

## EDUCATION

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- 2017 – 2020 **Stanford University - Statistics PhD (GPA: 3.85/4.0)** Stanford, CA  
With a Minor in Computer Science - Machine Learning track
- 2014 – 2017 **École Polytechnique** Palaiseau, France  
**M.Sc. in Applied Mathematics (GPA: 3.96/4.0)**  
With a focus on Statistical Learning and Probability Theory  
Multidisciplinary **B.Sc.** - intensive coursework in Applied Mathematics and Computer Science.  
Class Rank: 5 /400+
- 2012 - 2014 **Preparatory Program, Lycée Pasteur (GPA:3.93/4.0)** Neuilly, France  
Two-year program in advanced mathematics and physics in preparation for the nationwide competitive examinations to the French *Grandes Écoles*.

## WORK EXPERIENCE

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- 2017  
(April-Aug) **Quantitative Trader Intern - Jump Trading International**, London and Chicago  
Developed and analyzed a new agent-based model for market impact.  
Awarded the **Best Internship in Financial Mathematics Award** by Ecole Polytechnique.
- 2016 (Summer) **Data Science Intern - Keyrus Capital Markets**, Paris  
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 **Co-instructor in Mathematics and Statistics**  
Led weekly oral examinations in Advanced Mathematics for first and second-year undergraduate students preparing for the *Grandes Ecoles* entrance exams. Currently teaching several graduate courses.

## RESEARCH EXPERIENCE

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- 2017  
(Jan - Aug) **Community detection in the stochastic block model**  
Joint work with Youssouf Emin, Ecole Polytechnique  
Devised a novel algorithm for community detection in graphs.  
Awarded the **Best Paper Award** at the *Junior Data Science School*, Paris.
- 2016  
(Sept - Dec) **Positive polynomials and sums of squares**  
Undergraduate Research supervised by Stéphane Gaubert, Ecole Polytechnique  
Studied a positivity criterion for real multivariate polynomials.  
Focused on the algorithmic complexity of positivity certificates.
- 2016  
(Spring) **Twitter Feeds and Surge Modeling**  
Undergraduate Research supervised by Emmanuel Gobet, Ecole Polytechnique  
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  
Contributed a C++ algorithm to the CASP Project (Critical Assessment of protein Structure Prediction).
- 2015 - 2016  
(Sept - May) **Bitcoin Price Prediction**  
Supervisor: Dr. Adil Reghai, Head Quant at Natixis Paris  
Implemented a successful Bitcoin trading strategy in Python and validated its results through backtests.

## SKILLS

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- Languages** English (TOEFL: 116/120), French (native), Spanish (fluent), Arabic (native)  
**Programming** Object-Oriented Programming: Python, Java, C++      **Statistics:** R

## AWARDS AND HONORS

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- Fellowships** Stanford Graduate Fellow, Monahan Fellow  
**Data Science** Top 10 Finalist at the 2017 Data Science Game, Paris.  
**Piano** 10 years of practice - President of the Ecole Polytechnique International Amateur Piano Competition