

NATIONAL INSTITUTE OF TECHNOLOGY  
RAIPUR

BIOMEDICAL ENGINEERING

ASSIGNMENT

---

## Emerging Technologies in Healthcare

---

*Submitted By:*

Name : Surbhi Kosare

Roll No. : 21111066

Semester : First

Branch - Biomedical

Engineering

*Under The Supervision Of:*

Dr. Saurabh Gupta

Department Of Biomedical

Engineering

NIT Raipur

# **1 Introduction**

Working in any sector has become more intriguing as new trends and technologies have emerged. We no longer discuss a profession. We discuss the technology that are associated with it, as well as how to help it expand. The same may be said of healthcare. In healthcare, emerging technology covers all tools, drugs, vaccinations, and procedures. Additionally, systems to streamline healthcare operations, reduce costs, and increase patient quality are available.

## **1.1 Augmented Reality**

AR can aid in the improvement of health and the administration of vaccinations in the medical field. In addition, key operational outcomes. The use of augmented reality (AR) to improve the efficiency of specific tasks is common. For example, real-time storage and analysis of medical records and vital signs. During the examination of a patient by a physician. It has the capability of creating live pictures of a patient's 'insides.' CAT scans and 3D scans will be used. Cambridge consultants in Boston, Massachusetts, are working on the same concept. It allows us to use scans to view into the patients' bodies and communicate with the doctors.

## **1.2 Robotics**

Healthcare robots are projected to improve quality, operational economies, accuracy, and safety in healthcare service delivery with new applications and functionalities. The progress of AI will give robotics a whole new dimension. The integration of artificial intelligence and robotics will, as expected, make the procedure much faster and safer. Aside from that, data analytics, as well as advancements in hardware and software systems, will broaden the scope of robots' use in other healthcare disciplines. The Healthcare Robots Market will be boosted further by investment and collaboration between robotic firms and healthcare providers. However, the expense of robots and their accessibility to the general public will remain significant obstacles to overcome.. In the previous year, we saw a lot of robots doing invasive surgery.

Robotics and health information technology can also work together to allow for self-collection of data. It has the potential to deliver trustworthy

data to health IT professionals working in a variety of sectors. Surgical procedures, medicine administration, cognitive recuperation, and patient management are just a few examples. Remote procedures performed by doctors utilising sophisticated robotics are a step farther. Via super-fast 5G connections, devices like the Vinci surgery robot will be possible.

### **1.3 Medical Tricorder**

Every doctor aspires to be omnipotent. Any sickness can be diagnosed and analysed by this all-knowing technology. Like the mythical Star Trek medical tricorder. This was a handheld device that scanned people and provided a diagnostic. We might be on the verge of something similar. It is one of the most promising new healthcare technologies. A handheld device from Viacom called CheckMe Pro. It can monitor your heart rate, temperature, oxygen saturation, blood pressure, ECG, and other vital signs. BioSticker is another BioIntelliSens product. It has the ability to measure a wide range of parameters. Heart rate, skin temperature, activity levels, body positions, and gait are some examples. More on breathing rate, sleep condition, and other topics.

We're still a long way from the tricorder. Scanners will get a lot better in the future.

## **2 Conclusion**

In the healthcare industry, it is a combination of emerging technology. They will take us to the globalisation of the future. In the future, it will be impossible to combine disparate professions such as science and art. The time has come to unite and work together to make the world a better place. Where these technical advancements can help everything and everyone.