

PAUL DUBOIS

“leveraging science for a better world”

EDUCATION	PhD, CENTRALESUPELEC, UNIVERSITE PARIS-SACLAY	Oct 2021 – Dec 2024
	In partnership with TheraPanacea , developing AI adaptative radiotherapy optimization. Conferences and publications:	
	<ul style="list-style-type: none">• "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
	Dissertation on Random Fractals and Branching Processes.	
EXPERIENCE	MSCI MATHEMATICS, UNIVERSITY COLLEGE LONDON	Sept 2016 – July 2020
	Research project on modular forms mod 2: “Governing Fields For The Hecke Algebra”.	
	FREELANCE AI ENGINEER & DATA SCIENTIST	Jan 2025 – Present
	Main current client: Surgitech , developing AI software for deep brain stimulation.	
	PART TIME FREELANCE DATA SCIENTIST	Oct 2021 – Dec 2024
TEACHING	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. <i>Content:</i> 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, 2025
	“Mathematics Refresher” course for DSBA (Master Students), taught in English. <i>Content:</i> 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. <i>Content:</i> Python, SQL, Web Scraping, Tableau, Probabilities & Statistics, Basics of AI/DL.	
TEACHING	TUTORIAL SESSIONS, CENTRALESUPÉLEC (PARIS)	Oct 2021 – Dec 2024
	Coding, Optimization, Algorithms & Complexity, Computer Science; taught in French.	