Mathieu Molina

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Experience

2022 – Present, Palaiseau, France
PhD Student, Inria FAIRPLAY – CREST ENSAE
Supervised by Vianney Perchet, Patrick Loiseau, and Nicolas Gast

- Conducted research related to group-fairness, online algorithms and auctions, resulting in 4 papers with main contributions and 2 with smaller contribution (see mathieu-molina.github.io)
- Led the logistical and scientific organization of 3 days team seminar near Caen, to help exchange expert knowledge and foster the development of new collaborations among team members
- Mentored an intern on a prophet inequality project and served as a teaching assistant for the Data Science course at Mines Paris in 2022 and 2023

Apr 2021 – Sept 2021, Grenoble, France
Research intern, Inria POLARIS

- Trained a fair classifier with a high number of protected subgroups, and analyzed possible trade offs of utility and fairness across various fairness metrics
- Investigated research problems related to fairness in Supervised Learning, produced experimental exploration, survey of the literature, and statistical modelization

Apr 2020 – Aug 2020, Luxembourg
Program Manager Intern, Amazon EU Private brands

- Implemented strategies to prevent missed sales by proactively addressing inventory shortages, utilizing SQL queries to build automatic weeks of cover forecast, and optimizing order fulfillment processes
- Contributed to revenue growth by leveraging analytics to compare market trends and product performance, highlighting product categories for targeted marketing and pricing adjustments
- Mitigated losses due to logistics issues by identifying anomalies in sales profit and holding costs, conducting root cause analyses, and proposing actionable solutions

Aug 2019 – Jan 2020, Boston, USA
Research intern, Boston Children's Hospital – Harvard University

- Collaborated with healthcare experts to align goals on common research project, advising on the capacities and limitations of machine learning tools
- Used Pandas to process messy data, conducted thorough data cleaning, with advice from physicians, and engineered features to improve classifier performance
- Contributed to state level influenza forecasting (used later for COVID predictions). Developed predictions for blood potassium levels in infants with data from ICU to minimize blood draws from testing

Education

Mines Paris – Engineering degree, geostatistics and applied probability specialization — Sept 2017 – Sept 2021

PSL University – Artificial Intelligence, Systems, Data Master degree — Sept 2020 – Sept 2021

Tokyo Institute of Technology – Exchange semester, AI and applied mathematics — Sept 2018 – Feb 2019

Lycée Louis le Grand / Henri IV – CPGE MPSI/PSI* — Sept 2015 – Sept 2017

Skills

Programming: Python – intermediate (SciPy-Pandas-Sklearn-Keras), SQL – intermediate, Java – basic, R – basic,
Languages: English – fluent (Toefl IBT 112/120), Chinese – intermediate, Japanese – basic