

Achraf Azize

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EDUCATION

PhD Candidate - Scool (Inria) - University of Lille

Lille, FR

Interests: Differential Privacy; Multi-armed bandits; Privacy auditing; Membership Inference

Oct. 2021 – Present

ENS Paris Saclay: Master's Degree MVA

Gif-Sur-Yvette, FR

Master of Research in Mathematics, Computer Vision and Machine Learning

Sep. 2020 – Aug 2021

Ecole Polytechnique: French Engineering School

Palaiseau, FR

Major in Applied Mathematics and Computer Science, Minor in Physics

Aug. 2017 – Aug 2021

Moulay Youssef: Preparatory Classes in Science

Rabat, MA

Undergraduate course in Sciences leading to the entrance to the French Grandes Écoles

Sep. 2015 – May 2017

PUBLICATIONS

1. **Achraf Azize** and Debabrota Basu. How much does each datapoint leak your privacy? Quantifying the per-datum membership leakage. arXiv preprint, 2024.
2. **Achraf Azize** and Debabrota Basu. Concentrated differential privacy for bandits. IEEE SaTML, 2024.
3. **Achraf Azize**, Marc Jourdan, Aymen Al Marjani, and Debabrota Basu. On the complexity of differentially private best-arm identification with fixed confidence. NeurIPS, 2023.
4. **Achraf Azize** and Debabrota Basu, Rényi differentially private bandits. PPAI@AAAI, 2023.
5. **Achraf Azize** and Debabrota Basu. When privacy meets partial information: A refined analysis of differentially private bandits. NeurIPS, 2022.

WORK EXPERIENCE

Teaching Assistant

Oct 2021 – Present

ENS Paris-Saclay, Ecole Centrale de Lille

Lille, FR

- Graphs in Machine Learning, ENS Paris-Saclay (MVA Masters), 2021-2022, 2022-2023 and 2023-2024, with Daniele Calandriello. Course [link](#).
- Python Practicals, Ecole Centrale de Lille (SDIA Masters), 2022-2023, Course [link](#).

Research Intern

April 2021 – September 2021

InstaDeep

Paris, FR

- Multi-Object Manipulation using Relational Reinforcement Learning and Graph Attention Networks
- Achieved zero-shot generalization by successfully controlling a simulated robot's arm to stack objects into a previously unseen number of blocks and configurations

Report available [here](#)

Machine Learning Research Intern

April 2020 – August 2020

DataLab Groupe Crédit Agricole

Paris, FR

- Developed an Interpretability toolbox (Python), fully integrated into the DataLab's AutoML solution (MLBox)
- Developed an end-to-end AutoDL Script, based on Microsoft NNI framework, that finds automatically the optimal neural architecture for a tabular dataset, within some search space, considering the time and computational budget

Code and scripts available [here](#).

Development Intern

June 2019 – August 2019

PerfectStay

Paris, FR

- Developed a new Script in Go, that reverse engineered with high accuracy (99%) the results of a Pricing Program (iVector) used by PerfecStay, in 4 times less time (from 12 hours to 3 hours)

AWARDS AND HONORS

French Government Major-Excellence Scholarship (Top seven in Morocco)

Member of the Moroccan Mathematics Olympiad Team (Top 12)

Ranked 2nd in the Concours National Commun (CNC)