APPLICATIONS OF AUGMENTED REALITY

1. Use of AR Glasses

AR Smart Glasses are another form of wearable transparent device. They vary in designs, sizes, and shapes but serve a common purpose – reality enhancement. From 2017 onwards, the market for AR Smart Glasses has depicted a compound annual growth rate of 13 percent as per the type Monocular or Binocular [according to the assessment report of MARKET Research Future]. The prime reason for such an increase in demand is that these glasses combine virtual information (like three-dimensional images, animations, videos, etcetera) with real-world scenes entering the view-fields of users of varying age groups. A few examples of smart glasses used to augment the reality of the 2021 era are Google Glass Enterprise Edition 2, Microsoft HoloLens 2, Oculus Quest 2, Raptor AR Headset, and Magic Leap One. Each of them overlay the digital information on real-world objects, thereby enabling the users to track their emails, texts, or access other important details of their rotation. Still, if the users feel that they need to adapt themselves to different working environments, then the designs can be changed robustly so that any AR Glass (you have selected) may project a fully-colored High-Quality Display right in front of your eyes without compromising on the quality of the animations, videos, or other visuals.

2. AR in the Medical Field

AR is successful in offering numerous approaches which can **handle complex medical situations** of patients and classify the data of various types of surgery. With all this, the public can powerfully be aided with proper treatments which relax their minds and flush all the toxins out of their bodies. Such an **example of AR** in the medical field is **medical imaging**. In this, various types of diagnosis are performed by the surgeons, neurologists, or chemotherapists so that they may offer medical benefits to their patients by examining their body parts well. That body part could either be your brain, ear, heart, or lungs. You may wonder how such a diagnosis is made by medical professionals – they use AR applications for determining the end-to-end structure, margins, or shapes of the disease, like tumor or cancer. Later, those applications provide them with relevant insights after they delve into the bodies of their patients in an interactive three-dimensional augmented format. All this has potentially made intermediate surgeries or surgeries with low-survival rates not only safer but precise too. This is because a doctor or a chemotherapist can now view the patient's insides for predicting the likelihood of a disease occurrence or to understand the condition of their patients accurately. Finally, those medical experts will be performing appropriate medical treatments in accordance with the data presented by AR applications in the form of graphs and images of the body parts of the admitted patients.

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3. AR in Your Mobiles

AR has pushed the current limits of your mobiles to let you see in real what you wonder or have been wondering for ages!! Whether it is about measuring the height and width of a kitchen table or designing the environment as per your interest in real-world entities like a variety of furniture, all this has been made possible by mobile applications using Augmented Reality Technology. One of the famous AR-based mobile apps of 2021 is the Ruler App (5 Million Plus downloads). This is compatible with Android, iPads, and iPhones and can be used as an on-screen ruler tool for measuring the dimensions of real-time entities like sofas, pillows, tables, vases, and so on. The dimensions are measured in linear sizes, i.e. meter, millimeter, centimeter, inch, yard, and feet with no compromise on the accuracy of the surfaces recognized by your mobiles' cameras. Apart from recognizing the dimensions, there are other mobile apps like DecorateAR, Dulux Visualizer, and Paint Tester which use augmented reality technology for generating home decoration ideas like placing the furniture, resizing the variety of household entities depending upon the context of your home's environment. Through them, you will accurately estimate the materials required for decorating your homes so that the walls can beautifully be covered virtually and their high-resolution view can be generated flexibly within a couple of seconds.

