SACHA BRAUN

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EDUCATION

École Polytechnique
2020 - 2024
- Leading French multidisciplinary engineering programme ('Grande Ecole')
- Rankings : World's 2nd best small university (THE).
- Courses in pure and applied mathematics, computer science, artificial intelligence, and physics.

Paris-Dauphine PSL University
2017 - 2020
- Bachelor's degree (BSc) Applied Mathematics Graduated with Highest Honours - 17.72/20.
- Leading French mathematics programme.
- Rankings : 1st Millenium University (THE), 36th Shanghai 2020 (ARWU).
- Core courses : Probability, Computer science, Statistics, Linear algebra, Optimisation, Game theory.

EXPERIENCES

Roland Berger - Business Analyst Intern
June 2022 - September 2022
Study of the algorithm of a start-up specialized in the detection of fractures thanks to artificial intelligence.
Web scraping to collect and analyze data.

Gendarmerie - Internship in a French intervention unit
October 2020 - April 2021
Directed dangerous interventions such as dealing with knife attacks and armed people.
Managed soldiers in units that ranged from 23 to 100 individuals.

Ceremade - Research internship in mathematics
June 2020 - August 2020
Studying the cutoff phenomenon for the simple exclusion process on the complete graph using Markov chain.

PSL University - Tutor
September 2019 - June 2020
Gave mathematics classes (up to 30 students).
Created an online course to help students during the Covid-19 shutdown : more than 10,000 views.

PROJECTS

Hackathon organized QuantumBlack - 2nd place
Satellite images segmentation to highlight food infrastructures using the U-Net algorithm

Image segmentation with a random walk on an image - Python
Python project using probabilities to segment an image.

Autonomous driving using Reinforcement Learning - Python
Python project using Reinforcement Learning to learn a car to drive by itself.

3D World - C++
Creation of a snowy 3D world in which the orient express can evolve with automatic update of its speed according to the terrain.

Sport website - HTML, CSS, PHP, MySQL
Creation of a website to organize and simplify the organization of university sports.

SKILLS

Languages
French (native), English advanced, Spanish basic

Interests and activities
A handball player and involved in student organisations, I have experience in team working. A volunteer to visit homeless people on the street, I enjoy helping others. I love video editing and I'm always seeking sources of inspiration.