

Wearable Technology

Benefits for Your Health



Wearable Tech

In simple terms, wearable technology refers to electronic devices or gadgets that can be worn on the body or incorporated into clothing or accessories. These devices are equipped with sensors and computing capabilities that allow them to collect data and interact with their surroundings without needing any physical interaction from the user.

Modern wearable technology falls under a broad spectrum of usability, including smartwatches, fitness trackers, VR headsets, smart jewelry, web-enabled glasses and Bluetooth headsets.

Evolution of Wearable Technology

Ed Thorp and Claude Shannon

The world's first wearable computer - 1960

MIT declared the first wearable device – was used to transmit information about roulette wheels. The final version they used consisted of a cigarette packet-sized box that could be placed in a shoe, and that could transmit an audible signal to an earpiece used by another person.

Evolution of Wearable Technology

One significant shift in the evolution of wearables was seen with the launch of Apple Watch in 2015. It combined various features like heart rate monitoring, activity tracking, notifications from phone calls/messages/emails along with customizable watch faces and apps all in one device.

Another milestone moment came with Google Glass in 2013 – a revolutionary piece of eyewear that incorporated augmented reality (AR) technology.

Google Glass



Common Types of Wearable Technology

Fitness Trackers: Fitbit, Oura Ring

Fitness trackers are one of the most well-known types of wearable technology. These devices are typically worn on the wrist like a watch and can track various aspects of your health and fitness, such as steps taken, calories burned, heart rate and sleep patterns.



Smartwatches: Apple watch, Samsung Galaxy Watch

Smartwatches provide all the fitness tracker features but add notifications for calls, messages, emails, control music playback on their phones and even make payments with built-in NFC technology.



Wearable Technology

Virtual Reality Headsets: Gamers



Meta Quest 2

Augmented Reality Glasses: AR



XREAL Air 2 Pro



Apple Vision Pro



Benefits and Applications of Wearable Technology

Improved Health and Fitness Tracking: Wearable devices such as smartwatches or fitness bands can monitor vital signs like heart rate, steps taken, oxygen levels and calories burned.

Convenience and Portability: With devices like smart glasses, earbuds, or smart rings, users can access information and notifications without having to constantly check their phones.

Benefits and Applications of Wearable Technology

Better Sleep Quality Monitoring: Many wearable devices now come equipped with sleep tracking features that use sensors to monitor an individual's sleep patterns, such as duration and quality of sleep.

Safety and Security: Wearable devices can also serve as safety tools in emergency situations. For instance, some fitness bands and smartwatches have an SOS feature that sends alerts to designated contacts if the user is in danger or requires assistance. Fall detection.

Benefits and Applications of Wearable Technology

Health Monitoring: Wearable technology is aiding in health monitoring and disease management by enabling individuals to track and manage chronic conditions like diabetes, heart disease, or hypertension. Some devices can continuously monitor vital signs and send alerts to healthcare professionals if necessary, allowing for early detection and intervention.

Smartwatches and Heart Monitoring

A smartwatch heart monitoring system is a device that can measure your heart rate and other cardiac parameters using sensors and algorithms. It can help you track your fitness, health, and alert you of any potential heart problems.

Some smartwatches are FDA approved to perform electrocardiograms (ECGs), which are tests that record the electrical activity of your heart.

Apple watch Series ≥ 4 , Samsung Galaxy Watch ≥ 3 , Google Pixel Watch, Fitbit

Smartwatches and Heart Monitoring

Your Heart and Your Watch

Ron Brown MD

YouTube Link:

https://www.youtube.com/watch?v=cmH6A6JkPIU&ab_channel=TechforSenior

Smartwatches and Heart Monitoring

Discussion/Questions