ISMAEL LEMHADRI

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Objective: 5-month internship, April to August 2017

EDUCATION

2014 - Present   ***École Polytechnique*** Palaiseau, France
- **M.Sc.** in Applied Mathematics, 3.96 GPA.

Specialization in Statistical Learning, Operations Research and Stochastic Calculus
- Multidisciplinary **B.Sc.** Degree, *intensive coursework in Applied Mathematics and Computer Science*
- Ranked 5th/400+ in the 2014 class

2012 - 2014   ***Preparatory Program, Lycée Pasteur*** Neuilly-sur-Seine, France
Two-year intensive program in advanced mathematics and physics in preparation for the nationwide competitive examinations to the French *Grandes Ecoles* for scientific studies. GPA: 3.93

2012   ***Baccalauréat, Lycée ESL*** Fez, Morocco
High School Diploma in Mathematics and Physics. Awarded with Highest Honors.

RESEARCH EXPERIENCE

2016 (Sept - Present)   ***Research Assistant – Operations Research***
Supervisors: Profs. Stéphane Gaubert and Xavier Allamigeon, Department of Applied Mathematics
- Currently studying Positivestellensatze for real multivariate polynomials
- Focusing on algorithmic complexity of positivity certificates

2016 (Spring)   ***Twitter Feeds and Surge Modeling***
Supervisor: Prof. Emmanuel Gobet, Department of Applied Mathematics
- Used Hawkes Processes to compute the probability of a surge in Twitter traffic.
- Developed and implemented innovative algorithms in Python using rare-event simulation techniques.

2016 (Spring)   ***C++ Project: Protein Structure Classification***
Supervisor: Prof. Frank Nielsen, Department of Computer Science
- Used clustering and classification techniques to assess protein structures.
- Contributed an C++ algorithm to the CASP Project (Critical Assessment of protein Structure Prediction).

2015 - 2016 (Sept - May)   ***Bitcoin Price Prediction***
Supervisor: Adil Reghai, Head Quant at Natixis
- Reviewed state-of-the-art algorithms for statistical inference applied to stock price prediction.
- Implemented a successful Bitcoin trading strategy in Python and validated its results through backtests.

2013 (Summer)   ***Modern Mathematics: International Summer School for Students, Bremen, Germany***
Supervisors: Profs.Don Zagier and John Conway
- Carried out a 10-day research project on finite group classification.
- Presented the results to leading international mathematicians during a seminar.

WORK EXPERIENCE

2016 (Summer)   ***Data Science Intern at Keyrus Capital Markets***
- Developed a Twitter sentiment-analysis framework and implemented a new trading strategy based on it.
- Presented the project to financial partners in the process of Due Diligence.

2015 - present   ***Teaching Assistant in Mathematics at Lycée Blaise Pascal, Orsay***
Leading weekly oral examinations in Advanced Mathematics for first and second-year undergraduate students preparing for the *Grandes Ecoles* entrance exams

2014 - 2015 (Sept - April)   ***Full time Social Educator at EPIDE Belfort***
In charge of a team of 10 tutors in a rehabilitation center
- Provided social and educational support to 50 at-risk youths from underprivileged backgrounds.
- Initiated new vocational activities and practiced situational leadership.

SKILLS

Languages   **English** (TOEFL: 116/120), **French** (native), **Spanish** (fluent), **Arabic** (native)
Programming   **Object-Oriented Programming:** Python, Java, C++   **Statistics:** R
GRE   Quantitative 170/170 – Verbal 162/170 – Writing 5.5/6

EXTRA-CURRICULAR ACTIVITIES

Piano   10 years of practice
Leadership   **President** of the Ecole Polytechnique International Amateur Piano Competition: designed the competition's website and tripled the budget and the number of contestants for the 31st edition.