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https:/pauldubois98.github.io

PAUL DUBOIS

PROFILE

With a **mathematical** background, I am passionate about **technology** since high school.
I am committed to leveraging **science** for a better world.

EXPERIENCE

RESEARCH INGEENER / PHD, THERAPANACEA Oct 2021 – Oct 2024

Developing adaptative radiotherapy optimization, using Artificial Intelligence (Reinforcement Learning)

INTERN, ROOM FURNISHER Jul - Sep 2020

Improved and brought together open-source projects to fit the needs of the startup.

INTERN, AIRBUS Jun - Sep 2019

Designed tools using SQL, HTML, CSS, and JS; Python for process automation.

KITCHEN CLERK, RESTAURANT "LA PLAGE" Jun – Jul 2018

DISHWASHER, RESTAURANT "LA PLAGE" Jun – Jul 2017

Skills gained: Teamwork, working under time pressure & efficiency.

EDUCATION

OXFORD, MSC MATHEMATICAL SCIENCES Sep 2020 – Jul 2021

Grade average 68% (merit)
Courses: Analytic Topology, Category Theory, Approximation of Functions, Theories of Deep learning, Networks, Random Matrix Theory
Dissertation on Random Fractals and Branching Processes

UNIVERSITY COLLEGE LONDON, MSCI MATHEMATICS Sep 2016 – Jul 2020

Grade average: 85% (first)
Key courses: Probability, Measure Theory, Spectral Theory, Functional Analysis, Multivariable Analysis, Differential Geometry, Analytic Number Theory, Graph Theory and Combinatorics, Elliptic Curves, Commutative Algebra, High-Performance Computing, Evolutionary Games and Population Genetics
Research project on Modular forms mod 2: "Governing Fields for the Hecke Algebra"

TEACHING

DEEP LEARNING, CENTRALESUPÉLEC (PARIS-SACLAY, FRANCE) Jan - Apr 2023

Course for HSB curriculum (3rd year engineering students), taught in French.
Content: deep learning from scratch (back-propagation), perceptron, convolutions, optimizers & learning rates, RNN, U-net, V-net, GANs; with 5 Kaggles created as homework.

MATHEMATICS, ESSEC (CERGY, FRANCE) Aug – Sep 2021

"Mathematics Refresher" course for DSBA (2nd year master students), taught in English.
Content: basic methodologies for proofs; linear algebra, differential calculus, integration, and asymptotic analysis; prerequisites of the courses in the Master.

TUTORIAL SESSIONS, CENTRALESUPÉLEC (PARIS-SACLAY, FRANCE) Oct 2021 – May 2024

Coding, Optimization, Algorithms & Complexity; taught in French.

OTHER

GitHub repository: https://github.com/pauldubois98
French (Native Speaker); **English** (Fluent); ***Driving License*** *(2017)*