

# WILLIAM MANLEY

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| **Website:** <https://williammanley.github.io> |

## OVERVIEW

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Excited by the opportunity of employing his mathematical creativity in solving novel problems, with real world applications. A diligent and motivated graduate mathematician who has developed a knowledge and appreciation for a wide variety of fields within mathematics. A proven, effective communicator, who enjoys the opportunity of working both collaboratively and independently.

## EDUCATION

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### University of Oxford

*MSc Mathematical Sciences*

October 2020 - June 2021

*Oxford, UK*

- Specialising in modules with a background in biological systems & the modelling of continuous media.
- Currently working on dissertation titled 'The Geometry & Mechanics of Seashells'.

### University of Bath

*BSc Mathematics*

September 2017 - June 2020

*Bath, UK*

- First-Class Honours

### Petroc

*A-levels*

September 2015 - July 2017

*Tiverton, UK*

- Mathematics (A\*), Further Mathematics (A), Chemistry (B), Biology (a)

## RELEVANT

## EXPERIENCE

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### Micron, University of Oxford

*Research Internship*

June 2019 - August 2019

*Oxford, UK*

During the summer of 2019, I worked at the University of Oxford as a research intern as part of the UNIQ+ graduate research experience programme. I worked in the biochemistry department, under supervision of the Micron research group. During my time here, I worked on programming a microscopy imaging platform called *MicroscoPi*. A detailed description of the project, along with a report and presentation of my work can be found on my website.

- **Technical Skills:** Undertook two week intensive software engineering course, including programming in Python, version control in Git and an introduction to machine learning. Developed technical skills in image analysis and an understanding of some of the weaknesses of machine learning in certain contexts. Was able to apply familiar mathematical tools to aid in solving the problem.
- **Collaborative Skills:** Worked collaboratively in a research environment, gained an insight into the dynamic of working in a research team. Completed scientific report detailing my progress.
- **Presentation Skills:** Gave two presentations of my research. One to the academics within my department and another to the organisers and fellow members of the UNIQ+ programme.
- **Research Skills:** Conducted research in an area that I previously had little experience in. Learnt how to learn and apply new ideas quickly. Gained valuable skills in working independently and the ability to maintain a sustained, intense work ethic to complete a project in limited time.

**IMI, University of Bath***Research Internship*

June 2020 - September 2020

*Bath, UK*

During the summer of 2020, I was hoping to complete a research internship with the Institute for Mathematical Innovation at the University of Bath. However, due to the impact of COVID-19 the funding and supervision of this opportunity was pulled. However, I was particularly interested by the project and decided to work on the project independently. The project involved working with a local structural engineering company and using CFD to assess loads & stresses applied to a house structure under specific flow scenarios in the turbulent flow regime. A detailed description of my work on this project can be found on my website.

**Programming Tutor***University of Bath*

October 2019 - May 2020

*Bath, UK*

Ran tutorials for first year mathematics students from the University of Bath in the 'Programming and Discrete Mathematics' module. Responsibilities included: planning how to best present topics of each tutorial to new students in an accessible way, weekly marking of problem sheets, working with students to address any problems they encountered.

**COMPUTATIONAL  
KNOWLEDGE**

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**Programming Languages****Software & Programming Skills**

Python, MATLAB, Mathematica, R, HTML, Bash.

OOP, ML, Data Handling &amp; Visualisation, Git

Image Handling, OpenFOAM, CFD, ParaView.

**AWARDS &  
RECOGNITION**

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**Roche UNIQ+ Graduate Scholarship***Roche*

October 2020 - June 2021

I was awarded a full scholarship from Roche, a world leading pharmaceutical company to fund my graduate studies at the University of Oxford.

**IMA Associate Member***The Institute of Mathematics & its Applications*

2019-Present

I recently gained associate member status to the Institute of Mathematics and its Applications.

**University of Bath Gold Scholarship***University of Bath*

September 2017 - June 2020

I was awarded a scholarship given out to roughly 50 new students at the University of Bath each year. As part of the programme, I attended skills training sessions, conducted at least 50 hours of volunteering work during each academic year, organised meetings, presented in front of large audiences, attended networking events and represented the university at various events.

**Overall Academic Achievement for A-Levels***Petroc College*

September 2015 - July 2017

Mostly self-taught 2<sup>nd</sup> year of A-Levels due to lack of college funding/teaching availability and personal circumstances. This shows my maturity and independence, as well as, a resilience to continually apply myself to something that I enjoy doing.

*w.manley*