

Paul Dubois

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EDUCATION

MSci Mathematics, University College London

2016-2020

4th Year: Expected average **+80%**

Key courses: Advanced Modelling, Techniques of High-Performance Computing, Spectral Theory

Extra courses (not for credits): Modular Forms, General Relativity, Cosmology

Research project in Algebraic Number Theory – Modular forms mod 2

3rd year: Grade average **85%**

Key courses: Functional & Multivariable Analysis, Proba., Graph & Measure Theory, Elliptic Curves

Extra courses (not for credits): Differential Geometry, Commutative Algebra, Mathematical Logic

1st Prize for best presentation of 2nd year research project

2nd year: Grade average: **82%**

Key Courses: Real & Complex Analysis, Number Theory, Fluids Mechanics, Probability and Statistics

1st year: Grade average **86%** (ranked 6th) – Winner of Undergraduate Prize in Mathematics

Hight-School at Jean-Pierre Vernant High School, Pins-Justaret (France)

2015-2016

2016 - French scientific Baccalaureate, math specialty - with highest honors (Mention Très Bien)

2015 - Scholarship Aptitudes Test (SAT), Score in math: 740/800 (top 3%)

RESEARCH & WORK EXPERIENCE

Internship at Airbus, participated in creation of new digital tools

Jun-Sept 2019

Designed interactive dashboards to monitor project progress using SQL, HTML, CSS, and JS

Created python software to automate the data entry processes

Make Harvard (Hackathon in Harvard)

Feb 2019

Developed hardware which translates real-life rotations into rotations in a modelling soft

Oxford Hack (Hackathon in Oxford)

Nov 2018

Developed a tool that merges information from many documents into a single document

Porticode 3.0 (Hackathon in UCL) - Prize Winner

Nov 2018

Created in 90's style website and game from scratch

Research Assistant (at distance) for Susana Vasserman (PhD at Harvard, Eco. Dept.)

Jan-Mar 2018

Doing Textual Data Analysis with Python

Kitchen clerk in the restaurant "La Plage", Venerque (France)

Jun-Jul 2018

Research Assistant for Pierre Dubois (Professor at Toulouse School of Economics)

Nov 2017

Scrapping data for economic analysis of Antibiotic Resistance

Internship on Artificial Intelligence & Logic under supervision of Professor Martin Strecker

Aug-Sep 2017

Created A.I. using various techniques (such as Genetic Algorithms, Neural Networks...)

Dishwasher in the restaurant "La Plage", Venerque (France)

Jun-Jul 2017

Winner of Innovation Competition « Innovez » - 1000€ (SVJ n°329)

Feb 2017

In the French scientific review "Science et Vie Junior" for a Morse decoding machine

Active member in educative FabLab info@lèze

2014-Present

Led workshops to teach secondary school students 3D modelling and web development.

European Scouting

2011-Present

Webmaster (since 2017), Chief (2016-2018), Leader of treetop patrol (2015-2016)

TECHNOLOGY SKILLS

GitHub repository: <https://github.com/pauldubois98>

Web Page: <https://pauldubois98.github.io/>

- **Python**: Oriented Object Programming (OOP), web scraping (with Requests, Ajax, or API), multi-threading, Graphical User Interfaces (GUI, with Tkinter & PyGame), data cleaning/formatting, data analysis (with Pandas, Matplotlib, using Jupyter), High-Performance Computing (HPC, with Numba, NumPy, NumExpr, OpenCL), textual analysis
Advanced knowledge overall
- **HTML, CSS & JavaScript** (produced smart web interfaces, such as interactive dashboards, web apps, and games)
- **Java & Kotlin** (Used for *Android Apps*, e.g.: Cauchy-Crofton, used for applying an abstract math formula to real life)
- **C++** (Created a group chat messenger platform to run over internet, also used for *hardware electronics*)
- **C** (Sokoban game, also used for *hardware electronics*)
- **Latex** (and presentations with *Beamer*)
- **Electronics** using most common programmable microprocessors such as *Arduino* or *ESP* (created a wide range of objects from remote controlled boat to precision laser timer)

OTHERS

French: Native Speaker

English: Fluent

Driving License: 2 years