

Chapter 3

Artificial Intelligence Based on IoT for Healthcare

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ABSTRACT

In fields like healthcare, where human intelligence is critical, the introduction of new AI-powered applications is becoming increasingly popular. Technologies have reduced expenses, accelerated drug research, and improved wellness outcomes. AI has become increasingly cognizant of its potential to disrupt the business, as seen by growing funding for the sector in recent years from important stakeholders in both healthcare and risk capital. Traditional approaches include human participation and direct interaction with patients, which are now obsolete due to the advancement of technologies such as messaging bots and intelligent virtual assistants. On the other hand, the internet of things (IoT) is making significant contributions to healthcare, and its gadgets may collect complete health data. Machine intelligence collects and analyses data in established protocols in search of possible health-related predictions. The chapter delves into the aspects of combining AI and IoT to improve efficiency in healthcare systems.

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INTRODUCTION AND BACKGROUND

We refer to ourselves as Humans (*Homo sapiens*), or “man the wise because intelligence is so vital to us,” For thousands of years, scientists have been trying to figure out how we think: how a small amount of stuff can observe, analyse, foresee, and manage a cosmos far larger and more intricate than its own. Artificial Intelligence (AI) enters the picture at this point.

Healthcare, also known as healthcare, is the science of sickness, disease, damage, and other mentally and physically problems in humans by avoiding, detecting, treating, healing from, or curing them. Hospitals, clinics, and community health agencies are all quite different places to work. Healthcare systems are complicated, and we need to understand a variety of topics such as hospital kinds, patient care, insurance, healthcare providers, and legal concerns. This lesson will assist you in learning essential healthcare ideas so that you may succeed at work and comprehend the system.

AI aims to understand as well as construct intelligent beings. AI is a science and engineering field that is still in its infancy. The phrase was coined in 1956, shortly after work began in earnest following World War II. AI is commonly mentioned as the “area I’d most like to be in” by scientists from various areas, in addition to molecular biology. Any physics student would be forgiven for thinking that Galileo, Newton, Einstein, and the others had already figured everything out. However, this AI has positions available for several full-time Einsteins and Edisons. By putting a greater emphasis on digital transformation, more enterprises are being pushed to undertake projects driven by the IoT. These efforts allow businesses to improve consumer experience, generate new business channels, or build new partner ecosystems.

However, acquiring insights might make it difficult to realize these benefits. The sheer volume of data generated by these devices, the diversity of data that comes in, and the speed at which data is collected have posed challenges for businesses in terms of storage, processing power, and analytics.

IoT is growing at a breakneck pace across all industries, but businesses in each confront their own set of obstacles along the way. Enterprises may utilize prescriptive and predictive analytics to make well-informed choices by using all the massive data created by IoT devices and using machine learning models.

SIGNIFICANCE OF ARTIFICIAL INTELLIGENCE AND IOT

In the previous 20 years, artificial intelligence has made significant progress. This AI has established itself as a realistic approach for synthesizing and obtaining cognition. Furthermore, personified AI is now thought to avoid or successfully address many

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