

George McDonagh | CV

Computer Game and Software Programmer

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Skills

Technologies: Visual Studio, Unity, Unreal Engine, OpenGL, Git, Android Studio, Visual Studio Code
Languages: C++, C#, JavaScript, HTML, CSS

Experience

Summer 2015

Drop Dead Interactive – I worked with DDI on an in-development project using Unity and C#. I developed the top-down camera from scratch which followed the center point of the players and zoomed in/out accordingly. The camera would smoothly follow the players and could also be tilted to decrease/increase the viewing angle. After this I worked with DDI to implement a game menu where players would select their avatars before the game started.

May – July 2016

Furnley House Ltd – I was given the opportunity to work at Furnley House for 4 weeks as work experience but I asked to increase the period to 8 weeks as I found the experience to be invaluable. During this time I worked as the company's main IT support. I carried out a range of responsibilities from being everyone's main point of contact for IT-related issues to installing a new primary NAS device for the company's three branches to use.

July 2016 – January 2017

Furnley House Ltd – After the 8 weeks of work experience Furnley House offered me a contract to carry on the work I was doing for them alongside my studies.

Personal Projects

For a more detailed look at these projects and additional projects please visit my website: georgemcdonagh.co.uk.

3D Scene Renderer – C++, OpenGL

For my final year project I wrote a scene renderer using OpenGL in C++. This was a large project which included the following:

- My own maths library: Matrices, Vectors, Quaternions
- Scene editing tools
- Lua serialization
- Vertex and fragment shader programs written in GLSL
- Entity-component based scene management system
- Extensive OpenGL API use

Pseudo-3D Platformer – Unreal Engine, Blueprints

During a 24 Hour Game Jam hosted by my Game Development Society I programmed a procedurally generated platformer which featured static, moving, and breaking platforms. The collision of all of

these had to be updated so that the player could phase through them from underneath and then land on them. I was the primary programmer in my team.

2D Scrolling Space Shooter – C#, Microsoft’s XNA Framework

A space shooter featuring animated sprites, purchasable upgrades, never-ending gameplay, game state management, pixel-perfect collision detection.

PONG Replica – C#, Microsoft’s XNA Framework

As a project completed for a college assignment I created a PONG replica which featured several levels of difficulty, a spectator mode, a classic mode, a multiplayer mode, an arcade mode which included high-score board, and an options menu in which the player could customize certain aspects of the game in multiplayer mode.

Education

September 2016 – June 2018

De Montfort University – Computer Games Programming (BSc) Hons, 2nd, 3rd Years

September 2015 – June 2016

De Montfort University - Computer Science (BSc) Hons, 1st Year

September 2013 – June 2015

Leicester College - IT BTEC 90 Credit Diploma level 3 - Games Development | **D*D*D**

References

Jay Akira; Drop Dead Interactive (Founder)

Email: jay@dropdeadinteractive.com

Dr Hossein Malekmohamadi; DMU (Tutor)

Email: hossein.malekmohamadi@dmu.ac.uk

Hobbies, Interests

- Fantasy Fiction (Currently *The Wheel of Time*)
- Pixel Art
- Collaborating with others to make video games
- Procedural Generation
- Video Game Conventions
- All things space
- 3D Modelling
- Networking with Game Industry individuals
- UI Design
- Artificial Intelligence