

# Louis MAESTRATI

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## RESEARCH WORK

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- May 2020 - Aug 2020**      **Oxford Mathematical Institute**, Visiting Researcher  
Supervised by **Prof. Jared Tanner**  
Project on Regularization for Deep Learning: generalization and robustness
- Feb 2019 - Aug 2019**      **MILA (Montreal Institute of Learning Algorithms)**, Visiting Researcher  
Supervised by **Prof. Jean Michel Sellier** and **Prof. Yoshua Bengio**.  
Applying Deep learning models to Quantum Physics problems  
  
Worked on **Data-Driven Approach to Encoding and Decoding 3-D Crystal Structures**, published on arXiv:1909.00949
- May 2018 - Aug 2018**      **CNRS, Laboratoire de l'Accélérateur Linéaire**, Visiting Researcher  
  
Handwritten Image to Latex Generation Project, supervised by **Dr. Balázs Kégl**  
Working on an attention based model, using an Encoder-Decoder
- 2018**      **Project (Deep Learning)**  
Creating a computer program to defeat a human at the Avalam Game supervised by the researcher **Pascal Yim**
- 2016 - 2017**      **Project linking Economics of natural resources and Optimal Control**  
Worked on the mathematical tools and fundamental theorems of the theory of **Optimal Control** in order to plan the maximization of natural limited resources extraction.
- 2017 - 2018**      **Project in Algorithmic**  
Applied genetic algorithms to provide approximate solutions to **Traveling Salesman NP – Complete Problem**

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## STUDIES

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- 2020-2021**      **MSc in Machine Learning « MVA » Mathématiques Vision Apprentissage (ENS Paris-Saclay)**  
  
*Relevant Coursework* : Convex Optimization, Large-Scale Optimization, Biostatistics, Deep Learning for Medical Imaging, Object Recognition, Deep Learning, Kernel Methods, Probabilistic Graphical Models, Computational Statistics
- 2016 - 2020**      **Centrale Lille School: MSc in Applied Mathematics**  
  
Speciality in **Machine Learning (Master 2)** under the supervision of **Prof. Pierre Chainais**  
*Relevant Coursework*: Machine Learning, Markov Chains, Sequential Learning, Deep Learning, Statistics, Python and Java Programming, Optimization Sciences,
- 2019 - 2020**      **University of Lille: MSc in Applied Mathematics**
- Aug 2018 - Dec 2018**      **University of California at Berkeley**, Visiting student  
4-month program at Sutardja Center for Entrepreneurship and Technology
- 2013 - 2016**      **Lycée Louis-le-Grand Classes Préparatoires aux Grandes Écoles, MPSI/MP Info**

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## LANGUAGES & SKILLS

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- **French:** Native
- **English:** Fluent
- **German:** Intermediate
- **Software:** CATIA
- **Programming:** Python (TensorFlow, Pytorch), Solidity, Java, OCaml, Matlab