
 - Advisors: **Pr. Julien Mairal**, **Pr. Alexandre d'Aspremont**.
- 2016 (5 months) **Massachusetts Institute of Technology (Cambridge, MA)** - 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.
 - Advisors: **Pr. Neil Todreas**, **Pr. Koroush Shirvan**.

Education

- 2017 - 2018 **ENS Paris-Saclay (France)** - Msc. Mathematics, Vision and Learning (MVA)
- Founded in 1996, it is the oldest and most prestigious Master's program in Machine Learning in France.
 - Statistical Learning Theory, Deep Learning, NLP.
- 2013 - 2017 **École polytechnique (Palaiseau, France)** - Graduate Student
- Founded in 1794, the École polytechnique is the most prestigious Science and Engineering university in France, with a strong focus on Applied Mathematics.
 - Majored in Theoretical Physics.
 - Minored in Economics and Business Studies.
- 2010 - 2013 **Lycée du Parc (Lyon, France)** - Preparatory Classes: Bachelor level PCSI-PC*: courses in Mathematics, Physics to prepare top-level science universities.

Teaching

- 2018 - 2021 **Université Paris-Dauphine (France)** - Teacher (M2 MASH)
- Python for Data Science and Machine Learning.
- 2016 - 2017 **Lycée Saint-Louis (Paris, France)** - Teaching Assistant in Preparatory Classes
- Tutored and tested weekly students in physics for nationwide examination.

Job experience

- 2019 - 2020 **Athling (Paris, France)** - Consultant
- Evaluating the impact of machine learning on commerce and distribution. This report was commissioned by the french Prospective Observatory for Trade.

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)**.

2015 (3 months) **Ministry for Foreign Affairs (Paris, France)** - Civil Servant Intern
- Drafted notes on terrorism for diplomats and political leaders on a mission.
- Manager: **Emmanuel Cocher**.

Publications

- G. Mialon*, D. Chen*, A. d'Aspremont and J. Mairal. A Trainable Optimal Transport Embedding for Feature Aggregation and its Relationship to Attention (*ICLR 2021*).
- 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*).

Invited Talks

- Paris NLP Meetup, Virtual, 2021. *How Natural Language Processing is shaping Machine Learning*.
- Gatsby Unit, UCL, 2019. *Screening Data Points for Empirical Risk Minimization via Ellipsoidal Regions and Safe Loss Functions*.
- eXplain, Paris, 2019. *Sample Screening in Machine Learning*.

Services

- Currently organizing a reading group on Causal Inference for Inria.
- Reviewing: Neurips 2020 (Pre-registration experiment).

Past projects

- 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.
- Data Challenge: Paris RAMP Drug Test Challenge 2017 (ranked first decile).

Awards and Fellowships

2016 **EDF Énergies nouvelles Fellowship** - for pursuing research at MIT.

2016 **École polytechnique Outstanding Investment** - for involvement in the campus life and in a microfinance non-profit organization.

Languages and Skills

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