PIERRE FERNANDEZ

GPA: 3.95

+33 6 13 38 29 98 • pierre.fernandez@polytechnique.edu • pierrefernandezgenestier.github.io • linkedin.com/in/pierre-fernandezgenestier

EDUCATION

Université Paris-Saclay – *Master of Science in Mathematics, Vision and Learning (« MVA »)* — Paris-Saclay, France
École des Ponts ParisTech – *Double Degree: Master of Engineering (Mathematics and Computer Science)* — *Sep. 2020*
Relevant coursework: Machine & Deep learning, Computer vision, Optimization, Optimal transport, RL, Kernel methods, Graphs in ML, etc.

École polytechnique – *Master of Engineering (« Cycle ingénieur polytechnicien »)* — Palaiseau, France
Awards: « Outstanding Investment award » and « Outstanding Leadership award » — *Aug. 2017- Sep. 2020*
 « Research Internship award » for my 3rd year internship at Dassault Systèmes
Relevant coursework (1st and 2nd year): Mathematics, Applied Mathematics, Computer Science (Algorithms & Data structures), Biology
Major (3rd year) on Artificial Intelligence & Visual Computing (ML, RL, Statistics, Data visualization, TDA, etc.) - Major GPA: 3.99

Preparatory class Lycée Stanislas - *Equivalent B.S Physics and Chemistry* — Paris, France
Intensive preparation for the entrance exams to top French Universities - Ranked 4° at the entrance exams — *Aug. 2015 - Jul. 2017*

Lycée Stanislas – *Highest honors in high school final exams* — Paris, France
Award at the Paris Mathematics « Olympiades » (high level mathematics competition) — *2015*

WORK EXPERIENCE

Dassault Systèmes – *Research intern in the generative design team* — 3DS Campus - Vélizy, France
World leader company in 3D design & engineering software — *Apr. 2020 – Aug. 2020*
- Explored and developed methods for design generation and learning of autonomous virtual-soft-robots using Taichi (Python)
- Topics covered: CPPN, GA (NEAT, CMA-ES), topology optimization, reinforcement learning, differentiable physics, etc.

Incepto Medical – *Software engineer intern* — Station F - Paris, France
Start-up developing and gathering AI applications for medical imaging — *Jul. 2019 – Sep. 2019*
- Developed a tool using AngularJS to analyze annotations and results of deep learning algorithms
- Discussed with radiologists and data scientists to establish the needs of the tool

Military Experience: Prytanée National Militaire - *Head of a military Section of Students* — La Flèche, France
School and preparatory class for future officers in the French army — *Oct. 2017 - Apr. 2018*
- Led 2 sections of 25 students and conducted Physics and Chemistry courses and exercises

PROJECTS

3rd Year Projects (CS) – Machine Learning | Computer Vision | Shape analysis | Reinforcement Learning — École polytechnique
Kaggle challenge: link prediction on a webgraph (ranked 2°/54) | Pawns and grid detection on draughts game using C++ — *2019*
Image vectorization through direct optimization of bezigons using C++ | Autonomous agents on Gym car-racing using Python

Neural Representation of Temporal Sequences (Neurosciences) – *Scientific group project with NeuroSpin* — École polytechnique
Understand how the brain encodes temporal sequences and patterns — *2018-2019*
- Conceived a grammar encoding of sequences, used ReactJS to develop a smartphone app experiment, analyzed the results
- Our team was selected among the 10 best projects of the year (over more than 100 projects)

LANGUAGES & COMPUTER SKILLS

Languages	French, Spanish (Working proficiency), English (Working proficiency: TOEFL 110/120 | TOEIC 970/990)
Programming	Python (Pytorch, Tensorflow, OpenCV, Scikit-learn)	Javascript (React Native, AngularJS, ThreeJS, D3) C++ (OpenGL, OpenCV, Libigl)	Java, HTML, CSS, SQL

ADDITIONAL INFORMATION & EXTRACURRICULAR ACTIVITIES

Sport	Tennis: Elected representative of Polytechnique's tennis section, Running
Social Action	Co-president of a school organization that organizes a humanitarian trip to Tahiti One-and-a-half-month summer humanitarian internship in Papeete at FACE Polynesia
School Clubs	Vice-President of the graphic design organization of Polytechnique Organizer of a discovery trip to state-of-the-art Israeli start-ups, universities and R&D centers