



Hugo Sonnery

1 Bis Rue Joliot Curie
Résidence V, 91190 Gif-sur-Yvette

02 / 08 / 2001
French Nationality

Phone : +33 (0)6.95.53.39.90
Email : hs741@cam.ac.uk
Website : www.volut.es

Education

Master 2 MVA @ ENS Paris-Saclay (2020 - 2021) - Double Degree

- Applied Mathematics, Computer Vision and Machine Learning. Applied and Theoretical courses in ML : Reinforcement Learning, Probabilistic Graphical Models, Multi-scale models and RNNs, Graphs in Machine Learning, Theoretical foundations of Deep Learning, Kernel Methods for Machine Learning, Bayesian Machine Learning, Algorithms for Speech and NLP.
- Strong focus on **Deep Reinforcement Learning** and **Deep Generative Techniques**.
- Research project : Deep RL for Polyphonic Music Performance generation (supervisor : Ludovic Denoyer @ LIP6 / FAIR)

Master 2 in Data Science @ CentraleSupélec (2020 - 2021)

- Enrolled in the **Research in Mathematics & Data Science** track.
- **Machine learning and Applied Mathematics** : Advanced Machine Learning, Advanced Statistics, Stochastic processes and calculus, Temporal sequences, Convex Optimization.
- Elective classes : Deep Learning, Large Scale Distributed Computing and Optimization, Advanced Multivariate Data Analysis, Random Matrix Theory and Applications to Machine Learning, Machine Learning in Network Science.
- Minor research project (poster, article and project report) : **Neural implementation of a non-linear Kalman Filter**.
- Major research project : **Graph and knowledge extraction from scientific papers**.
- Elected **class representative** in most courses and for the Research track.

Master 1 of Engineering @ Trinity College, University of Cambridge (2019 - 2020) - Erasmus

- **Machine learning and applied mathematics** : Inference, Mathematical methods, Statistical signal processing, Information theory and coding.
- **Bioengineering** : Introduction to neuroscience, Medical imaging and 3D computer graphics, Introduction to molecular bioengineering and Biomaterials. Optional course in Organisational Behaviour and Business Economics.
- End-of-year research project : design of an audio modem implementing a basband-OFDM / DMT modulation system.
- Member of the **Cambridge Union**, the **Machine Learning & Neuroscience society** and the **Cambridge Film Association**.

Third year Bachelor of Engineering @ CentraleSupélec (2018 - 2019)

- **ML-oriented applied mathematics** : Statistics and machine learning, Convergence, integration, probability and partial differential equations. **Computer Science** : Information systems and programming, Algorithmics and complexity, Formal logic and verification (optional advanced CS course).
- Signal processing, Quantum and statistical physics, Corporate accounting and finance management. Options in : Electronic systems, Electrical energy, Continuum mechanics.
- End-of-year projects : **Antennas and resilient communication systems** (smart antennas, crisis management communications and resilient communication systems), **Black swans detection in particle physics / data analysis in cosmology**, FM stereophonic radio.
- Ranked first in order of priority amongst a promotion of 850 students in the *Data Science, Machine Learning and Applied Mathematics / Mathematics and modelling for finance* Master tracks. Elected class representative in most courses.

Third year Bachelor of Theoretical Physics @ Orsay University (2018 - 2019) - Double Degree

- Optional evening classes (15h / week) in Fundamental Physics : **Analytical mechanics, Quantum mechanics, Continuous media electrodynamics, Statistical physics, Wave optics, Special relativity and History of science**. Graduated July 2019.

MPSI / MP * 2 @ Lycée du Parc (2016 - 2018) - Preparatory classes

- Theoretical and applied mathematics, Physics, Chemistry, Computer science and Programming.
- **Student research project on Monte - Carlo methods** : Theory and application to multi-dimensional integrals (as part of the entry exams to French *Grandes Écoles*).
- Eligible to admission at **École Polytechnique** and **École des Mines ParisTech**. Admitted at **ESPCI, CentraleSupélec** and **ENS Rennes**. [*French preparatory classes are akin to a two-year "triple track" foundation course in maths, physics & computer science*]

Experiences

Reverse Student Entrepreneurship Programme @ [The Family](#) (2018 - 2019)

- Weekly entrepreneurship-related workshops held in the morning ; meetings with mentors at lunch and concrete study cases during the afternoon. Courses in online advertising, growth hacking, leadership and community management.

