William McNulty

Software Developer

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Education

Sept 2005 June 2010	**Kingsdale Foundation School**, *GCSE*. 8 GCSEs including Maths, English, IT and Physics
Sept 2010 June 2012	**Kingsdale Sixth Form**, *A-Levels*. Maths, IT, Physics
Sept 2012 May 2015	**Royal Holloway University of London**, *BSc. First Class Honours*. Computer Science

Projects

Year 1 Term 1 — **Robotics**.

Our robotics group project involved building a rambler type robot that would use its sensors and Lejos NXT to navigate around obstacles as well as avoiding table edges and respond to sounds.

- Implemented behaviours using object oriented design. Storing these behaviours in an array and using an arbitrator to control them.
- Improved both the physical design and the internal logic of the robot over time.
- Wrote an extensive report containing annotated code, design features, and explaining how we solved problems that we had along the project.
- Presented our design as well as its features to our peers and lecturers.

Year 1 Term 2 — **XNA Games**.

My XNA project involved me design and create the game Asteroids, whilst including our own functionality and features.

- Created and tested code for the game using C# in Microsoft XNA IDE. Having experienced similar style of coding in Java, C# was quickly adopted.
- Produced a detailed report which explained the challenges we faced, the features we decided to implement, and how we achieved our goals.
- Designed and evaluated all aspects of the game as a group, analysing different approaches, suggestions and assessing ideas.
- Gained number of skills working in a team, listening and understanding ideas of others, accepting and taking on board constructive criticism, treating others with respect and keeping up group moral, being punctual and adjusting to different schedules and by fully immersing myself in the task at hand.

Year 2 Term 1 — **Software Engineering**.

This was an individual project in which I had to create a calculator with a graphical interface, using both reverse polish and infix notation.

- Learned how to efficiently create a project based on a given UML diagram.
- Effectively used source control to maintain work throughout the project.
- Used Agile methodologies such as TDD, use-cases, and user stories during the course of the project. item Gained the ability to create GUIs using WindowBuilder and involving it into the MVC pattern.
- Made sure my code complied against coding standards by adhering to a given Checkstyle rule set.

Year 2 Term 2	**Team Project**. We were assigned the task of creating an automated restaurant system in which members of staff and customers used a tablet to communicate. The project consisted of 5 sprints, each lasting 2 weeks, and we were constantly communication to the product owners (the lecturers).

- Learned how to utilise the scrum based agile methodology.
- Created user stories based on the product specification and turned them into tasks.
- Used the ProjectCards management tool throughout to assess to project progress.
- We held many scrum meetings each week to emphasize working as a team.
- Scrum master was changed each week which allowed me to understand how important communication and respect within a team is.
- Sprint review meetings were held at the end of each sprint and allowed us to demo the current working product (vertical and horizontal slices).

Year 3 Term 1 & 2	**Final Year Project**. I chose to do my final year project on the subject of Value at Risk, which focuses on risk management of financial assets.

- Implemented different approaches of Value at Risk calculation, including Historical Simulation, Model Building and Monte Carlo Simulation.
- Analysed the accuracy of my implementation of each approach using backtesting and stress-testing.
- Allowed financial derivatives to be part of the portfolio.
- Gave a presentation of my program to my peers and project supervisors.

Work Experience

Summer 2014	**Nursery Book**, *Junior Web Developer*. I worked for a small start-up company called NurseryBook which aims to allow parents to view their child's development whilst in nursery through an on-line portal.

- Create user interfaces which allowed nursery owners to transfer their existing records to an on-line form.
- Helped merge the back-end of the database with both the user interface on the website and the Android application.

Augest 2015 - Present	**ICBC Standard Bank Plc**, *Software Developer*. I am currently working at ICBC

Technical Skills

Database	MySQL, SQL Server
Languages	C#, Java, Javascript ES2016
Frameworks	ASP.NET MVC, EntityFramework
Other	LaTeX, SSRS

References

Available on request