PAUL DUBOIS   "leveraging science for a better world"

EDUCATION	
PHD, CENTRALESUPELEC, THERAPANACEA	Oct 2021 – Dec 2024

Developing adaptative radiotherapy optimization, using Artificial Intelligence.

Conferences and publications:

- "Radiotherapy Dose Optimization via Clinical Knowledge based Reinforcement Learning", Artificial Intelligence in Medicine (AIME), 2024
- "Clinically Dependent Fully Automatic Treatment Planning System", American Society for Radiation Oncology (ASTRO), 2024
- "A Novel Framework for Multi-Objective Optimization and Robust Plan Selection Using Graph Theory", European Society for Radiotherapy and Oncology (ESTRO), 2024
- "Dose Volume Histograms Guided Deep Dose Predictions", Société Française de Physique Médicale (SFPM), 2024
- "Attention Mechanism on Dose-Volume Histograms for Deep-dose Predictions", Société Française de Radio Oncologie (SFRO), 2024

MSC MATHEMATICAL SCIENCES, OXFORD UNIVERSITY   Sept 2020 – July 2021

Grade average 68% (merit)

<u>Courses:</u> *Analytic Topology, Category Theory, Approximation of Functions, Networks*

Dissertation on Random Fractals and Branching Processes.

MSCI MATHEMATICS, UNIVERSITY COLLEGE LONDON   Sept 2016 – July 2020

Grade average: 85% (first)

<u>Key courses:</u> *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".

EXPERIENCE	
(PART TIME) FREELANCE DATA SCIENTIST	Oct 2021 – Dec 2024

Data science projects (from scrapping to analysis).

INTERN, ROOM FURNISHER   July – Sept 2020

Created the MVP of the startup, bringing together open-source projects.

INTERN, AIRBUS   Jun – Sept 2019

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

TEACHING	
DEEP LEARNING, CENTRALESUPÉLEC (PARIS)	Jan – Mar 2023, 2024, 2025

Course for 5th year master engineering students, *taught in French*.

<u>Content:</u> *deep learning from scratch (back-propagation), perceptron, convolutions, optimizers & learning rates, RNN, U-net, V-net, GANs; with Kaggles created as homework.*

MATHEMATICS, ESSEC (CERGY)   Sept 2021, 2023, 2024

"Mathematics Refresher" course for DSBA (Master Students), *taught in English*.

<u>Content:</u> *basic methodologies for proofs; linear algebra, differential calculus, integration, and asymptotic analysis; prerequisites of the courses in the master.*

DATA ANALYSIS, IRONHACK (BARCELONA)   July – Aug 2023

9 weeks bootcamp, *taught in English*.

<u>Content:</u> *Python, SQL, Web Scraping, Tableau, Probabilities & Statistics, Basics of AI/DL.*

TUTORIAL SESSIONS, CENTRALESUPÉLEC (PARIS)   Oct 2021 – Dec 2024

Coding, Optimization, Algorithms & Complexity, Computer Science; *taught in French*.

OTHERS	
French (Native Speaker); **English** (Fluent); ***Driving License***	