


Aymeric Roucher

Data Scientist in natural catastrophe modelling at Descartes.
Passionate about leveraging data to gain global-scale insights.

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EXPERIENCE

- Sep. 2021**
Current position | **Data Scientist, Descartes Underwriting** - Parametric insurance start-up that raised a \$120M series B
Manage development of new insurance products for climatic risks: cyclone, frost, wildfires.
- Led the extension of proprietary cyclone model to the whole globe, covering a total risk of over \$500M.
 - Several key improvements (backtesting, physical interactions...) leading to state-of-the-art performance.
 - Report directly to one of the three cofounders of the company on product dev and market evolution.
- Apr-Sep 2020** | **Machine Learning Intern, Wandercraft** - World's first exoskeleton to help disabled people walk again.
- Developed a Tensorflow model that recreates the robot's real trajectory from sparse experience data.
 - Results achieved in 5 months exceed the team's expected results for 1 year of development.
 - The model I developed is still in use and unchanged as of 2022.
- Jun-Sep 2019** | **Data Science Intern, IAC Partners** - Chicago office.
- Advised a Fortune 500 company on the decision of introducing a new employee portal.
- 2017 - 2018** | **Lieutenant, French Special Forces** - Nine months military internship in a french paratrooper section.
- Trained in the physical and military drills of an elite unit, obtained the Military Paratrooper License.

PROJECTS

- 2021** | **Data Science - Wine Quality prediction** | autonomous project started during my master's thesis.
Using a self-crafted dataset of weather features, predict the long-term quality of Bordeaux wine.
- Spent 3 months in Bordeaux as a visiting scientist at *First Growth* Château Latour to get first-hand insights.
 - Final model beats critical ratings. Paper under review for *Computer and Electronics in Agriculture*.
- Jan. 2021** | **Data Science - Kohler Mira UK** | Data Science team project - Supply Chain.
- Reduced stock held at factories by 57%, with further reduction down the line.
- 2020** | **Computer vision - Intelligent Drone Challenge** | Autonomous Drone Swarm Challenge, HEC Paris
Program a swarm of intelligent drones to explore a catastrophe scene and help victims.
- Won the challenge as a team, winning a prize of €5,000.

EDUCATION

- 2020 - 2021** | **MPhil ISMM & MPhil Machine Learning and Machine Intelligence - University of Cambridge**
ISMM is a program aiming at providing students from engineering backgrounds with a business sense.
Supplementary courses from the Machine Learning group.
- ISMM coursework : Intellectual property, Supply chain and operations management, Data and Modelling.
 - Machine Learning coursework : Probabilistic Gaussian Processes (A), Advanced Machine Learning (A).
- 2017 - 2020** | **MSc Computer Science, Ecole Polytechnique** | #2 «small university» in the world (THE ranking 2021)
- Fully funded "Ingénieur polytechnicien" scholarship.
 - Applied mathematics: Statistics, Markov chains, Topological analysis.
 - Computer science: Data structures, Big data, Computer architecture.
- 2015 - 2017** | **BSc Mathematics & Physics, Ecole Sainte Geneviève**
"Classes préparatoires": intensive course preparing for the exams to French top engineering schools.
- Mathematics, Physics and Computer Science.

LEADERSHIP & TEAMWORK

- Scout movement** - Head of a group of 7 chieftains. Organized a 15 - days camp in the Pyrénées for 45 young boys.
- 4L Trophy** - automobile raid from Paris to Marrakech. Raised €8,000 to buy and restore an old Renault 4L, and rode all the way to Marrakech through the Moroccan desert.
- Rugby** - won 2018 Paris University Championship with Polytechnique, played for the Cambridge Rugby League team.
- Treasurer** of the Ecole Polytechnique's video association (24 members). Leveraged professional level prestations to increase budget by 20%.
- Ecole Polytechnique's **Wine Society** - organized €60k of student orders.

SKILLS

- French** - native, **German** - fluent (C1 DSDII), **English** - fluent (IELTS 8.0), **Chinese** - HSK2
- Python** (Tensorflow, Pandas, Sklearn), **SQL**, **Javascript**, **HTML/CSS**, **PHP**, **Git**, **Docker**, **Tableau**