BYTE QUEST

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Byte Quest is the article published by the CSE dept of Vasavi College of Engineering regarding the latest innovative Technologies and Software that have been emerged in the competitive world. The motto of this article is to update the people regarding the improvement in technology. The article is designed by the active participation of students under the guidance of faculty coordinators.

 Good, bad or indifferent if you are not investing in new technology, you are going to be left behind.

-Philip Green

 Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

-Stewart Brand

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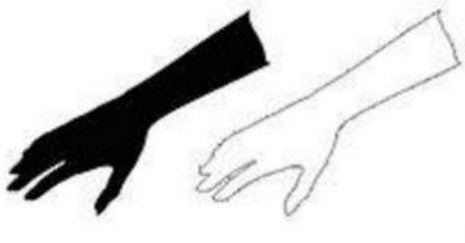
HAND GESTURE TECHNOLOGY



Gesture recognition is a topic in computer science and language technology with the goal of interpreting human gestures via mathematical algorithms. Gestures can originate from any bodily motion or state but commonly originate from the face or hand. Current focuses in the field include emotion recognition from face and hand gesture recognition. Users can use simple gestures to control or interact with devices without physically touching them. The identification and recognition of posture, gait, proxemics, and human behaviours is also the subject of gesture recognition techniques. Gesture recognition can be seen as a way for computers to begin to understand human body language, thus building a richer bridge between machines and humans than primitive text user interfaces or even GUIs (graphical user interfaces), which still limit the majority of input to keyboard and mouse and interact naturally without any mechanical devices. Using the concept of gesture recognition, it is possible to point a finger at this point will move accordingly. This could make conventional input on devices such and even redundant.

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WIRELESS BODY AREA NETWORK

Over the past years a booming interest is comprehended in the field of wireless communication for the development of a monitoring system to observe human vital organs activities remotely. Wireless Body Area Network (WBAN) is such network that provides a continuous monitoring over or inside human body for a long period and can support transmission of real time traffic such as data, voice, video to observe the status of vital organs functionalities. In this article we will look into WBAN technology. Monitoring Sensors : Wireless body area network is a system which can continuously monitor a person's activities. Based on the operating environments the monitoring sensors can be classified into two types : Wearable sensor devices worked on the human body surface. Implantable devices operated inside human body. Traffic Types : In a WBAN, traffic can be divided into three categories such as : 1.Normal traffic 2. Emergency traffic 3. On-demand traffic Requirements: Wireless medical sensors on WBAN must satisfy 4 important aspects: 1.Wearibility 2. Reliability 3. Security 4. Interoparability WBAN technologies: Most common technologies that deploy WBAN are: 1.Bluetooth 2.Zigbee 3. Wifi 4. IEEE 802.15.6 WBAN WBAN Applications: 1.Medical Applications: a. Remote Healthcare monitoring b. Assisted living c. Telemedicine 2. Non-Medical Applications: a. Sports b. Military c. Lifestyle & Entertainment

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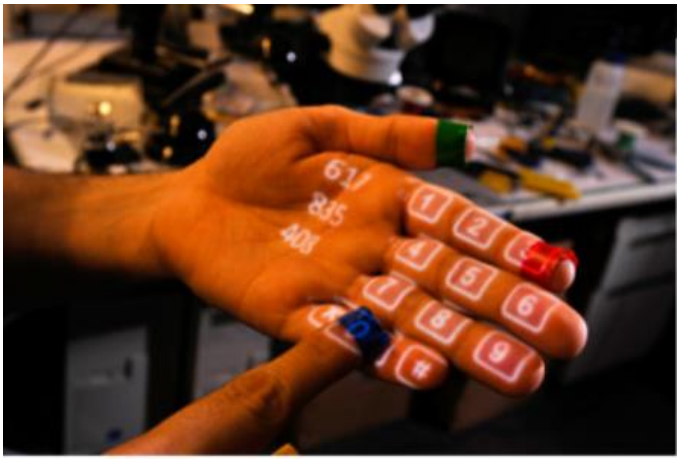
AUGMENTED REALITY



AUGMENTED REALITY (AR): It is a technology that superimposes a computer-generated image on a user's view on a real world, thus providing a composite view. From social media filters, to surgical procedures, augmented reality is rapidly growing in popularity because it brings elements of the virtual world, into our real world, thus enhancing the things we see, hear, and feel. When compared to other reality technologies, augmented reality lies in the middle of the mixed reality spectrum; between the real world and the virtual world.

HOW DOES AUGMENTED REALITY WORK? In most augmented reality applications, a user will see both synthetic and natural light. This is done by overlaying projected images on top of a pair of see-through goggles or glasses, which allow the images and interactive virtual objects to layer on top of the user's view of the real world. Augmented reality devices are often self-contained, meaning that unlike the oculus rift or etc vive vr headsets, they are completely untethered and do not need a cable or desktop computer to function. Augmented realities can be displayed on a wide variety of displays, from screens and monitors, to handheld devices or glasses. Google glass and other head-up displays put augmented reality directly onto your faces, usually in the form of glasses. Handheld devices employ small displays that fit in users' hands, including smartphones and tablets. Augmented reality devices will gradually require less hardware and start being applied to things like contact lenses and virtual reality displays. Key components in augmented reality are Sensors, Camera, Projection, Processing and Reflection.

AUGMENTED REALITY VS VIRTUAL REALITY: Augmented reality and virtual reality are inverse reflections of one in other with what each technology seeks to accomplish and deliver for the user. Virtual reality offers a digital recreation of a real-life setting, while augmented reality delivers virtual elements as an overlay to the real world.

ADVANTAGES OF AUGMENTED REALITY: * Augmented reality helps in three dimensional thinking.

* Augmented reality can help customers in an e-commerce setting.

* Augmented reality can help the viewing experience memorable to the audience.

DISADVANTAGES OF AUGMENTED REALITY: *Other people can develop their own layers of content to display.

* It is harmful for human eyes.

* Augmented reality glasses are expensive.

APPLICATIONS OF AUGMENTED REALITY: For medical students, it is used to practice surgery in a controlled environment. With recent advances in computer technology, gaming applications are on upswing. In some automobile models, augmented reality technology is used to display information on the windshield.

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