STUART ADAMS

Software Engineer

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SUMMARY

Self-motivated software engineer with practical experience in a high-pressure software development environment. Adept in developing, testing, and maintaining high-performance software. Experience using OpenGL graphics API to develop advanced graphics and visual effects. Worked as part of a team to design and develop NVR software for embedded Linux devices deployed on multiple sites worldwide.

EXPERIENCE

Software Engineering Intern

Veracity UK Ltd.

📅 2017 – Present   📍 Prestwick

- Worked in a team to design and develop cross-platform NVR software for Windows and embedded Linux systems.
- Gained practical experience in a large, concurrent codebase using the latest C++ standards and techniques.
- Developed web services providing standardized interfaces for interoperability of security products.
- Developed WPF applications for the remote configuration of security devices.
- Represented the company at speed networking events.

VOLUNTEER WORK

President

UWS Games Development Society

📅 2017 - 2018   📍 Paisley

- Arranged workshops and events for learning C++ and version control.
- Founded and moderated a Discord server to provide advice and support for game development students and alumni.
- Represented the society and university by giving presentations at local colleges.
- Liaised with alumni and industry professionals to build a network for students.
- Used social media for event promotion.

ACHIEVEMENTS

🎓 **Student of the Year**
West College Scotland
📅 2016

🏆 **Subject Prize**
West College Scotland
📅 2016

⊞ **Games Competition 2nd Place**
Microsoft Imagine Cup National Finals
📅 2015

🎮 **Best Game**
West College Scotland
📅 2015

▤ **Academic Excellence Award at Advanced Higher Level: English**
Clydeview Academy
📅 2014

EDUCATION

BSc. Computer Games Technology (Hons)

University of the West of Scotland

📅 2016 – 2019   📍 Paisley

HND Computer Game Development

West College Scotland

📅 2014 – 2016   📍 Paisley

GRADES

- Serious Games: A
- GPGPU and Accelerator Programming: A
- Computer Game AI: A
- Algorithms and Collections: B
- Research Methods in Computing: A
- Games Technology Group Project: A
- Advanced Games Programming: A
- Creative Technologies Professionalism: A
- Real Time 3D Graphics: A
- Interactive Physical Modelling: A
- Game Engine Design: A
- 2D Graphics Programming: A
- Structures and Algorithms: A
- Computer Games Design: A
- Game Engine Design: A

HOBBIES

- Game Programming
- Gaming
- Reading
- Movies
- Music Production
- Guitar

PROJECTS

Real-Time Physically-Based Rendering
Honours Project

📅 2019   📍 UWS

- Developed a physically-based renderer, Moka.
- Renderer is written in C++17 and OpenGL, demonstrating the many techniques employed by a commercial game engine to achieve photorealistic rendering of materials in real-time.
- Features a microfacet BRDF based on UE4.
- Irradiance environment mapping is used for the ambient and diffuse terms, while Karis' split-sum approximation is used for specular image based lighting.

RedMetal
Games Technology Group Project

📅 2018   📍 UWS

- A high-speed zero-gravity racing game for four players.
- The game features a late 90's aesthetic reminiscent of WipeOut.
- Players must complete a set number of laps before their opponents to win.
- Particular care was taken to create a driving experience similar to that of a commercial racing game, with smooth camera effects and an FOV that increases with speed.

TinyBox
Games Technology Group Project

📅 2018   📍 UWS

- TinyBox is the game engine that powers RedMetal.
- It is a custom C++ library that targets both Windows and Linux desktops.
- SDL2 is used as a platform abstraction layer, allowing the engine to target both platforms with minimal code changes.
- OpenGL is used for the renderer backend.
- Bullet is used for physics engine backend.
- Features high-level 2D and 3D graphics facilities.
- A component system allows quick prototyping and loose coupling.