

# Imad EL HANAFI

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*CV for a 6-month internship in Machine Learning, starting in April 2018*

## EDUCATION

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- 2017 – 2018** *MSc in Data Science, Ecole Polytechnique, Paris-Saclay University, France*  
MSc in Data Science at the Ecole Polytechnique (Top ranked French engineering school).  
Advanced Machine learning, Statistical Learning Theory, Big Data Analysis,  
Probabilistic Graphical Models, Deep Learning and Online Learning.
- 2014 – 2018** *Master of Engineering, ENSTA ParisTech, Paris-Saclay University, France*  
Simulation and Mathematical Engineering, major in Optimization and Data Science.  
Operational Research, Probability theory - Martingales and Markov Decision Process,  
Advanced Statistics, Numerical Analysis, Computational Finance and module in Stochastic Models.
- 2012 – 2014** *Preparatory school (CPGE), Lycée Moulay Youssef, Rabat, Morocco*  
Specialized in Mathematics, Physics and Computer Science – MPSI – MP\*  
Intense preparation for entrance examination to the French Graduate Ecoles

## ORGANISATION, RESPONSIBILITIES AND EXPERIENCES

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- SEP. 16-AUG. 17** *Junior Quantitative Analyst, Crédit Agricole CIB, Paris (6 months) – New York (6 months)*  
• Participated in the development and monitoring of quantitative methods of risk assessment and cash flow models used to structure, analyze and operate Securitization transactions.  
Data analysis of loan databases using *Pandas* and *SQL*.
- MAY 16-AUG. 16** *Research Internship, Department of mathematics, Leeds University, UK*  
• Testing a mathematical model to predict the formation of support and resistance levels against market data using R and Python.  
This project is based on optimal stopping theory, statistical modeling and data analysis.  
*Nominated for Best Research Internship at ENSTA ParisTech.*
- AUGUST 2015** *Worker Internship, Gunma, JAPAN*  
• Internship in Caro Foresta Resort Hotel.
- 2014 – 2015** *International relations - Forum TRIUM, Paris*  
• Organized student forum in partnership with Mines ParisTech, Ponts ParisTech and ENSAE engineering schools (140 companies, 5000 visitors and 670.000€ turnover).

## ACADEMIC PROJECTS

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- 2015 – 2016** *C++ Project*  
• Advanced project in C++ based on Operations research algorithms for trajectory planning in a complex environment.
- 2014 – 2015** *Reinforcement learning - A mid-size project written in Python*  
• Designed an algorithm where an agent learns to select actions that optimize rewards using Markov Decision Process and Monte-Carlo methods.

## HONORS AND AWARDS

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- 2015** Winner of EBEC France: A real time engineering competition - Case study
- 2014** French Government's Major-Excellence Scholarship
- 2012** Excellence scholarship, Hassan II Academy of Science and Technology, Morocco
- 2012** Winner of the general competition in science and technology in Physics, Morocco

## SKILLS AND INTERESTS

## LANGUAGES

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*Computer:* Microsoft office, Linux, Latex, C/C++  
Python, R, MATLAB, SQL, Spark

*Sports:* Swimming (weekly training) and hiking

English (full proficiency),  
French (bilingual), Arabic (native)  
and Japanese (beginner)