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Virtual reality has an interesting history, the idea of VR technology was first proposed by a sci-fi writer named Stanley G. Weinbaum in his short story Pygmalion’s Spectacles written in the 1930s. He wrote of a pair of goggles that allowed the user to experience a fictional world. Following this in 1955 a man named Morton Heilig envisioned a multi-sensory theatre in his paper entitled “The Cinema of the future”, he went on to build a working prototype in 1962. It was called the Sensorama and is one of the earliest known examples of a virtual reality system. It was a large device that you could place your face into. It simulated a motorcycle ride through New York, the user would sit in an imaginary motorcycle, with fan-generated wind, and simulated noise and smells of the city. Despite the lack of user control the experience still felt real. Heilig believed his invention could also be used to train the armed forces, he gave an example of a supersonic jet. Allowing students to experience flying the jet without putting them in danger. Heilig also patented a design in 1960 called The Sword of Damocles and it is considered the first virtual reality head-mounted display. The drawings of it look incredibly like the VR technology we see today. As the years progressed a man named Ivan Sutherland inspired by Heilig detailed the idea of an “Ultimate Display” in 1965. This device would be able to simulate a virtual reality to the point that the user would not be able to tell the difference from actual reality. “The ultimate display would, of course, be a room within which the computer can control the existence of matter. A chair displayed in such a room would be good enough to sit in. Handcuffs displayed in such a room would be confining, and a bullet displayed in such a room would be fatal. With appropriate programming such a display could literally be the Wonderland into which Alice walked.” – Ivan Sutherland. Obviously as it was only 1965, the technology available made it impossible to create such an impressive piece of technology. The idea of a virtual world indistinguishable from our own, sparked ideas in the minds of inventors in the years to come. Like American computer artist Myron W. Krueger, who created Videoplace. This was an artificial reality that surrounded the user, it also responded to their movements without needing goggles or gloves, the user would be projected onto a screen in front of them, they could change the image of themselves by moving around. Later in 1991 we began to see virtual reality machines that were accessible by the public, Virtuality Group launched VR arcade games. Players would wear goggles and play immersive games. Some of the machines were networked together allowing multiplayer. Following this was the Nintendo Virtual Boy in 1995, with a head mounted display and “3D” graphics. The console was released but ended up being a commercial failure. This was since it was difficult and uncomfortable to use. After this the movie The Matrix was released in 1999, a movie about a virtual world. This movie inspired many to invest themselves more in virtual reality. This brings us to 2012 when the Oculus Kickstarter was created, the Kickstarter raises 2.5 million and essentially influenced most of the large tech companies to create the VR technology that we see today.

But what is the future of VR? It’s challenging to predict the types of technology we will have 10 years from now. I believe it is likely that VR technology will be a much bigger part of our world. The corona virus outbreak proved that our society can still function using the internet, I believe as the years go on, we will improve on this, creating more advanced technology for virtual interactions. VR still has a long way to go before it is totally undistinguishable from reality, companies such as Pimax have developed 8k headsets, which provides a more captivating experience, but requires a very powerful processor. Also, with the development of 5g, future users of VR could potentially receive images in real time, just like if they were viewing the real world. Currently movement in VR is somewhat difficult, products like KAT VR which allows a user to have complete control over there lower body actions, such as walking, and running have created a new more immersive experience for users. VR treadmills have also been developed, allowing the player to move on the spot. Unfortunately, these products don’t work very well right now. They are also quite expensive. Overtime It is likely that improvements will be made to these devices. Developments in hepatic feedback are also being made, right now haptic gloves such as VRgluv are big, clunky and not easily accessible for consumers. The dream would be to have haptic gloves that look and feel like any normal glove but at the same time provide an effective touch simulation. In order to really immerse the user in a virtual world, full body haptic suits will have to be used. Companies such as TeslaSuit have created working suits, but again they are not easily available to the consumers, right now they are being used for tasks in dangerous environments such as astronaut training. As we travel into the future VR headsets will also have to be improved upon, right now they are large, heavy and can cause irritation and discomfort after long periods of using them. Eventually it is hoped that VR headsets will be light and easy to ignore when wearing them. VR can also be a huge part of the workplace of the future, right now more and more people are beginning to work from home, meetings are being held on platforms such as skype, the problem with this is a large amount of body language is lost. The next step in online meetings is VR, this allows for more efficient communication. Finally, one can only hope we avoid the dystopian future detailed in the 2018 movie Ready Player One where humanity lives in a virtual world in order to escape the bleakness of our own world.

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