Andrew Jacobson

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PROFESSIONAL SUMMARY

AR/XR Unity Developer with over 7 years of experience in immersive 3D applications and spatial computing, focusing on creating seamless, interactive AR experiences for mobile platforms. Proven expertise in Unity, multiple XR frameworks, and optimizing performance for Android and iOS devices.

EXPERIENCE

Merge EDU San Antonio, Texas
Unity 3D AR/VR Developer August 2021 – Present

- Engineered cross-platform C# XR framework for Unity, ensuring seamless functionality across iOS and Android.
- Developed iOS plugins for Unity using Swift, enabling native functionalities like web authentication and XR features.
- Prototyped XR experiences for Qualcomm and Snap hardware, optimizing performance and UX for AR smart glasses.
- Led the R&D of a photogrammetry app using ARKit, RealityKit, AR Foundation, and Unity, supporting on-device and server-based object processing, which later transitioned from experimental to production stages.
- Collaborated on Python tools to enable seamless file type conversions and optimized 3D models, reducing download speeds by up to 10-15 times and significantly lowering storage requirements.
- Wrote compute shaders to perform calculations that would be otherwise impossible on lower-end CPUs.
- Engaged with a remote, cross-functional team, maintaining regular communication with management, developers, QA, and design to ensure project alignment.

Innovative Multimedia Group San Antonio, Texas
Software Developer June 2017 – July 2021

- Led the development of a VR safety training experience for Toyota in Unity for Meta Quest, enhancing employee training through immersive simulations.
- Optimized gameplay code and shaders for enhanced performance on iOS, Android, and Meta Quest.
- Developed a VR wheelchair basketball game for Oculus Rift in Unity, emphasizing inclusive design for varying levels of player accessibility.

TECHNICAL SKILLS

Languages/Frameworks: C#, Swift, ARKit, RealityKit, ARCore, AR Foundation, Vuforia, Python, Java, C++
Tools/Software: Unity, Unreal Engine, Blender, Maya, Google Firebase

EDUCATION

Texas A&M University, Mays Business School College Station, Texas
Master of Science in Business May 2017

Texas A&M University College Station, Texas
Bachelor of Science in Visualization May 2016

PUBLICATIONS

PulmonaReality: Transforming Pediatric Pulmonary Function Experience Using Virtual Reality
Association for Computing Machinery July 2016

This paper presented PulmonaReality, an interactive virtual reality game built using Unreal Engine 4 for Oculus Rift aimed at young patients to help immerse them into a world that makes pulmonary function tests more enjoyable for the user while providing more reliable results for the examiner. In our preliminary user studies, children reported that the system was easy to use with minimal instruction and evoked a sense of wonder when they experienced our different interactive 3D environments.