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EDUCATION

2017-2018 **MVA - *Ecole Normale Supérieure Paris-Saclay*, Cachan, France**
Master's degree in *Applied Mathematics, Machine Learning and Computer Vision* (Graduated with highest honours)
Reinforcement Learning, Learning Theory, Computer Vision, Probabilistic Graphical Models, Bandits, Kernels.

2014-2018 ***Ecole Polytechnique*, Palaiseau, France**
Master's degree in Applied Mathematics - *Statistics, Machine Learning, Operations Research and Optimisation.*
Acquired solid background in Mathematics ranging from Dynamical Systems to Stochastic Models in Finance, with a strong focus on Statistics, Probabilities, Machine Learning, Optimisation.

2011-2014 ***Lycée Sainte-Geneviève*, Versailles, France**
Attended a top French institution dedicated to the preparation for entrance exams to French Engineering Schools.

PROJECTS

2017-2018 **Kernel Methods for Machine Learning, *Decease prediction from genetic data***
Implemented kernel methods from scratch (using only Python librairies for optimization solvers) to predict decease from genetic data. Understood the theory of Kernels in Machine Learning and was able to re-implement known learning algorithms such as SVM and Ridge Regression for kernel methods.

Computer Vision and Object Recognition, *Generative Adversarial Networks*
Understood the GAN theory presented in very recent papers (2016-2017) and trained GANs to generate paintings from photographs and photographs from paintings using Cycle-GANs, as well as photos from night to day and day to night. Implemented Wasserstein Loss to produce better output results.

Reinforcement Learning, *Intrinsically Motivated RL and Curriculum Learning*
Reviewed five different papers so as to try to show how giving an RL agent intrinsic reward (via its surprise) actually naturally induces a curriculum of gradually more difficult tasks to learn for the agent.

2016-2017 **NLP and Text Mining, *Paper citations prediction challenge***
As part of the NLP and text mining course, developed a predictive model to accurately predict if given articles would cite or not other articles. Achieved 0.975 F1-score on testing set, 3rd best score of the class.

WORK EXPERIENCE

Oct. 2020 - **PhD graduate student, *Université Paris-Saclay,* Paris**
Working on a mathematical theory of deep and infinitely-wide neural networks under the supervision of Lénaïc Chizat and Christophe Giraud.

Feb. 2019 - Sept. 2020 **Research Engineer, *Zalando,* Berlin**
Working on probabilistic graphical models and attention-based models to deliver better size advice to customers. Strong focus on the Machine Learning oriented research, and the design and implementation of algorithms.

April 2018- Sept. 2018 **Research Intern in Deep Reinforcement Learning, *InstaDeep,* London**
Conducted research on developing methods for solving single-player games using self-play reinforcement learning with neural networks and Monte Carlo tree search.

April 2017- July 2017 **NLP Research Intern, *Proxem,* Paris**
Worked on Unsupervised Learning techniques in Topic Modeling to automatically extract content from unstructured textual data. Worked from the *Latent Dirichlet Allocation* as first model and developed further generative graphical models to extract topics/themes out of corpora, extract specific aspects of those topics, and detect positive or negative sentiment polarities towards those topics.

June 2016- Aug. 2016 **Data Scientist Intern, *Turo,* San Francisco**
Designed a car recommendation engine based on a graph database which had to be built from scratch and updated every day. Learned to handle autonomously a Data Science project in a demanding and challenging start-up environment.

SKILLS & EXTRA CURRICULAR ACTIVITIES

Programming Python, R, Go, C#, Java, C++, Matlab, SQL, CQL (Cypher Query Language). [*link to GitHub page in the header*]

Languages **French** (mother tongue), **English** (fluent) : **TOEFL** 114/120, **Spanish** (intermediate).

Activities ***Music*** : electric guitar player, rock music lover. ***Sports***: table tennis 12 years, competed in French national championships. Played in Polytechnique's football team. ***Abroad experience***: attended school in Guernsey at the age of ten.