Designing For Virtual Reality

Aishwarya Tadwalkar, Freelance Multi-Disciplinary Designer and MA Animation Student at Nottingham Trent University

In this article, we hear from Aishwarya Tadwalkar, a freelance multidisciplinary designer and MA Animation student, as she transitions from graphic design to game development and Virtual Reality (VR). It highlights her journey from working with Unity to creating the VR game Abyss in Unreal Engine, exploring the challenges, recognition, and future potential of VR in gaming and education. Through her experiences, Aishwarya showcases her evolving approach to design and immersive technology.

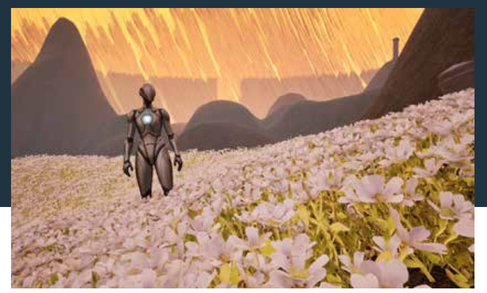
I am a multidisciplinary designer who started out as a graphic designer before pursuing a master's degree in animation at Nottingham Trent University. During my final project, we were introduced to Unreal Engine (game engine) as part of our Animation course. I became fascinated by the idea of creating my own game. I had previously studied game design as an additional subject during my bachelor's, where I first worked on Unity. One of my key projects was an immersive experience that recreated the ancient site of Mohenjo Daro. Designing games in Unity was a complex process, so when I shifted to Unreal Engine during my master's, being able to create a hyper-realistic environment with ease was an absolute game changer.

Getting into Game Design

Having grown up playing games like Captain Claw, Uncharted, and Dark Souls, I knew I wanted to create an RPG (a genre of video games called role-playing games). The first game I developed in Unreal Engine was Abyss, a survival horror game set in an abandoned underground hive city. In this game, the player must navigate dense architecture to escape to the outside world. My background in graphic design allowed me to design my own game props. I was amazed at being able to merge different aspects of design together.

The Journey to VR

I was introduced to Virtual Reality by my professor, Tasneem Guendouz, who suggested I make Abyss a VR game. Until then, Virtual Reality (VR) had always seemed like something out of science fiction to me. The first time I put on the headset, I was struck by how immersive it felt, like all of my senses were activated at once. VR relies heavily on the suspension of disbelief, making you feel as though you're physically present in the environment. Designing for VR is fundamentally about crafting spaces that can captivate the viewer. For my game, I focused on creating an environment that was engaging even without much interaction with the surroundings, as I was still learning how to make it fully interactive. I set the game in an ancient room, with the only light source being a swirling red portal at its centre.



This was the ending scene of Abyss and It amazed me how different the portal felt in VR compared to seeing it on a screen. In VR, it truly felt like I was stepping into another world.

Challenges & Recognition

Deciding to adapt my game for VR changed the entire course of my career and it would not have been possible without the support of my professors and my parents, in particular, having been a constant source of encouragement. Designing games sounds like a fun experience in theory but it can be gruelling at times. For the past few months I have been working countless hours putting efforts into programming certain parts of the game which can be really exhausting.

It all comes to fruition when your hard work is recognised and in my case I got an incredible opportunity through NTU to exhibit my game at New Designers exhibition in London and Nottingham Contemporary alongside other talented students. Watching people experience the game was invaluable. I got a lot of constructive feedback, one of which stood out to me the most, came from a VR game writer who said *"We are at the very beginning of understanding the potential of Virtual Reality, and we have a unique opportunity to shape its future."*

The Future of VR

Although VR devices were first introduced in the 90s. The technology didn't truly take off until recently. With major developments like Facebook acquiring Oculus, leading to the Meta Quest, and Apple's introduction of the Vision Pro, the industry is rapidly evolving and only gaining momentum. VR is now expanding beyond gaming by incorporating practical, everyday applications. Its impact can be seen across various fields, especially in training simulations for high-risk industries, including surgery, where VR is allowing doctors to practice their skills in virtually simulated surgeries.

The Impact of Virtual Reality

My current project delves into the potential of VR in education. I'm developing an educational adventure game that immerses players in historical eras, designed to make history engaging for students. Unlike traditional 360-degree virtual tours, this game allows players to experience history not just as passive observers but as active participants, gaining a deeper understanding of the society and culture of that time. This project is not intended to replace traditional teaching methods but rather to enhance how students learn and retain knowledge. VR is opening up new possibilities, and it will soon become as commonplace as smartphones.