

MONICA MCGUIGAN

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I am presently studying Physics at the University of Bath, a subject that I am passionate and curious about and am looking to further develop my knowledge and understanding. I enjoy problem solving and using the analytical skills learnt from my work placement and applying them to real-world problems. I am a hardworking, motivated individual with an eye for detail and looking for the opportunity to demonstrate my skills and ability.

EDUCATION

UNIVERSITY OF BATH (2018 – 2022)

MPhys Physics - Properties of Matter, Electric Circuits, Vibrations, Waves and Optics, Mechanics, Introduction to Quantum Physics, Electricity and Magnetism, Relativity, Astrophysics and Mathematical Methods for Physics.

SQA QUALIFICATIONS - ST ALOYSIUS' COLLEGE (2004 – 2017)

Advanced Highers in Mathematics (A), Physics (A) and Italian (C)

Highers in English (A), Mathematics (A), Physics, (A), Human Biology (A), Italian (A)

WORK EXPERIENCE

LEONARDO, SUMMER PLACEMENT STUDENT (JUNE 2019 – AUGUST 2019)

This summer, I returned to Leonardo to work as a summer placement student within the Radar Systems modelling group. I was tasked with creating a tool to analyse radar platforms with the aim of assessing their performance in real-life air-to-air situations. I wrote the engine of this tool using the language C# and the user interface using Windows Standard forms. For the majority of this project, I worked independently and had autonomy on the functionality – this freedom allowed to me to further improve upon my coding and analytical skills as well as improve my soft skills such as project management and communication.

LEONARDO, YEAR-IN-INDUSTRY PLACEMENT STUDENT (AUGUST 2017 – JULY 2018)

As part of the Engineering Development Trust's (EDT) Year-In-Industry placement scheme, I spent 10 months working on a project as a placement student for an engineering company. My project involved writing software to be integrated into an existing application within the company. This software has many uses, one such use was to test a hypothesis about radar target types. The results from the testing that I carried out were published in an in-house innovation journal called "The Polaris".

To design and test my application, I used the coding language C#, as well as the mathematical toolset MATLAB. This project showed me the importance of good team collaboration as I worked closely with the two engineers who built the wider application that my software would be implemented into. At the end of my placement I presented the results of my work to a group of Leonardo employees. I was a Scottish finalist in an EDT competition called the Contribution to the Business Awards (CTTB), which allowed six of the Scottish cohort of placement students to make a presentation of their findings to a panel of judges from various industries and an audience including colleagues and peers. This placement was an invaluable experience of working in industry prior to starting university.

MARKS AND SPENCER, CUSTOMER ASSISTANT (JULY 2017 – AUGUST 2017)

The summer after I left school I was employed as a Customer Assistant. Where I ensured that shelves were fully stocked at all times, manned the tills and maintained the appearance of the store, whilst

providing an exceptional standard of customer service. I worked well within a small team where communication was a key skill requirement.

TESCO, CUSTOMER ASSISTANT (AUGUST 2016 – APRIL 2017)

During my final year at school I worked part time as a Customer Assistant. My role involved operating tills and handling takings, replenishment of stock and assisting customers. This role instilled in me reliability, motivation, punctuality, a strong work ethic and great customer service skills. I was regarded as a highly valued member of the team and developed strong relationships with all colleagues and management. I worked within a large team of people to deliver excellent customer service in a busy supermarket.

SKILLS

- Team player and confident individual
- Communication and presentation skills
- Problem solving and analytical ability
- Intermediate level in coding language C#
- Proficiency in MATLAB and Mathcad

PUBLICATIONS

“An Assessment of Radar Target Fluctuation Models”, M. F. McGuigan, B. J. Wilcox, P. S. Rose. *Polaris Innovation Journal*, Leonardo MW.

ACHIEVMENTS AND INTERSTS

I recently participated an event called Code for Good hosted by J.P. Morgan Chase which allows coders to use their programming skills to benefit charitable organizations by creating innovation solutions to their technology-based problems. This experience allowed me to use my coding skills to create a tangible improvement for a worthy cause.

As part of my extracurriculars at university, I am involved in the Snowsports club and have been elected as the Brand Manager for the club this coming academic year. The role requires skills pertaining to social media and communications – both of which I am keen to develop.

I have been appointed as an academic representative for my year group at University whereby I communicate issues and concerns from my peers to the staff facilitated through the Student-Staff Liaison Committee.

I successfully completed my Gold Duke of Edinburgh award. This scheme, which I followed over a period of 3 years taught me many skills, such as team working, dealing with challenges and at times stressful situations, confidence building within myself and others and the importance of good communication. Whilst completing the award I volunteered as a mathematics mentor to a younger pupil helping them with their National 5 mathematics.

I am a KeepSafe Ambassador, which is a scheme set up by the charity “I Am Me” in partnership with Police Scotland aimed at reducing disability hate crime by raising awareness through their ambassadors. I volunteer as a scout troop leader for the Glasgow Disabled Scouts which I have been doing for a year. I find this hugely rewarding and challenging at the same time.

Through taking part in a Headstart Program run by the EDT I attended a 5 day program where my passion for engineering and applied physics was ignited.

Outside my studies and volunteering, I am a keen skier as well as enjoying yoga. I have also played hockey for 10 years throughout school and now at university.

References on request

