

# MASSIL ACHAB

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## WORK EXPERIENCE

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- ConsenSys**, Paris, France 12/2019 - Present  
*Software Engineer*  
I develop and help scaling CoDeFi product on illiquid assets tokenization.
- PriceHubble**, Paris, France 02/2018 - 11/2019  
*Senior Data Scientist*  
Real estate valuation and trend forecasting in several countries using machine learning techniques.  
I improved PriceHubble ETL pipeline, designed valuation models and deployed them.
- Columbia University, Earth Institute**, New-York, USA 04/2013 - 07/2013  
*Research Intern*  
Improvement of filtering and analysis tools to feed a crop simulation model.  
I designed a simpler approach and evaluated the effect of filtering on crop model's accuracy.

## EDUCATION

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- Ecole polytechnique**, Palaiseau, France 09/2014 - 10/2017  
*Ph.D. in Machine Learning*  
Topics: Hawkes Processes, Cox regression, Granger Causality.  
PhD thesis: Learning from Sequences with Point Processes.  
Supervisors: Prof. Emmanuel Bacry and Prof. Stéphane Gaïffas
- ENSAE**, Malakoff, France 09/2013 - 05/2014  
*MSc in Statistics & Machine Learning*  
Master thesis: Quantum model of interest rates.  
Supervisor: Dr. Taoufik Amri
- Ecole polytechnique**, Palaiseau, France 09/2010 - 03/2013  
*BSc, MSc in Probabilities & Random Models*  
Bachelor thesis: Blackjack strategies with dynamic programming.  
Supervisor: Prof. Stéphane Gaubert

## PUBLICATIONS

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- [Analysis of order book flows using nonparametric estimation of branching ratio matrix](#), with E. Bacry, J.-F. Muzy, M. Rambaldi, *Quantitative Finance*, 2017.
- [Uncovering Causality from Multivariate Hawkes Integrated Cumulants](#), with E. Bacry, S. Gaïffas, I. Mastromatteo, J.-F. Muzy, *International Conference on Machine Learning (ICML)*, 2017
- [SGD with Variance Reduction beyond Empirical Risk Minimization](#), with A. Guillaoux, S. Gaïffas, E. Bacry, *International Conference on Monte Carlo Methods and Applications*, 2017.

## TECHNICAL STRENGTHS

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| <b>Computer</b>  | Python (TensorFlow, PySpark), SQL, Docker, Kubernetes, React, Node.js.     |
| <b>Languages</b> | French (native), English (fluent), Berber (intermediate), Arabic (notions) |

## EXTRACURRICULAR ACTIVITIES

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| <b>Hobbies</b> | Geopolitics, African startup ecosystem, Theater. |
| <b>Sports</b>  | Football, Gym, Wakeboard.                        |