International Politics Internship @ [Commissariat à l'Énergie Atomique \(CEA\)](#) (Summer 2019)

- Composing a 200 pages analysis report on international policy in less than two months, focusing on multilateral organisations and possible pathways towards better cooperation in disarmament. High commitment displayed during the internship abiding with strict deadlines (2 months in total) with significant preparatory research carried out beforehand.
- Necessity to interpret, synthesise and report efficiently on complex historical and political processes in order to produce weekly updated drafts for more peaceful international relations. Displayed project management and communication skills working with both business, technical and non-technical teams internationally located.

Shadowing Internship @ [European Organisation for Nuclear Research \(CERN\)](#) (July 2016)

- Assisting two particle physicists working on A Large Ion Collider Experiment (ALICE) and shadowing the everyday life of an experimental scientist. Attendee of the CERN Summer Student Programme lectures during two weeks and subsequently took part in the building of a Muon detection Chamber.
- Produced a 30 pages outreach document popularising the mission of the CERN to the public, and detailing my experience as a CERN intern.

Selection Process (Piscine) @ [École 42](#) (August 2016)

- Underwent the intense 1-month-long selection process of the Computer Science and Programming School *École 42*.
- Completed 20 programming and fundamental computer science exercises every weekday ; handed in 2 projects (1 in group, 1 in solo) each weekend ; sat between 4 and 8 hours weekly exams. Learned ShellScript, C and the basics of Git in a production environment, as well as data structures and discrete mathematics applied to computer science. Admitted.
- Progress in the admission process and in the completion of various tasks required team working, leadership and project management skills and the ability to consistently meet deadlines under high emotional and peer pressure.

Internship in Software Development @ [Hoomano](#) (July - August 2015)

- Developed a robot-embedded demonstration web-application in Python, C and Javascript - now used by the sales department to demonstrate extensively NAO robot's whole range of abilities and advanced behaviours to future clients.

Web development class @ [3WAcademy](#) (July / August 2014)

- 2-months sit course in front-end web development (HTML, CSS, Javascript, jQuery, PHP & MySQL).
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Languages

English : bilingual (C1) ; completing a Bachelor's degree in Engineering at the University of Cambridge.

Spanish : advanced (B2)

German : basic (A2)

French : mother tongue

Technical skills

Highly proficient in Python and related scientific libraries (Numpy, Matplotlib, etc) which I used thoroughly in my projects.

Experienced in shell environments and repository management systems (Git).

Intermediate knowledge of C and database management systems (MySQL and NoSql). Elementary experience of NodeJS, Matlab, front-end website development and object-oriented programming.

Both proficient on MacOS and Windows environments and common IDEs on both platforms. Familiar with Unix environments.

Other projects

Development of a robot choreography for the shooting of a *Renault Trucks* commercial and training of academic researchers in the development of embedded applications based upon SoftBank's robotics software *Choregraphe*.

Contributed to the sponsorship campaign of the student-led robotics team *RoboLyon* competing in the *First Robotics Competition* of Montréal. Raised 30K€ with a team of two other students.

Programming, testing and validation of a Python / *Choregraphe* software for the student-led robotics team *Naomazing* competing in the *Nao Challenge 2014* edition. Ranked first among 80 others teams in the *Movie Time* challenge.

Awards

First national prize of the French Geosciences Olympiads 2015 Edition. More than 8K+ high school students competitors.

Interests

Contemporary independent cinema (Spike Jonze, Michel Gondry, Barry Jenkins François Truffaut and *Nouvelle Vague*).

Interest in filmmaking and screenwriting. Currently writing and shooting my second medium-length film.

Sports : running (twice a week), sprinting and hiking.