

Reda Belhaj-Soullami

📞 (+33) 6 98 64 16 97 • ✉️ reda.belhaj-soullami@polytechnique.edu
🌐 redabelhaj.github.io • in Reda Belhaj-soullami • 🌐 redabelhaj

Education

Ecole polytechnique

Paris

"Ingénieur polytechnicien" diploma - Equivalent to a Master's degree

2018-2022

Major in Applied mathematics. Relevant courses : advanced probability theory, statistics and statistical learning, Markov chains and Martingales, Machine Learning, Monte-Carlo simulation, Stochastic calculus for finance, optimization and control, Deep Learning for computer vision, programming, Design and analysis of algorithms, deep learning for computer vision, real analysis, functional analysis

Lycée privé Sainte-Geneviève

Versailles

Preparatory classes for french Grandes Ecoles

2016-2018

Majors in Mathematics and Physics - Intensive preparation in pure science to competitive exams for entrance into the french Grandes Ecoles

Work Experience

Squarepoint Capital

London

Quantitative research intern

March 2021-August 2021

Research and implementation of strategies within the firm's automated trading framework. Analysis of large data sets using advanced statistical methods to identify trading opportunities.

NukkAI

Paris

Research engineer intern

June 2020 - August 2020

Design of a deep multi-agent reinforcement learning algorithm for radar tracking. This work led to a publication of a paper at CAID (Conference for AI in Defense).

Lycée privé Sainte-Geneviève

Versailles

Oral Examiner

September 2019 - June 2020

Providing 45 students in weekly mathematics oral examination, in preparation of the competitive exams for entrance into the french Grandes Ecoles.

Fondation du lycée Louis-le-Grand

Paris

Mission leader

September 2018 - April 2019

Ecole polytechnique's leadership training : Tutor in charge of 25 students, (weekly mathematics and physics classes), in charge of various projects to promote excellence and social diversity in french "Grandes Ecoles" : development of the foundation website, organization of informational conferences, collaboration for the attribution of scholarships...

Publications

Nouredine Nour, Reda Belhaj-Soullami, Cédric Buron, Alain Peres, and Frédéric Barbaresco. Multi-radar tracking optimization for collaborative combat, 2020.

Academic Projects

Note : Please consult my personal website for a full list, as well as additional information about these projects : reports, code...

Taking mobility into account in epidemiological models

Research project

January 2021 - March 2021

This project aims to study and develop epidemiological models, based on discrete-time SEIR models or on transport PDE models, taking into account the mobility dimension.

Retweet prediction on Covid-19 tweets

Course project

November 2020

The goal was to find a ML algorithm to predict the number of retweets of Covid-19 related tweets.

Reinforcement learning for the game of Snake

Research project

September 2020 – December 2020

Design and implementation of a Reinforcement learning algorithm for the classic game of Snake

EfficientNet for object detection

Research project

March 2020 – June 2020

A computer vision project aiming to use the EfficientNet technique for the task of object detection.

User Scheduling in 5G

Research project

January 2020

A combinatorial optimization project, aiming to design optimal packet schedulers for allocating channels to users

Prediction of probability of default (with BNP Paribas)

Collective Scientific Project at Ecole polytechnique

September 2019 – May 2020

Machine learning and Deep Learning project (1 day a week) : identifying and implementing several learning techniques to enhance the estimation of the probability of default.

Certifications

Coursera

Machine Learning certifications

July 2019

Neural Networks and Deep Learning - Improving Deep Neural Networks : Hyperparameter tuning, Regularization and Optimization - Structuring Machine Learning Projects

Languages

French : Native

English : Fluent (*TOEFL* : 111/120)

Spanish : Intermediate.

IT skills

Python (including main ML/DL libraries), Java, \LaTeX .

Activities and interests

Music: Guitarist since I was 11 - Blues, Rock, Metal, Fusion **Cinema, Gastronomy**