VIRTUAL REALITY (VR)

SUPERVISOR : MSc.AHMED RAZZAQ – A.E SAJAD ALI

GROUP : MUSTAFA, et al.

INTRODUCTION :

Virtual Reality (VR) is a computer-generated environment with scenes and objects that appear to be real, making the user feel they are immersed in their surroundings. This environment is perceived through a device known as a Virtual Reality headset or helmet. Many people have already experienced virtual reality games, and VR is of growing importance for training and education in fields like medicine, engineering, and the sciences. Some of the world's leading technology companies — including Microsoft, Sony, Google, Facebook, Apple, and Samsung — are spending heavily to develop VR equipment and applications.

DEVICES OF VR :

Valve Index: A headset that can be plugged into a computer and is equipped with a remote control allowing you to move around in a large room virtually. This headsets provides higher frame rate and wider field of view than competitors. HTC Vive and Valve Index use the same technology, so their remote controls and base stations can be combined

Oculus Rift S : A headset to be plugged into a computer and equipped with a remote control that allows you to move around in a narrow area virtually. It is ergonomic and can be set up rather fast, mainly for games and 3D graphics applications. Oculus Rift S is an advanced version of a "regular Rift" that is no longer sold

HTC Vive / HTC Vive Pro
A headset that can be plugged into a computer and is equipped with a remote control allowing you to move around in a large room virtually. The primary uses are games and 3D graphics applications. Price: Approximately 600 €, requires a powerful computer.

HTC Vive / HTC Vive Pro
The prototype revealed at GDC'15 included an OLED 1920 × 1080 pixel display (providing 960 × 1080 pixels resolution per eye) with an RGB subpixel matrix, and is capable of displaying content at 120fps. It features an FOV of 100°, stereoscopic 3D, and unwarped output to a TV, either for others to view what the headset wearer sees, or a separate display to compete against the headset user using a standard PS4 controller.

VR APPLICATIONS :

- VR in Military
- VR in Education
- VR in Sports
- VR in Mental Health
- VR in Medical Training
- VR in Fashion
- VR in Marketing
- VR in Architecture

Conclusion

The above applications are just a handful of instances of how Virtual Reality technology is being adopted. The capacity held by technology is unlimited and flawless. Alongside these applications the technology is also being executed in mass communication fields like Cinema and Entertainment, Research, Health & Safety, Heritage & Archaeology, Fine Arts, Marketing, and Music and Concerts, etc. It remains to be seen how this technology will revolutionize various industries across the world in the future.
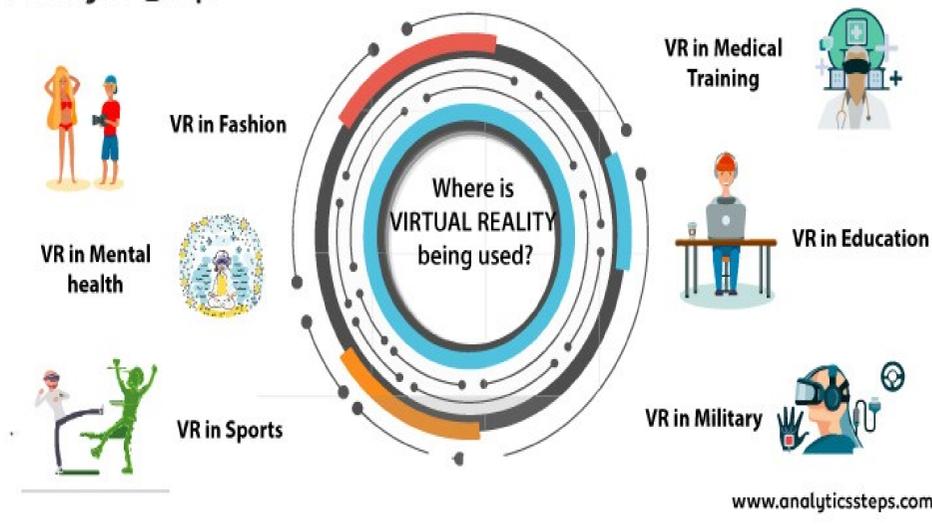
Areas where Virtual Reality is being used