

An Immersive New World: A Comparison of Virtual and Augmented Reality

By James Trinh

With the recent development of Virtual Reality and the rise of Augmented Reality, many people are captivated by the immersion that these technologies provide. What I'm here to talk about today is to compare the advantages and disadvantages between them.

What is Augmented Reality (AR)?

Augmented reality is the idea of combining the utility of the computer into our everyday reality, and this is generally done with a strong focus in a visual sense. In games such as *Pokémon GO*, the real world is combined with the game by having the game incorporate the real world's map and utilizing the camera to display the *pokémons*. Some apps, including Amazon, allow you to "place" a furniture in your home by using your camera and letting you see how it would match with your room or even fit. In short, AR add onto or "augments" the real world with digital elements. With the headset I demoed in the Cave 2 at UIC, I struggled with it since there was no feedback aside from visual cues.

What about Virtual Reality (VR)?

Where AR is focus on enriching the current life, virtual reality focuses on making it as immersive as possible. VR creates an entire world in on itself that one would become enveloped in. VR aims to make it feel as if you are in a totally different realm. Google Earth VR, for example, allows you to zip through the world and walk around the streets of various city. One second you could be in New York, the next you're in Tokyo. If VR were to be perfected, one would have all their five senses immersed in the world similarly to *The Matrix*; meaning you can not only see and hear the world, but you can touch, smell, and even taste the environment if you are daring enough. As of now, devices like the Oculus Rift and the Valve Index can only do sights and sound with one foot in touch.

So, what's the difference between AR & VR?

The main difference is that AR is refining the real world by adding more to it, where as VR creates its own world or environment for the user to explore. The downside of augmented reality is that it can't

fully immerse the user with their five sense and give them an “out of this world experience”. On the other hand, VR wouldn’t allow the user to keep track of the reality at hand.

Both technology has downside and upside, but I’m on team VR.