

Christopher Blum

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Education

PhD Electrical and Electronic Engineering

The University of Manchester, 2021-Present

- Researching the use of B-spline in Numerical optimisation with application to mobile robot path planning.

MEng (Hons) Mechatronic Engineering

The University of Manchester, 2017-2021

- First-Class Honours degree and Fourth Year First Prize.
- Undertook a 4-th year project which was awarded the Department Project Prize where I: operated in a team of 6 members to produce a complex deliverable within a 2-semester period. Organised weekly review meetings with team members to agree responsibilities, outlined timings, monitored progress, and identified obstacles. Engaged in and managed the design, plan, and manufacture of an infection detection system whilst adhering to a budget and producing detailed reports and presentations along the way.

A-levels/GCSEs

The Manchester Grammar School, 2010-2017

- A Levels: Mathematics (A), Further Mathematics (A), Physics (A), Electronics (A*)
- GCSEs: 10 A*s including Maths, Further Maths, English, Chemistry, Physics, and Electronics.

Skills

- Proficient in C and C++ coding, Python, LabVIEW, Multisim, MATLAB, VHDL, Assembler, Simulink, Maple and MapleSim, Solidworks, Alitum, Cura, ROS, and Microsoft Office.
- Full, clean UK driving licence

Work Experience

Research Intern

The University of Manchester, Summer 2019

- Worked as part of a research team of 4 interns and 2 PhD Students.
- Had weekly meetings with the research team to review, document, and project progress with the project, resolving any issues with the proposed scope of work.
- Helped develop a learning resource in the form of a software manual for a new robotics development system, so that users may understand the contents of the included libraries including functional example codes and basic C++ tutorials for those new to coding.
- Expanded upon the current software library of the system, such that it can work with newer parts designed by other team members.

Sailing Instructor

Helly Hansen Watersports Centre, Salford Quays, June 2018-May 2019.

- Manage the sailing lessons for up to 8 children per session including: safety briefings, full instruction, and assessment of their ability. I also manage similar sessions for a group of up to 8 adults.
- Engage students with well thought out, stimulating, and enjoyable tasks to give them a perspective on the broader discipline of sailing.
- Work with a well-established watersports team to maintain the sports centre and boats. This includes following briefs, reporting faults, and disclosing any safety or welfare concerns

- Ensure safety on the water by performing risk assessments before sessions, being aware of other instructors and their session requirements and liaising with the other instructors by radio during the session

Shop floor Team Member

Gregg's Bakery, Sale Moor, Nov 2015-April 2019.

- Monitored and guided new staff members through theoretical training and assisted their integration to the job.
- Provided guidance on the most efficient method of completing the practical tasks of each service.
- Worked with a floor team of 7 and ensured the work environment was safe and clean for customers.
- Ensured the turning over of the fresh produce was kept up to date on the shop floor, whilst ensuring there are enough members to serve the customers.

Society Memberships

Choir and Orchestra Society / Schola Apium

- I currently serve as piano accompanist for two amateur choirs based in Manchester, preparing music for each rehearsal and aiding the choirs in learning their music, and performing the accompaniment role where required across 4 concerts per year.
- I have served on the committee as the Webmaster, I maintain the society's online presence from a maintenance perspective, including management of the website, email server, and file storage systems.
- Previously I served as Librarian, I ensured that sheet music is organised and updated for the rehearsals. Worked with two managing directors and a committee of 19 members to organising weekly rehearsals.
- I also canvassed for the society, which has led to a doubling of active members; and I ensured that attendance was documented for end of year forecasting.

Robotics Society at Manchester University

- Originally an active member of the society, working on the first-year buggy project, and then moving onto a personal project. Additionally, I held committee roles including Project Lead and Vice President, where I provided logistical and practical support in the running of the society, including inventory management, meeting minutes, and liaising with the university.

Electronics Club at Manchester Grammar School

- Interacted with basic breadboard circuits, allowing for further development to microcontroller programming later.
- Established a fundamental base for programming and circuit fabrication techniques which proved vital for my university work, and the decision to study Mechatronics.

Hobbies and Interests

Pipe organ playing, Choral Singing, railways, reading, cooking, socialising, card games, current affairs.

References available on request