

# ISMAEL LEMHADRI

4-th year PhD student majoring in Statistics at Stanford University.

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github: <https://github.com/ilemhadri>

## EDUCATION

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- 2017 – June 2022 **Ph.D. in Statistics – Stanford University** *Stanford, CA*  
With a Minor in Computer Science - Machine Learning track. GPA: 3.9/4.0
- 2019 **M.S. in Statistics – Stanford University** *Stanford, CA*
- 2014 – 2017 **B.S. in Applied Mathematics – École Polytechnique** *Palaiseau, France*  
Multidisciplinary B.S. – with a focus on Applied Mathematics and Computer Science.

## WORK EXPERIENCE

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- June – Sept 2019 **Data Scientist Intern – Google**, *Mountain View*
- Conducted experimentation and A/B testing for Search ads
  - Derived insights on the core algorithms used for generating Search ads.
- 2017 **Quantitative Researcher – Jump Trading**, *London and Chicago*
- Developed and analyzed a new agent-based model for market impact
  - Received the **Best Internship in Financial Mathematics Award** at Ecole Polytechnique.
- 2015 – present **Instructor in Mathematics and Statistics**, *Stanford and Paris*
- Principal Instructor for the graduate-level *Statistical Learning* course at Stanford University
  - Principal Instructor for the undergraduate-level *Introduction to Statistics* course at Stanford University
  - Prepared all course material and lectured 100+ students
  - Oral Examiner in Mathematics for undergraduate students in Paris, France.

## HONORS & AWARDS

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- 2017 **Stanford Graduate Fellowship in Science and Engineering** – Hewlett Family Fellow  
Highest award offered to Stanford graduate students
- 2017 **François Monahan Foundation PhD Fellowship**
- 2017 **Ranked 5th** out of 500 students at Ecole Polytechnique exit exam
- 2014 **Ranked 4th** out of 500 students at Ecole Polytechnique entrance exam
- 2017 – 2018 **Top 10 Finalist** at the 2017 and 2018 editions of the Data Science Games, *Paris*.
- 2017 President of the Ecole Polytechnique International Amateur Piano Competition

## RESEARCH EXPERIENCE

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- 2019 **A Neural Network with Feature Sparsity**  
**Ismael Lemhadri**, Feng Ruan, Robert Tibshirani  
*BayLearn Conference 2020*
- Developed a neural network model that incorporates feature selection through L1-regularization
  - Devised and implemented a novel gradient descent algorithm
  - Demonstrated the model's performance on both simulated and real datasets.
- 2018 **Market Impact in a Latent Order Book**  
**Ismael Lemhadri**  
*Market Microstructure and Liquidity (2020)*
- 2017 **Community detection in the stochastic block model**  
**Ismael Lemhadri**, Youssouf Emine  
*SIAM Conference on Mathematics of Data Science (2020)*
- Devised a novel algorithm for community detection in network graphs.
- 2016 **Rare-Event Estimation in Hawkes Processes with Applications to Twitter**  
**Ismael Lemhadri**, Laurent Meunier
- Used Hawkes Processes to estimate the probability of a surge in Twitter traffic.
  - Developed and implemented innovative algorithms in Python using rare-event simulation techniques.
- 2016 **Protein Structure Classification**
- Contributed a C++ implementation of the K-Means algorithm to the CASP (Assessment of Protein Structure) project.

## SKILLS

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**Programming** Python, C, C++ **Data Science:** R

**Languages** English (TOEFL: 116/120), French (native), Spanish (European B2), Arabic (native)