Hey, I'm Matt!

To check out my previous work, visit mattfiler.co.uk

About Me

I'm a Senior XR Developer at Ultraleap with over 4 years' professional experience building world-class hand tracking demo applications and tools in Unity for Android and Windows. In 2020 I achieved First Class Honours in Games Technology at the top of my University of the West of England class.

I'm a highly motivated self-driven C# engineer with a passion for excellence, boasting a wide range of knowledge in a variety of languages, pipelines, and tools, with a keen desire to deliver on time and take on new challenges. I'm comfortable in a project leadership role and never afraid to go the extra mile to succeed.

Professional Work Experience

- **Senior XR Engineer, Ultraleap: full time - November 2020 to present**
  - o Developing cross-platform Windows and Android demo applications in C# using Unity, showcasing the best of our industry-leading computer vision technologies in virtual reality. Lead developer for Ultraleap's flagship demos including "Launcher" and "Blocks". Most recently released "Aurora" which can be downloaded via Steam, Pico, and Lynx. Contributed to Ultraleap's open-source and internal tooling, including the creation of a novel form of hand-based locomotion.
  - o Pioneered the concept, development, and maintenance of an internal web-based cross-team application release pipeline named "Obsidian" which automatically handles all actions across build pipelines, Git operations, release forms, signing, and app publishing. Developed the platform using APIs from GitLab, Zephyr, JIRA, and more.
  - o Created an automated internal QA test pipeline using Unity and WinForms which could be used to evaluate hand tracking quality and performance, as well as automate previously time-consuming manual application test runs using pre-recorded tracking data.
  - o Regularly project managed using agile techniques with JIRA, Miro, and other softwares.

- **Game Programmer, PlayWest: part time - August 2019 to November 2020**
  - o Developed educational games using Unity for the University of the West of England. Across a variety of projects I created frontends, level population systems, and internal pipeline tools. I was often given projects to rapidly prototype and push to release in a short timeframe. Released "Don't Walk By", "iPatch Pirates", and "Polygon Fitness".

- **Tools/Web Programmer, University of the West of England: intern - July to August 2020, June to August 2018**
  - o Produced a research-focussed toolkit using DirectX and assimp for importing, editing, and exporting 3D scenes with support for C++ plugins to handle custom file types.
  - o Built an online postcard generator utilising the Google Vision API to generate context from user uploaded images. Trained a machine learning model to generate text from the context.
  - o Developed a functional WebGL application to guide interactive tours around historical sites in Wales using pointclouds and GPS tracks recorded from drones.

Education

- **University of the West of England: Games Technology BSc(Hons)**
  - o Attended September 2017 to July 2020
  - o Achieved Bachelor of Science with First Class Honours: **year 1** - 71.5%, **year 2** - 78.9%, **year 3** - 75.5%

- **North Somerset Enterprise and Technology College: IT Practitioners Extended Diploma**
  - o Attended September 2015 to June 2017
  - o Achieved IT Practitioners Extended Diploma with D*D*D*: **18 modules** - distinction

- **Priory Community School**
  - o Attended September 2010 to June 2015
  - o Achieved bronze DofE, L2 Mobile App Development, and 11 GCSEs: **English** - A*, **Maths** - A, **Science** - A

Personal & University Projects

- **OpenCAGE: personal project - 2017 to present**
  - o Reverse engineering Alien: Isolation's engine to build a suite of bespoke scripting and asset management tools from scratch which allow for the creation of custom maps and missions. Worked to produce plugins for existing tooling to allow for modification of behaviour trees and other game configurations. While working on the project I have spoken to a lot of the Creative Assembly team which has been a great window into the world of AAA development.
  - o To promote the tools I've developed a series of mods which have been featured in a variety of gaming publications including IGN, PC Gamer, Eurogamer, and NME. I also worked with the YouTuber "AI and Games" to produce a deep-dive video on the game's systems, which has just surpassed 1 million views.
- **Level Streaming System: university project - 2020**
  - o Created a system in my own custom DirectX11 engine using C++ for building game levels which can be streamed at runtime. Developed custom tools for the asset pipeline using WinForms C#.
- **Skybox Generator: university dissertation - 2019 to 2020**
  - o Worked towards developing a toolkit capable of producing realistic skies for use in games, aiming to solve several novel issues such as HDR upscaling and cloud depth sampling from LDR images. Worked across multiple languages and interfaces including MATLAB, Python, shell script, PHP, C#, C++.
- **Mario Kart DX12: university group project - 2019**
  - o Developed a custom game engine using DirectX12 with proprietary content management tools for a recreation of the game Mario Kart. Single handedly produced and maintained the engine's asset pipeline: consisting of low-level runtime asset handling functionality, creation and maintenance of custom file formats, tools to handle importing and converting asset formats, and extensions to Blender to allow graphical level editing with prop/trigger placement.
- **Alien Isolation Zombies: personal project - 2016 to 2018**
  - o Built a map for the game Call of Duty: Black Ops 3 utilising Radiant. Scripted a custom campaign and produced marketing material including trailers and promotional teasers.
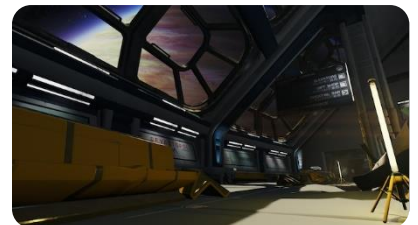
Many more projects can be found on my website, along with additional information about each of these.

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References

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Email: andy.king@uwe.ac.uk
Relation: Manager at PlayWest.

Name: Adam Harwood
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Relation: Former manager at Ultraleap.