Andrew Macdonald
Game Programmer

Email	andrew@andrewmac.me	**Website**	http://AndrewMac.me
Twitter	@AndrewAlexMac	**Date of Birth**	4th May 1992
Skype	AndrewAlexMac	**Location**	Dundee, United Kingdom; but willing to relocate

Objective

To gain an entry-level programming position within the games industry; and to gain an in-depth knowledge of game development workflows and processes; so as to empower teams and other disciplines through the development of powerful tools.

Skills

C++, **C#**, Python, **DirectX/OpenGL**, JavaScript/HTML5, **virtual reality**, audio engineering, networking, Maya scripting, **native cross-platform development**, Unity3D, DevOps, UNIX/Linux, **build engineering**, vector/matrix mathematics, toolchain development, **source control** with adv. Git, **team leadership**, events planning, **public speaking**, audio/video production.

Experience

IGDA Scotland   *Chair, Nov 2013 – Nov 2015 (expected)*

I serve the local community as chair of the chapter's board, during which time it has become one of the fastest growing chapters in Europe. My present goals are to build a strong data-driven foundation, to later establish it as the first legal non-profit organisation of its kind worldwide.

Tag Games   *Programming Intern, Summer 2013*

Worked as part of a professional team of 8 on *Cat Tap Fever*, a free-to-play iOS/Android title published by *505 Games*, built in C++ using Tag's *ChilliWorks* cross-platform mobile game engine. My work included implementing UI, streamlining build/asset pipelines, and developing QA tools

Education

Abertay University   *BSc Computer Games Technology (Hons), 2010 – 2015 (expected)*

Studied a broad range of game programming techniques including 2D/3D graphics, console development, audio, networking, and mathematics. See *Projects* below for examples of work. Also served on Ethical Hacking and LAN Gaming society committees. Graduation expected May 2015.

Sharjah English School   *2005 – 2010*

A-Levels in Maths, Physics and Design Technology, including full marks for my fully functional *Watchbox* consumer electronics product prototype, featured on Engadget.com. Also completed AS-Levels in Chemistry in addition to self-taught Computing (Java) in my spare time.

Projects

OVRWatch   *Solo project: Sep 2013 – Present (work in progress)*

Developing an optical eye tracking system for the Oculus Rift as part of my final year university dissertation. Using dual infrared cameras retrofitted into a modified DK1 headset, and a bespoke cross-platform *OpenCV*-based C++ companion library, the project aims to ascertain eye tracking's potential in gameplay, QA and player engagement, when used in a virtual reality setting.

Project ARC   *Team project: Sep 2012 – May 2013*

Worked in a small team to develop a plugin-free HTML5 3D multiplayer shooter for a group coursework project. We constructed our own JavaScript game engine; with my focus being development infrastructure, tools, asset pipeline, video production and presenting progress.

NotSonyLinux   *Solo side project: Sep 2011 – Present*

Constructed an unofficial PlayStation 2 Linux devkit using only retail parts to allow homebrew development without Sony's official '*Linux for PS2*' resources, expensive specialist hardware, or hardware modchips. Presented multiple talks on the project and still polish it in my spare time.

Honours

Winner of IGDA Scholarship to GDC San Francisco 2014

Develop Magazine 30 Under 30 2013: Honourable Mention