

# Virtual and Augmented Reality - Demo Reflection

By: Joseph Galante

As technology is evolving, there are more companies trying to come up with a new virtual or augmented reality experience. Before stepping into the CS 491 lecture on the first day, the only experience I had using virtual or augmented reality was the augmented reality of Pokemon Go. Now that I have seen and used more of the VR and AR technology that is offered to a consumer, my original perception has changed slightly.

Starting off light, the Google Cardboard was the first tool I used when testing different devices. An advantage of the Google Cardboard is they're open source, very cheap to purchase, and will work with almost any smartphone device. The Google Cardboard is a simple contraption; and in my opinion, an easy way to introduce someone to the world of VR. It was non-invasive to the senses and was quick and easy to set up. While there aren't any extreme downfalls of the Google Cardboard, some inconvenient aspects of the product are definitely present. It may be cheap and easy to manufacture, but that also means the device will not offer much technology (After all it's just a piece of cardboard).

After the Cardboard, the next device on rotation was the HTC Vive. I had watched reviews, presentations, and other demonstrations of the HTC Vive and I was excited to try it out first hand. In all honesty my first thought before putting on the headset was "Wow I really hope I don't pass out from motion sickness." After putting on the headset I realized I didn't have anything to worry about. Although not being able to see my own body was nerve-racking at first, this feeling soon passed and I was immersed into this virtual world that didn't seem real. The VR using the Vive seemed heavily geared towards games. Playing the basketball, archery, and shooter games gave me an adrenaline rush normal non-VR games couldn't. One of the main issues with the setup of HTC's product was the large wire that needed to be connected to the back of the device at all times. Knowing that there was someone behind me the whole time moving the wire out of my way while I moved took away from the immersive experience. All in all I believe the HTC Vive is a strong step in the right direction for the VR industry, but it is still far from being perfect.

Next on my list of devices to try was the HaloLens. Of the bunch, this was the only AR device that I was going to try. I didn't know what to expect knowing that AR is just layers of virtual content on top of the reality that we see. Using the device can be a bit awkward to use in public considering anyone using the HaloLens looks like a crazy person wearing ridiculous-looking goggles making hand gestures. Regardless, it was a very cool seeing virtual content interact with the reality around me.

Finally, the last stop on my rotation was the Cave 2. Immediately entering the room, I was blown away by the almost fully immersive experience of a rendered brain. Being surrounded on all sides by 3D images on these screens gave an intense illusion of depth and almost seemed like a new reality. Inside the cave the user holding the "wand" could control and manipulate the program being seen by everyone in the cave. Scrolling in and out of the images created an astounding and detailed visual experience. One of the downfalls of the Cave was the fact that the floor and ceiling were not included in the experience. The floor was the normal floor and the ceiling was the normal ceiling. This took away from the immersive feeling that the cave originally offered.