Reality (AR – Vr)

so we first started to search about augmented reality to see if we could use or make something related to memory with we

What is augmented reality (AR)?

Augmented reality (AR) is the integration of digital information with the user's environment in real time. Unlike virtual reality (VR), which creates a totally artificial environment, AR users experience a real-world environment with generated perceptual information overlaid on top of it.

Augmented reality is used to either visually change natural environments in some way or to provide additional information to users. The primary benefit of AR is that it manages to blend digital and three-dimensional (3D) components with an individual's perception of the real world. AR has a variety of uses, from helping in decision-making to entertainment.

AR delivers visual elements, sound and other sensory information to the user through a device like a smartphone or glasses. This information is overlaid onto the device to create an interwoven experience where digital information alters the user's perception of the real world. The overlaid information can be added to an environment or mask part of the natural environment.

Boeing Computer Services Research employee Thomas Caudell coined the term augmented reality in 1990 to describe how the head-mounted displays that electricians use when assembling complicated wiring harnesses worked. One of the first commercial applications of augmented reality technology was the yellow first down marker that began appearing in televised football games sometime in 1998. Today, Google Glass, smartphone games and heads-up displays (HUDs) in car windshields are the most well-known consumer AR products. But the technology is also used in many industries, including healthcare, public safety, gas and oil, tourism and marketing.
How does augmented reality work?

Augmented reality can be delivered in a variety of formats, including within smartphones, tablets and glasses. AR delivered through contact lenses is also being developed. The technology requires hardware components, such as a processor, sensors, a display and input devices. Mobile devices already typically have this hardware available, with sensors including cameras, accelerometers, Global Positioning System (GPS) and solid-state compasses. This helps make AR more accessible to the everyday user. A GPS is used to pinpoint the user's location, and its compass is used to detect device orientation, for example.

Sophisticated AR programs used by the military for training can also include machine vision, object recognition and gesture recognition. AR can be computationally intensive, so if a device lacks processing power, data processing can be offloaded to a different machine.

Augmented reality apps are written in special 3D programs that enable developers to tie animation or contextual digital information in the computer program to an augmented reality marker in the real world. When a computing device's AR app or browser plugin receives digital information from a known marker, it begins to execute the marker's code and layer the correct image or images.

The three main VR categories are the following:

Non-Immersive Virtual Reality:

This category is often overlooked as VR simply because it’s so common. Non-immersive VR technology features a computer-generated virtual environment where the user simultaneously remains aware and controlled by their physical environment. Video games are a prime example of non-immersive VR.
Semi-Immersive Virtual Reality: This type of VR provides an experience partially based in a virtual environment. This type of VR makes sense for educational and training purposes with graphical computing and large projector systems, such as flight simulators for pilot trainees.

Fully Immersive Virtual Reality:

Right now, there are no completely immersive VR technologies, but advances are so swift that they may be right around the corner. This type of VR generates the most realistic simulation experience, from sight to sound to sometimes even olfactory sensations. Car racing games are an example of immersive virtual reality that gives the user the sensation of speed and driving skills. Developed for gaming and other entertainment purposes, VR use in other sectors is increasing.
The virtual technology definition includes specific shared characteristics. Not only immersive, they are also computer-generated, believable as multidimensional experiences, and interactive.

Differences between AR and VR

VR is a virtual environment created with software and presented to users in such a way that their brain suspends belief long enough to accept a virtual world as a real environment. Virtual reality is primarily experienced through a headset with sight and sound.

The biggest difference between AR and VR is that augmented reality uses the existing real-world environment and puts virtual information on top of it, whereas VR completely immerses users in a virtually rendered environment. While VR puts the user in a new, simulated environment, AR places the user in a sort of mixed reality.

The devices used to accomplish this are different, too. VR uses VR headsets that fit over the user's head and present them with simulated visual and audio information. AR devices are less restrictive and typically include devices like phones, glasses, projections and HUDs in cars.

In VR, people are placed inside a 3D environment in which they can move around and interact with the generated environment. AR, however, keeps users grounded in the real-world environment, overlaying virtual data as a visual layer within the environment.

What’s the Difference Between Virtual Reality and Augmented Reality?

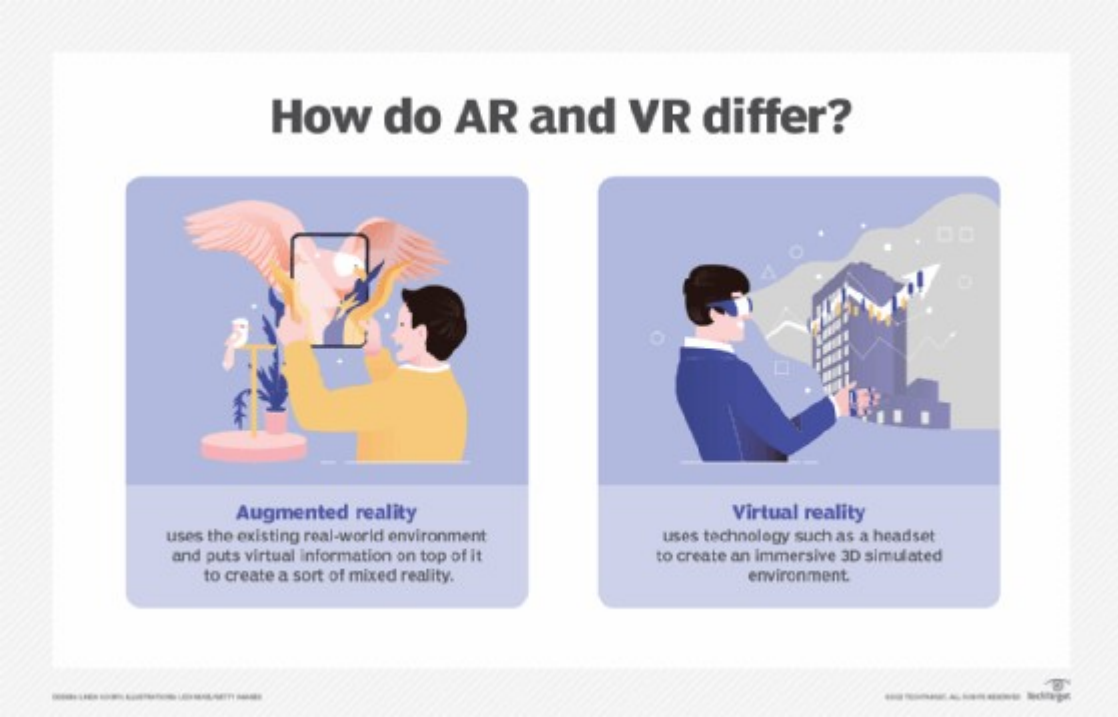
Virtual reality (VR) is an all-enveloping artificial and fully immersive experience that obscures the natural world. Augmented reality (AR) enhances users’ real-world views with digital overlays that incorporate artificial objects.

VR creates synthetic environments through sensory stimuli. Users’ actions impact, at least partially, what occurs in the computer-generated environment. Digital environments reflect real places and exist apart from current physical reality.

In AR, the real world is viewed directly or via a device such as a camera to create a visual and adds to that vision with computer-generated inputs such as still graphics, audio or video. AR is different from VR because it adds to the real-world experience rather than creating a new experience from scratch.

How Does Virtual Reality Technology Work?

The VR process combines hardware and software to create immersive experiences that “fool” the eye and brain. Hardware supports sensory stimulation and simulation such as sounds, touch, smell or heat intensity, while software creates the rendered virtual environment.



We won’t talk about examples about VR AR ar coz we did our think