

## Education

2019 –	<b>ENS Paris-Saclay</b> , Master MVA	<i>Paris, France</i>
2020	Master on Mathematics, Computer Vision and Machine Learning Key subjects studied: Convex Optimization, Theoretical foundations of Deep Learning, Kernel methods, Computer Vision, Reinforcement Learning,	
2016 –	<b>Ecole Polytechnique</b> , Master of Science (Cycle ingénieur polytechnicien)	<i>Paris, France</i>
2019	Top-ranking school of science and engineering (ranked 4 <sup>th</sup> small university in the world by THE). Key subjects studied: <ul style="list-style-type: none"><li>• Computer Science: Algorithms design and analysis, Concurrent Computing, Machine Learning</li><li>• Maths: Advanced Probabilities and Statistics, Operational Research, Optimal Control</li><li>• Physics: advanced quantum physics, relativity, variational principles and analytical mechanics</li></ul>	
2014 –	<b>Lycée Stanislas</b>	<i>Paris, France</i>
2016	A two-year intensive university-level preparation in maths and physics to prepare for highly competitive nationwide exam	

## Experience

Since Apr 2020	<b>Inria</b> , WILLOW team, Research intern <ul style="list-style-type: none"><li>• Proposed a way to solve equations of dynamics in a differentiable way. This required implementing a QP/QCQP solver and its derivatives using ADMM algorithm.</li><li>• Published <i>Differentiable simulation for physical system identification</i> in RAL journal and ICRA conference</li><li>• Working on Differentiable rendering</li></ul>	<i>Paris, France</i>
Apr – Jul 2019	<b>Université de Montréal</b> , Department of Mathematics, Research Intern <ul style="list-style-type: none"><li>• Studied classical MCMC sampling algorithms</li><li>• Worked on extensions of Metropolis-Hastings algorithm</li></ul>	<i>Montreal, Canada</i>
Jun – Sept 2018	<b>Amadeus IT</b> , eCommerce Dpt, Software Engineer Intern <ul style="list-style-type: none"><li>• Participated in the development of a software</li><li>• Designed algorithms with the newest web technologies (Angular6, NodeJS, MongoDB)</li></ul>	<i>London, UK</i>
Sept 2016 – Apr 2017	<b>Special Operations Command</b> , Officer candidate <ul style="list-style-type: none"><li>• Managed teams during highly demanding military training course</li><li>• Organized military exercises</li></ul>	<i>Paris, France</i>

## Academic projects

Aug – Dec 2018	<b>Intraday production model of electricity for the French regulator</b> , tutored by Pr. René Aïd <ul style="list-style-type: none"><li>• Pre-processing and exploration of data</li><li>• Data mining &amp; ML algorithms for prediction</li></ul>
Aug – Dec 2018	<b>Counting animal populations from aerial photos</b> , tutored by Pr. Renaud Keriven <ul style="list-style-type: none"><li>• Implemented the U-net neural network</li><li>• Improved accuracy with a validation using photos from different angles</li></ul>

- Aug – Dec 2018*      **Graph clustering: models & algorithms**, tutored by Pr. Sébastien Gadat
- Used advanced algebra and Markov chains properties to analyze spectral clustering
  - Developed a new clustering algorithm
- Aug 2017 – Jun 2018*      **Red Star FC**, tutored by Pr. Eric Moulines
- Designed a sport analytics tool using advanced statistics, learning and graphs clustering algorithms
  - Collaborated with a professional football team

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### **Additionnal skills**

**Languages** – French (native), English (professional, TOEFL: 104), Spanish (intermediate)

**Computer Skills** – Python, C++, Java and Javascript.

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### **Interests**

**Action Sociale de la Kès** – Provided tutoring in French for refugees with a Polytechnique charity

**Handball** – Played in the national championship for 2 years

**Military parachutist license** – Passed the license during military training