

# ABBAHADDOU YASSINE

+33666408799 ♦ [abbahaddou.yassine@gmail.com](mailto:abbahaddou.yassine@gmail.com)

[abbahaddou.github.io](https://abbahaddou.github.io)

## RESEARCH EXPERIENCE

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### **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 Research - 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

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**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**

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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**

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

**TEACHING**

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

**SKILLS AND LANGUAGES**

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<b>Languages</b>	French, English, Arabic
<b>Skills</b>	Python, R, JAVA, Matlab, SQL, VBA

**ACHIEVEMENTS & AWARDS**

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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**

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Sport: Football, Mixed Martial Arts

Interest: Photography