

Education

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

Experience

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

Academic projects

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

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

Additional skills

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

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

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