

DARRIN Maxime

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EDUCATION

ÉCOLE DES MINES PARIS

ENGINEERING DEGREE: INNOVATION
AND PUBLIC AFFAIRS
2019-2021 | Paris, France

ÉCOLE NORMALE SUPÉRIEURE DE LYON

MS IN COMPUTER SCIENCE
2018-2021 | Lyon, France

BS IN FUNDAMENTAL COMPUTER
SCIENCE

2017-2018 | Lyon, France

SORBONNE UNIVERSITÉ

MS IN APPLIED MATHEMATICS FOR AI
2020-2021 | Paris, France

PARIS 1 PANTHÉON SORBONNE

MA IN PHILOSOPHY OF SCIENCE
2019-2021 | Paris, France

LINKS

Github:// [Icannos](#)

LinkedIn:// [Maxime-Darrin](#)

G Scholar:// [Maxime Darrin](#)

Twitter:// [Icannos](#)

Website:// [Maxime Darrin](#)

COURSEWORK

Business ready ML

ML systems deployment

Advanced Machine Learning

Statistics and Probability

Advanced Algebra

Information Theory

Stochastic algorithms and finance

Data structure

Large scale databases

Ethic of AI

Public administration

Public affairs

Public policy

SKILLS

PROGRAMMING

Over 5000 lines:

Shell • Python • OCaml

• \LaTeX • C/C++

Over 1000 lines:

Scala • PHP • Assembly

RESEARCH EXPERIENCE

ILLS, CENTRALESUPELEC / MILA, MCGILL UNIVERSITY | PHD STUDENT

Currently | Montreal, Canada

Joint Phd on information theory for robustness and risk assessment of language models.

- Prediction of missclassification and risk assessments of machine learning models.
- Information-theoretic analysis of machine learning models.
- Trustworthy text generation, hallucination and failure detection.
- Redteaming, LLM inversion.

FACEBOOK | RESEARCH INTERN

May 2021 - September 2021 | Paris, France

- Automatic theorem proving by using natural language processing algorithms.
- AlphaZero-like algorithm to explore proof trees.
- Automatic formal verification.

CENTRALESUPELEC | RESEARCH INTERN

May 2020 - September 2020 | Paris, France

Work on quantifiable certification of ML algorithms and adversarial robustness assessment.

WORLDLINE | RESEARCH INTERN

April 2019 - September 2019 | Lyon, France

- Work on secure and private distributed learning/federated learning.
- Developing fraud detection / anomaly detection algorithms to detect credit card frauds in real-time.

CNRS | RESEARCH INTERN

April 2018 - September 2018

- Design of ML algorithm to decode positional attention of human patient from EEG data.
- Real time classification and decoding of EEG data to allow neurofeedback.

TEACHING

AIVANCITY | ASSOCIATE PROFESSOR

Currently, Paris, France

- Robustness and safety of AI system and how to ensure them. How to design robust systems and to ensure a high level of confidence in AI based decisions.
- Business ready and safe machine learning systems.

OPEN-SOURCE PROJECTS

PGN TO TEX A small personal project to convert PGN chess games to LaTeX and produce chess books from chess studies.

PUBLICATIONS

- [1] M. Darrin, M. Faysse, G. Staerman, M. Picot, E. Dadalto Camara Gomez, and P. Colombo. Todd: A tool for text OOD detection., 2 2023.
- [2] M. Darrin, P. Piantanida, and P. Colombo. Rainproof: An umbrella to shield text generators from out-of-distribution data, 2022.
- [3] M. Darrin, A. Samudre, M. Sahun, S. Atwell, C. Badens, A. Charrier, E. Helfer, A. Viallat, V. Cohen-Addad, and S. Giffard-Roisin. Classification of red cell dynamics with convolutional and recurrent neural networks: a sickle cell disease case study. *Scientific Reports*, 13(1):745, 2023.
- [4] M. Darrin, G. Staerman, E. D. C. Gomes, J. C. Cheung, P. Piantanida, and P. Colombo. Unsupervised layer-wise score aggregation for textual ood detection. *arXiv preprint arXiv:2302.09852*, 2023.