Mark Lumb
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Education

2018 - 2022 Newcastle University

MComp Computer Science (Games Engineering) Not Completed Yet - On track for a First

Masters Year (Fourth Year)

So far this year, I have completed several more advanced games focused modules all using C++, these include: developing a deeper understanding of pointers and references and advanced features of C++; advanced graphical programming to create a tropical island scene using C++ and OpenGL; and creating a physics engine which works in 3 Dimensions with a variety of features. The modules I am undertaking in semester 2 are working in a team project to create a game and another dissertation.

Bachelor Years (First, Second and Third Year)

Undertook multiple modules over the three years including a dissertation into creating a procedurally generated infinite terrain using Unity and C#, this achieved a First. I also studied several games focused modules including one which went through implementing the basics of a 2D physics engine in C++ as well as one that introduced the concepts of graphical programming in Unity, receiving a First in both of these modules.
I have also undertaken multiple general and security focused modules providing me with experience in a range of languages including: C++, C, C#, Java, SQL, Linux, Website languages, Assembly Language, and Python.

2011 - 2018 Harrogate Grammar School
Sept 2016 – June 2018 A-Levels

Mathematics	A
Computer Science	B
Physics	C
EPQ (Extended Project Qualification)	A

2011 - June 2016 GCSE's and BTEC's

Achieved a range of grades including 3 A*'s - these were in Computer Science, Product Design and Mathematics; 5 A's and 2 B's. I also achieved a Distinction* in Creative Digital Media Production BTEC.

Work Experience

July - October 2020 Positiply

Was part of the initial start-up team of the company and was the lead algorithm designer and developer.

- Conducted market research to give insights into what young people and employees would want out of the system.
- Aided in business decisions and got an insight into how a new business is started, operates and several key behind the scenes areas.
- Developed the initial database and algorithm designs using UML diagrams and other standard prototyping techniques.
- Advised the business founder as a technical expert to provide him with a greater technical understanding of the different systems behind the website – for example file types behind a website and how that can use an external algorithm.
- Designed and prototyped 2 algorithms for the company, only one of which was decided to be implemented into the initial launch of the site. I then developed and thoroughly tested this algorithm

using the agile software approach and unit testing. The algorithm that is used in the site is to calculate peoples feedback rating.

June - July 2016 **Treves UK (Tier 1 Automotive supplier, global manufacturer of interior trim and acoustic systems**)

Worked for one week as a trainee engineer under the chief engineer and one week in the IT and office department as a customer and supplier liaison

- Streamlined problems to make work easier and more efficient for time constraints, including advancing a waste removal technique that allowed for quicker transportation and removal of the waste build up
- Developed a new interview technique to see if people could follow instructions and execute them in a small amount of time
- Overhauled a spreadsheet to document serial numbers and dimensions of all moulds and machines used for Honda car components
- Enhanced existing workbenches into new ones to make a more efficient working triangle for an employee, so they wouldn't have to move around as much to do all their tasks making them more efficient
- Quality control and product testing - tested the side boot panels for the new Honda Civic to see if they would fit into the car correctly

August 2015 & August 2019 **Technotherm Ltd (Leading distributor of ring binder mechanisms)**

Worked as a packaging specialist

- Worked in a small team of 2 staff and under pressure when lots of orders came in before the cut-off time
- Located products in the warehouse as well as packaged, labelled and sent off orders that were placed
- Quickly adapted to the company’s software and computer system to take orders, made invoices and made delivery notes for the packages

August 2014 - March 2017 **Village Shop & Paper round**

- Delivered papers to people's houses in the morning
- Aided in unloading shop resupplies that occurred at very early hours of the morning

Additional Skills and Achievements

I am familiar with multiple programming techniques and methodologies to achieve a more professional level of development, such as:

- Object oriented development
- Test driven development
- Multiple software engineering cycles
- Algorithm design and planning using UML diagrams, flow charts and other prototyping techniques
- VDM Modelling

- Part of the engineering society at school where we did maintenance on the school's electric powered race car that competes in events. We also took part in the F1 in schools challenge where we designed and made a small CO2 powered foam car.
- Competed in several UK Maths challenges in high school, each time earning a certificate for being in the top percentage of Maths students in Scotland, England and Wales.
- In year 11 and sixth form I became a school prefect.
- In year 10 I was my form's charity representative, where I had to organise all our charity events

Interests

I enjoy drone flying, archery and making projects, for example I have created my own shelves, coffee table and containers for things in my room. I also provided my coding knowledge for a project of my brothers to make an authentic functioning PipBoy from the fallout franchise, where he designed and 3D printed the shell and I got the hardware and made the software to feature in it using a Raspberry Pi.

References

Available on request