

CRAIG JEFFREY

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Profile

Perfectionist Game Programming Student

Final year game programming student at University of Abertay Dundee searching for a programming job starting this summer/late this year. I am a quick learner as I find the process of mastering a skill or achieving proficiency deeply rewarding and pride myself in being competent at what I do. I am an open minded and curious person, always willing to learn and consider criticism.

Education

2012 - 2016: University of Abertay Dundee BSc(Hons) Computer Games Technology *Expecting 2:1*

Modules include: Network Programming, Procedural Methods, Graphics Programming, Audio Programming, Computer Operating Environments, Applied Mathematics.

Honours Project - "Music Information Retrieval for Computer Games" (2015-2016 | C++ | Windows PC | Open Source->[GitHub](#) | [Project Website](#))

My honours project involves using music information retrieval techniques on audio signal waveforms to facilitate automatic content creation for music games. I developed an application "*RhythmIR*" for the project which implements a system for doing this, as well as a simple rhythm game for testing the output. A large number of libraries are used in the application, including *aubio*, *dear imgui*, *SFML* and a library of extensions to *SFML*.

Projects

These projects and more are covered in more detail on my [website](#).

Group Project - "Galaxea" - Engine Programmer (2014-2015 | C++ (Abertay Framework) | Sony PS Vita)

- In third year at university I participated in a professional group project working on a 2D game based on a brief by FuturLab.
- As the engine programmer I implemented many aspects of the game including level loading (using Tiled and RapidXML), menus and UI, the overall application state machine and tile collision physics (using Box2D).
- I worked as part of a team of 8 along with 1 gameplay programmer.

Independent Project - "Handmade Hero" - Casey Muratori (Ongoing | C++ | Windows | Open Source->[GitHub](#) | [Handmade Hero Website](#))

- I am following along and independently studying and customizing Casey Muratori's Handmade Hero.
 - Doing this project has taught me a lot so far including how an industry veteran goes about programming and has challenged me to re-evaluate my views on programming paradigms such as object orientation.
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Technology

Languages: **C++(>15 projects)**, HLSL(2 projects), MATLAB(2 projects), Python(2 projects), HTML/CSS(1 project), C#(1 project).

Development Tools: **Microsoft Visual Studio,**
Git with SmartGit,
Unity, CMake

Libraries and APIs: **C++ Standard Library (including C++11),**
Boost (filesystem), DirectX 11,
OpenGL 3.0 (fixed-function),
XAudio2 & X3DAudio, Windows API, WinSock,
SFML, Box2D, RapidXML, ImGui, aubio.

Miscellaneous: 3D rigging/skinning with Autodesk Maya,
LaTeX with TeXstudio,
Level Editing with Tiled,
Image Editing with paint.net/Autodesk Pixlr.

Awards

6 Years Perfect Attendance (2006-2012) - Achieved at Caldervale High School.

Hobbies

Computer Gaming

- I enjoy games that have interesting mechanics, mechanical depth or involve mastering a skill and tend to play online games as I am competitive.
- Due to my interest in game mechanics I have a strong intuition when it comes to speculating on how code may be structured or implemented.
- Computer gaming as an interest and passion has provided me with some very useful skills ranging from working effectively in a team to optimizing efficiency in competitive environments.
- I have developed basic skills in image editing and interface design attained when customizing the user interface of various games I enjoy.

Computer Hardware and Peripherals

- I have an interest in computer hardware and peripherals and have above average knowledge of how computers work physically.
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References

Available on request.
