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## **VIRTUAL AND AUGMENTED REALITY AS AN INTEGRAL PART OF OUR PRESENT AND FUTURE**

There are many advanced technologies, but virtual and augmented reality stand out in their background. Though the names sound somewhat futuristic, virtual and augmented technologies are growing at a rapid pace today. There are different versions of headsets with some type of screen displaying virtual reality. And you can use augmented reality on such devices as a regular smartphone or a laptop.

The term "virtual reality" (VR) was first introduced by the American computer scientist Jaron Lanier in 1989. The active home use of VR began with the release of the Oculus Rift in 2016. This device gave a new impetus to the development of video games in virtual reality, which is one of the most popular areas of VR use today.

However, it does not mean that virtual reality headsets are used only in the entertainment industry. For example, there are VR services which encourage socialization and development of communication skills. Virtual Speech is the most popular of these projects. Practicing in cyberspace, insecure and poorly socialized people can become more relaxed and confident. It can help them in developing their soft skills.

Virtual reality is also actively used for various types of design. It is much easier to evaluate a car part or a house project which were recreated in cyberspace than in regular drawings.

The integration of VR into education has been going on for several years. It is obvious now that a student surgeon who has just read about heart surgery can learn the subject worse than his classmate who performed such an operation in a simulation of reality. There is also a chance that VR headsets can replace microscopes for educational purposes. For example, studying a 3D model of a particular cell instead of looking at it under a microscope is more interesting and easier for perception.

The growing market of virtual reality gives an opportunity for shopping. Some online stores have already had VR fitting rooms. Thus, the risk that you will not like or do not fit the clothes or shoes ordered online is significantly reduced because you have already tried them on.

It should be mentioned about the connection of VR technologies and tourism. Thomas Cook created a VR tour "Try Before You Fly" which allows you to watch a test version of a holiday in different parts of the world in 5 minutes. As a result, the turnover from booking tickets for tours in New York grew by 190 per cent. Another example of using the virtual reality technology in tourism is the program VR Expeditions 2.0. Applying it, you can stay at home and not only visit many attractions of our planet but even walk on the surface of Mars.

The famous American writer L. Frank Baum was the first to mention the idea of an electronic display that can overlay data onto real life. This idea formed the basis for an augmented reality (AR) technology. Unlike virtual reality, AR does not require special headsets. You can use a phone camera or special glasses, such as HoloLens from

Microsoft. There are many video games using this technology and the most popular of them is PokemonGO. The game involves active movement around the city to find and catch Pokemons – fictional creatures of the Japanese popular franchise with the same name.

AR can be used in fitness giving performance analytics as well as some advice as to the diet and exercise.

There are also AR programs for improving shopping. They help customers to see the price of the product on the shelf and read the reviews about it.

Augmented reality significantly improves the security of devices equipped with a camera. For example, you can set your smartphone to unlock using Face ID technology which analyzes the face of someone trying to access the device.

AR can also give a start to the development of another futuristic technology – holograms. This program helps to improve online conferences by projecting images of participants (just as science fiction writers tell about that on the pages of their books).

Despite their popularity, VR and AR technologies are still developing rapidly. It is difficult to imagine the world even in 10 years, but it is easy to predict that the impact of virtual and augmented reality on the material world will be great. It will be really exciting to see how these technologies will be applied to both business and our everyday life.

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