4. AR is mixing up well with the Entertainment Industry

The 2021 Entertainment industry believes the fact that **AR** is a substantial marketing opportunity as the entertainment brands can **mix** their branded content well **with the characters the audience likes the most**. Those characters may either be revolutionary, analytical, idealistic, or humorous and may be selected upon the level of interest shown by the audience in real-time. There are many **entertainment apps** using the model of Augmented

Reality Technology, but the famous ones are **Snapchat, Google Lens, and Augment**. Each of the apps can curatively augment the entertainment with its eye-gazing filters, stickers, lenses, and user-friendly emoticons. All these options can actively represent the moments you share with your families and friends. Besides, the experts of the 2021 entertainment industry believe in incorporating the chronological storylines of these entertainment applications more augmenting the reality of entertainment much more frequently. Either they are traveling to places or attending some comedy shows, it is feasible for them to produce content and mix it well with their marketing campaigns anytime, anywhere. What they need to keep in mind while creating the content is object orientation in real-time. If the same isn't given proper attention, then it will create a negative impact on their motto with which they are spreading awareness about products whose qualities are yet to be discovered by the accounts of premium users.

5. AR is Open for Travel 'N' Tourism

Travel 'N' Tourism is all about managing the customers or travelers who will be exploring every nook of their destination with the accommodations arranged by a travel agent or a tour operator. However, if the travel services aren't offered to the customers on time, it may decelerate the revenue growth generated by travel companies by leaps and bounds. Keeping this in mind, various agencies and hotels are using **AR-based travel apps for** helping their customers explore their destinations without compromising on the quality of **transportation** and **food venues** with interactive dish menus mapping the eating choices of travelers well. **A few** travel apps used by the agencies and hotels that showcase Augmented Reality **are World Around Me, Smartify, ViewRanger, AR City**. Whether you are trying harder to locate transportation, gas stations, ATMs, temples, or excited about scanning the brochures of agencies/ travel companies offering accommodations at pocket-friendly rates, any of these apps will help you identify what you are actually looking for! Thanks to these Augmented Reality-based applications which contain all the necessary details about the routes, method of transportation you may be familiar with, and some hotel accommodations booked after you narrowed your choices down. Now, you need not leave your beds and feel tense while learning more about the local attractions coming amidst your destinations.

6. AR in Classroom Education

Augmented Reality is willing to engage with teachers and other educators like college professors so that students of all age groups can **deeply absorb the learnings of the subjects** included in their curriculum. The subjects are either related to science, mathematics, music, or psychology and their concepts are explained well at lesser expenses since the infrastructure isn't demanded by AR Technology. Anytime and anywhere, without any additional equipment, students can learn a new language like German, Spanish, or French with **Mondly** (their AR language assistant). Or, if they want to explore volcanoes and terrains located at the geological nodes of planet Earth in a fun and engaging manner, **Google Earth** (an AR-based application) provides search capabilities to students for zooming, rotating, or tilting the three-dimensional views surrounding our planet. In addition, they can access a larger collection of imagery including aerial, street views, and satellite images. Such apps

supporting Augmented Reality are **compatible with various versions of Android and iOS** so that teachers can smoothly impart knowledge and students can enrich their learning experience at lesser hustles. Thus, students (or kids too) won't be stopping themselves from accessing such freedom while learning, thereby managing their time effectively and sharpening their skills through such advantageous Augmented digital platforms.

7. AR for Public Safety

Public Safety simply means protecting the public from calamities, crimes, and other unknown dangers which can harm the public potentially. Whether you are working for a customer service sector or engaged with some drug enforcement agency, safety is something on which you can't compromise. The app creators of KOVA corp have understood this and, as a result, launched an **AR-based application, Silent Partner,** which immediately and securely captures photos or videos of unexpected events like disasters from your smartphones. Later, you (or the public safety officials or police officials) can transmit those videos or pictures which are geotagged and retrieved easily anywhere. Besides, this application has a speech analysis functionality through which the voice content can be conveyed to investigators to safeguard the public. **Another AR application (iOnRoad Augmented Driving Lite App) is for drivers**, which uses GPS, sensors, and native cameras on their smartphones for detecting vehicles, so that drivers can be warned before the vehicle collides. Also, if, in case, the driver misses the collision notification, then an audio-visual warning pops to guide the drivers to apply brakes or reduce the speed of the car so that they may reach the predefined spots safely and on time. Such apps act as a powerful aid to responsible citizens involved with driving companies or police departments because their minds won't think much about those plans which aren't appropriate from the safety perspective of the public.