Patric Boardman - CV

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First class University of Exeter physics graduate aspiring for a career in science with applications in health.

EDUCATION

Sep 2017 - Jun 2021 University

MPhys Class I

Sep 2014 - Jun 2016 A-Levels

Three A-Levels in Mathematics (***A****), Physics (***A***) and Graphic Design (***B***)

SKILLS

Languages

- Julia
- Python (NumPy, Pandas, scikit-learn)
- MATLAB
- LaTeX
- R
- SQL (PostgreSQL)
- C (Module in University, Grade: First)
- HTML & CSS

Software

- GitHub
- Jupyter Notebooks
- VS Basic
- Microsoft Office (Word, PowerPoint, Excel, Outlook, Teams, etc)
- Zoom
- Endnote
- Adobe Creative Cloud (Illustrator, Photoshop, InDesign)

CERTIFICATIONS

- The Complete SQL Bootcamp - Udemy certification (Jan 2023)
- Equality and diversity training certification (2022)
- Dean's Commendation for outstanding academic performance (2018, 2019, 2020)

RELEVANT EXPERIENCE:

Sep 2017 – Jun 2021: Integrated Masters in Physics, University of Exeter

- Achieved an overall average of ***77.3%*** across my degree receiving a ***first class*** integrated masters degree in physics with honours in physics (MPhys.)
- Relevant optional modules include: Properties of Matter (Exam mark: ***87%***), Soft matter (Exam mark: ***86%***), The Physics of Living Systems (Exam mark ***80%***), Mathematical Modelling in Biology and Medicine (Exam Mark: ***70%***)
- Masters project and dissertation: Investigated the effects of alcohols on the mechanical properties on red blood cells. This involved developing a contour detection algorithm, as well as linear regression to extract parameters (Mark: ***64%***.)

Apr 2020 - Sep 2020: iGEM 2020 Team Member, University of Exeter

- Worked as part of an interdisciplinary team utilising engineered bacteria to 3D print Calcium Carbonate crystal structures, initially as a proof of concept.
- Developed Julia, Python and MATLAB and programmes that used finite difference method to solve first order differential equations to simulate the mechanical properties of hydrogels for the printer.
- Assisted in the simulation of both the diffusion of CO2 within the hydrogel matrix, and the fluid dynamics of the of the hydrogel and bacterial spores (https://2020.igem.org/Team:Exeter/Engineering.)
- Earned a ***gold medal*** in the competition. Full details of the criteria can be found at 2020.igem.org/Judging/Medals.

Python for Data Science and ML Bootcamp, Udemy Certification

Am undertaking a Udemy course focussing on data analysis, visualisation and ML algorithms.

OTHER EXPERIENCE:

The Complete SQL Bootcamp, Udemy Certification

Undertook Udemy course focussing on the fundamental principles of SQL.

Sep 2022 - Jan 2023: Student Teacher, University of Exeter

- Delivered physics and chemistry lessons to groups of school pupils and adults. Communicated information clearly, assessed team understanding and demonstrated fundamental scientific knowledge. Constructed PowerPoint presentations and planned lesson activities focusing on teamwork, collaboration and idea-sharing.
- Wrote a 4000-word essay on the clarification of misconceptions in maths and physics, which required referencing, research, literature critique and qualitative writing.

Jun 2018 - Present: Physics YouTube Channel

- My YouTube channel focuses on presenting both A-Level and university level physics content in a clear and understandable way. Video topics mostly focus on thermal and statistical physics but also include electromagnetism and some vector calculus. (youtube.com/user/pazzy768/videos)

Jun 2016 - Aug 2017: Website and Graphic Designer, The Cube Lab

- Developed of a range of websites using HTML and CSS and helped maintain existing websites by using WordPress, ensuring they are responsive and implementing search engine optimisation (SEO).
- Designed several logos, websites, brands, and illustrative package designs for a wide range of clients, many of whom I had to directly communicate with.

Additionally have worked part time in Coffee#1 in Exeter and the Cornish Bakery.