



---

# AR : The New Version Of Discovering Reality

Have you ever thought about a kind of technology which would give you the lively experience just by sitting at home?

What if you would have such a technology which would give you range of choices which suits you the most without actually trying it?

To solve these problems the invention of AR's and VR's were made, which in turn drastically changed the entertainment and gaming industry and also various other fields.

Do you all remember the famous Pokemon Go game which was released in 2016 which created an unreal hype among all the users. In that game AR technology was used to give realistic effect.

AR was first invented in Harvard University in the year 1968 by van Sutherland.

And In 2008 BMW became the first company to use AR technology commercially.

The primary value of augmented reality is the manner in which components of the digital world blend into a person's perception of the real world, not as a simple display of data, but through the integration of immersive sensations, which are perceived as natural parts of an environment.

The earliest functional AR systems that provided immersive mixed reality experiences for users were invented in the early 1990s, starting with the Virtual Fixtures system developed at the U.S. Air Force's Armstrong Laboratory in 1992. [

Commercial augmented reality experiences were first introduced in entertainment and gaming businesses. Subsequently, augmented reality applications have spanned commercial industries such as education, communications, medicine, and entertainment. In education, content may be accessed by scanning or viewing an image with a mobile device or by using markerless AR techniques

## **NOW LET'S UNDERSTAND WHAT IS AR AND VR**

### **What is Augmented Reality?**

Augmented Reality is an interactive experience of a real world environment where the objects that reside in the real world are enhanced by computer-generated perpetual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somato sensory and olfactory. AR can be defined as a system that incorporates three basic features : a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects.

### **What is Virtual Reality?**

Virtual Reality (VR) is the use of computer technology to create a simulated environment. Unlike traditional user interfaces, VR places the user inside an experience. Instead of viewing a screen in front of them, users are immersed and able to interact with 3D worlds. By simulating as many senses as possible, such as vision, hearing, touch, even smell, the computer is transformed into a gatekeeper to this artificial world. The only limits to near-real VR experiences are the availability of content and cheap computing power.

### **Technology Stacks in Augmented Reality**

**Vuforia**

**Google ARCore**

**Maxst 3D**

**Wikitude**

## AR VS VR

While both technologies involve simulated reality, AR and VR rely on different underlying components and generally serve different audiences.

In virtual reality, the user almost always wears an eye-covering headset and headphones to completely replace the real world with the virtual one. The idea of VR is to eliminate the real world as much as possible and insulate the user from it.

Once inside, the VR universe can be coded to provide just about anything, ranging from a light saber battle with Darth Vader to a realistic (yet wholly invented) recreation of earth.

While VR has some business applications in product design, training, architecture and retail, today the majority of VR applications are built around entertainment, especially gaming.

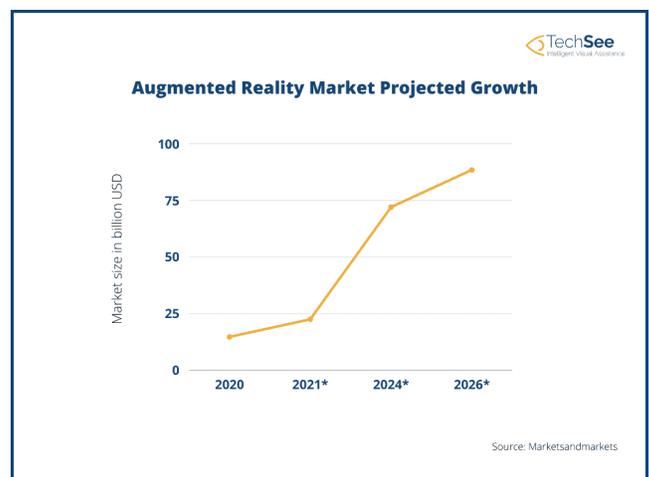
Augmented reality, on the other hand, integrates the simulated world with the real one. In most applications the user relies on a smartphone or tablet screen to accomplish this, aiming the phone's camera at a point of interest, and generating a live-streaming video of that scene on the screen.

Now let's see the reasons why Augmented Reality became more successful than the Virtual Reality

## RISE OF AR

As more consumers adopt augmented reality technology, AR will move into the mainstream and cease to be viewed as a niche technology. 2020 marked a significant period of growth for AR, with 2021 set to further expand on this.

Augmented reality technology is becoming more widely available to consumers. At the end of 2020 it was estimated there were a total of 598 million AR active devices and this is projected to increase to 1.73 billion by 2024, according to research by ARtillery Intelligence.



# FUTURE OF AR

## E-Commerce -

The retail & E-commerce software industry will stay ahead in the race when it comes to harnessing AI in the future. We'll see its penetration in both --web and mobile apps. A normal-looking person may virtually dress up in sunglasses, jackets, footwear, and jewelry while putting the camera in a smartphone.



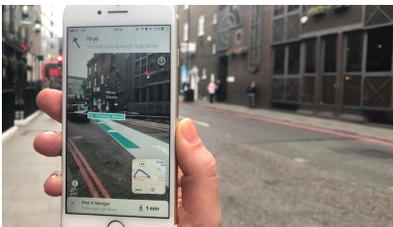
## Digital Marketing -

This will be quite different and change the perception of customers. AR technologies will make the users experience more exciting when engaging with any brand. Marketing AR will likely be seen in packaging, on street signs, through gaming apps, and interactions with other products.



## Geolocation

Finding a nearby restaurant on your smartphone isn't a new thing. But yes, AR will significantly deliver top-notch service. On a real-time basis, the advisories will surely come to the suggestions. AR could benefit everything from real-time travel advisories to restaurant suggestions.



## Healthcare--

Amidst this pandemic time the healthcare industry has ramped up, but still, there are many areas, by which, the modality of treatment can be transformed. Indeed, AR has the potential to change the healthcare sector. It almost creates a 3D image by detaching users from reality that could be a driving force in the future.



## ADVANTAGES OF AR

The AR system is highly interactive in nature and operates simultaneously with real time environment.

- It reduces line between real world and virtual world.
- It enhances perceptions and interactions with the real world.
- It can be used by anyone as per applications.
- Due to its use in medical industry, life of patients have become safer. It helps in efficient diagnosis of diseases and in early detection of them.

## DISADVANTAGES OF AR

- **Unaffordable-**

Augmented reality is expensive to create, and some AR apps are too complex for the average user. The cost of an app can range from \$0 up to around \$100k; it all depends on how complicated you want your app or advertising campaign to be.

- **Promote Risky Behavior**

Augmented Reality is a technology that uses virtual overlay on the physical world. It can be used in games, entertainment, and many other ways. Augmented Reality has been around for decades, but it's only recently that they've had significant advances in technology to make them more mainstream, with smartphones and tablets providing AR experiences to consumers at an affordable price point.

- **Privacy and Security Problems**

Augmented Reality can cause privacy or security concerns. This is rooted in AR making it difficult to discern between what's real and what's not, thus leading to a fear of being "tricked" by an attack.

Currently the Augmented Reality Technology is not being utilized to its maximum potential, once it is used to the full extent it would change the world forever.

## REFERENCES

1. Wikipedia.com
2. Marxentlabs.com
3. Splunk.com
4. Reydar.com
5. Techdayhq.com

A initiative by:  
DELTA THE INNOVATORS



[www.deltatheinnovators.com](http://www.deltatheinnovators.com)