

PAUL DUBOIS

“leveraging science for a better world”

EDUCATION	<p>PHD, CENTRALESUPELEC, UNIVERSITE PARIS-SACLAY Oct 2021 – Dec 2024 In partnership with TheraPanacea, developing AI adaptative radiotherapy optimization. Conferences and publications:</p> <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 <p>MSC MATHEMATICAL SCIENCES, OXFORD UNIVERSITY Sept 2020 – July 2021 Grade average 68% (merit) <i>Courses: Analytic Topology, Category Theory, Approximation of Functions, Networks</i> Dissertation on Random Fractals and Branching Processes.</p> <p>MSCI MATHEMATICS, UNIVERSITY COLLEGE LONDON Sept 2016 – July 2020 Grade average: 85% (first) <i>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.</i> Research project on modular forms mod 2: “Governing Fields For The Hecke Algebra”.</p>
EXPERIENCE	<p>(PART TIME) FREELANCE DATA SCIENTIST Oct 2021 – Dec 2024 Data science projects (from scrapping to analysis).</p> <p>INTERN, ROOM FURNISHER July – Sept 2020 Created the MVP of the startup, bringing together open-source projects.</p> <p>INTERN, AIRBUS Jun – Sept 2019 Designed tools for process automation using SQL, {HTML, CSS, and JS}, and Python.</p>
TEACHING	<p>DEEP LEARNING, CENTRALESUPÉLEC (PARIS) Jan – Mar 2023, 2024, 2025 Course for 5th year master engineering students, <i>taught in French.</i> <i>Content: deep learning from scratch (back-propagation), perceptron, convolutions, optimizers & learning rates, RNN, U-net, V-net, GANs; with Kaggles created as homework.</i></p> <p>MATHEMATICS, ESSEC (CERGY) Sept 2021, 2023, 2024 “Mathematics Refresher” course for DSBA (Master Students), <i>taught in English.</i> <i>Content: basic methodologies for proofs; linear algebra, differential calculus, integration, and asymptotic analysis; prerequisites of the courses in the master.</i></p> <p>DATA ANALYSIS, IRONHACK (BARCELONA) July – Aug 2023 9 weeks bootcamp, <i>taught in English.</i> <i>Content: Python, SQL, Web Scraping, Tableau, Probabilities & Statistics, Basics of AI/DL.</i></p> <p>TUTORIAL SESSIONS, CENTRALESUPÉLEC (PARIS) Oct 2021 – Dec 2024 Coding, Optimization, Algorithms & Complexity, Computer Science; <i>taught in French.</i></p>
OTHERS	<p>French (Native Speaker); English (Fluent); Driving License</p>