

ABBAHADDU YASSINE

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RESEARCH EXPERIENCE

Ecole Polytechnique, Laboratoire d'Informatique de l'X

July 2022 - Present

PHD candidate

Supervisors : Michalis Vazirgiannis, Fragkiskos D. Malliaros , Johannes F Lutzeyer

PhD in Graph/Geometric machine learning.

Ecole Polytechnique, Laboratoire d'Informatique de l'X

January 2022 - June 2022

Research Engineer

Graph/Geometric machine learning.

NAVER LABS EUROPE

April 2021 - October 2021

Research Intern

Supervisor : Jean-Michel Renders

- Evaluating the robustness of click models to policy distributional shift.
- Deep exposure models for unbiased recommendation.
- Learning to rank by optimizing the Normalized Discounted Cumulative Gain (NDCG) measure.

INRIA Saclay

October 2020 - April 2021

Research Assistant,

Supervisor : Fragkiskos D. Malliaros

- Extension of deep learning algorithms to nonEuclidean data represented as Multilayer Networks (graphs).
- Application to the problem of graph-based multi-omics data integration in bioinformatics

French National Center for Scientific assistant - CNRS

October 2018 - June 2019

Research Assistant,

Supervisor : Ludovic Goudenège & Gautier Viaud

- The study of Partial Differential Equation mixed with free boundary problems.
- Deep Learning algorithms for stochastic control problems on finite horizon in high-dimension.

Hedge Fund of La Française Group

March 2020 - August 2020

Research Intern

- Optimal Control Algorithms for Long/Short Equity Trades in Variance Swap Pairs Strategies.

Societe Generale Corporate and Investment Banking

September 2019 - February 2020

Exotic Equity Derivatives Trading/Research Intern

- Calibration of Stochastic Volatility models for pricing Exotic Equity Derivatives, e.g. Autocalls.
- Dynamic Hedging Optimization: An Optimal Control Approach.

EDUCATION

PHD Student - Ecole Polytechnique

July 2022 - Present

PhD in Graph/Geometric machine learning.

MVA Master (Mathematics, Vision, Learning) - ENS Paris Saclay*September 2021 - December 2022*

Master's degree in Mathematics, Machine Learning and Computer Vision.

Highest honors

Relevant Courses : Deep Learning, Natural Language Processing, Object Recognition & Computer Vision, Large-Scale Distributed Optimization, Probabilistic Graphical Models, Reinforcement Learning.

Ecole CentraleSupélec Paris-Saclay*September 2017 - December 2022*

Master of Science, Applied mathematics & Engineering.

High honors

Relevant Courses : Stochastic calculus, Probability, Statistics Machine learning, Partial differential equations, Financial risks modeling, Algorithmic and programming.

CPGE MOULAY YOUSSEF , MPSI - MP*September 2015 - September 2017*

An intensive program in Mathematics, Physics, Engineering science and Computer science.

PUBLICATIONS

S. ENNADIR, **Y. ABBAHADDOU**, M. Vazirgiannis, and H. Bostrom. A simple and yet fairly effective defense for graph neural networks. In *The Second Workshop on New Frontiers in Adversarial Machine Learning, 2023*.

Y. ABBAHADDOU, J. Lutzeyer, and M. Vazirgiannis. Graph neural networks on discriminative graphs of words. In *NeurIPS 2023 Workshop: New Frontiers in Graph Learning, 2023*.

Y. ABBAHADDOU, S. ENNADIR, J. Lutzeyer, and M. Vazirgiannis. Bounding the expected robustness of graph neural networks subject to node feature attacks. Submitted to *The Twelfth International Conference on Learning Representations, 2023*.

SUPERVISION

Kexin Xu. *Incorporating Solvent Information in Graph Diffusion Models for Protein Docking*. First Year Master Student, Research Intern from *Shanghai Jiao Tong University*

TEACHING

INF554 Course - *Machine and Deep learning*, Ecole Polytechnique.

SKILLS AND LANGUAGES

Languages	French, English, Arabic
Skills	Python, R, JAVA, Matlab, SQL, VBA

ACHIEVEMENTS & AWARDS

Top 1% students in Morocco (Concours National Commun ranking 2017).

French Government's Major-Excellence Scholarship (37,830 €).

Merit Scholarship of the CIUP (5,000 €)

EXTRA-CIRRICULAR

Sport: Football, Mixed Martial Arts

Interest: Photography