International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 10 Issue 3, May-Jun 2026 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Edge Computing in Healthcare

Matthew N. O. Sadiku[1], Paul A. Adekunte[2], Janet O. Sadiku[3]

[1]Roy G. Perry College of Engineering, Prairie View A&M University, Prairie View, TX, USA
[2]International Institute of Professional Security, Lagos, Nigeria
[3]Juliana King University, Houston, TX, USA

ABSTRACT

An efficient and cost-effective approach for extending cloud computing is edge computing. Edge computing is a distributed computing model that processes data closer to where it is generated. Unlike traditional cloud computing, which depends on centralized data centers, edge computing brings computation and data storage nearer to the data sources. The integration of edge computing in modern systems takes advantage of Internet of things (IoT) devices and can potentially improve the systems' performance, scalability, privacy, and security with applications in different domains. Domains such as Ambient Assisted Living (AAL) or healthcare can greatly benefit from the IoT and edge computing advancements. Edge computing is revolutionizing healthcare by enabling real-time data processing closer to where it is generated, which can help improve patient care and operational efficiency. The integration of edge computing technologies in healthcare systems enables IoT wearable devices that are equipped with a diverse range of sensors to continuously monitor a wide range of signals and detect anomalies. This paper aims to explore the mechanisms, applications, benefits, and challenges of edge computing in healthcare.

KEYWORDS: *edge computing, cloud computing, applications.*

How to cite this paper: Matthew N. O. Sadiku | Paul A. Adekunte | Janet O. Sadiku "Edge Computing in Healthcare" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-10 | Issue-3, June 2026, pp.1260-1270, URL: www.ijtsrd.com/papers/ijtsrd125045.pdf

IJTSRD125045

INTRODUCTION

The modern healthcare ecosystem is undergoing a profound digital transformation, fueled by the proliferation of the Internet of medical things (IoMT) devices and the increasing demand for real-time data analytics. With approximately 10 billion IoT medical devices currently in use-ranging from wearable heart rate monitors to complex imaging machines-the volume of clinical data generated is unprecedented. Historically, this data has been routed to centralized cloud data centers for processing and analysis. However, the latency inherent in cloud computing, coupled with bandwidth limitations and stringent privacy regulations, has exposed the vulnerabilities of a cloud-only approach in life-critical scenarios. Edge computing has emerged as a transformative paradigm to address these challenges. Edge computing promising a vision of processing data close to its generation point, reducing latency and bandwidth usage compared with traditional cloud computing architectures, has attracted significant attention lately. Figure 1 shows the symbol of edge computing [1].

Traditional cloud computing relies on centralized servers to process and store data. It requires data to traverse long distances over networks, introducing latency. In healthcare, where split-second decisions can mean the difference between life and death, this delay is often unacceptable. By decentralizing data processing and bringing computational power closer to the source of data generation-the "edge" of the network-healthcare providers can achieve near-real-time analytics, enhance data security, and ensure continuous operation even during network outages. Edge computing represents a fundamental shift in healthcare IT architecture, moving computational power to where it is needed most: the point of care. The integration of edge computing into healthcare infrastructure offers a multitude of advantages that directly impact patient outcomes and institutional efficiency [2].

CONCEPT OF EDGE COMPUTING

The history of edge computing traces back to the introduction of content delivery networks in the 1990s. The concept was straightforward: place servers close to end-user locations for faster cached image and video transmission. Edge computing was created jointly by Microsoft and their academic collaborators. Today, more and more services are pushed from the cloud to the edge of the network. Since data is increasingly being produced at the edge of the network, it would be efficient to process the data there. Keeping this data closer to its users (at the edge) eliminates many of the problems inherent with the public cloud model. Figure 2 shows how edge computing works [3]. Edge computing allows data from IoT devices to be analyzed at the edge before being sent to the cloud.

Edge computing (EC) or edge cloud is a computing paradigm where substantial compute and storage resources are placed at the edge of the Internet, in close physical proximity to mobile devices, sensors, end users, and IoT devices. It refers to bringing the flexibility and openness of cloud-native infrastructure to that local infrastructure. The idea of "edge" is to do processing near the data source. The terms "cloudlets," "micro data centers," and "fog" are used to refer to these small, edge-located computing nodes or data centers. A *cloudlet* is a cluster of computers well connected to the Internet and can be treated as "data center in a box." The main objective of a cloudlet is to extend the remote datacenter cloud services in close proximity to the end users. Physical proximity is the essence of edge computing since it improves latency, bandwidth, trust, and survivability. While the cloud has revolutionized the way we deal with data, the next wave of that revolution will happen at the edge [4].

A standard edge computing framework consists of three distinct levels [5]:

- The cloud: Which manages the overall data storage and processing.
- The edge: Tasked with near-instantaneous data handling.
- The device: Responsible for initial detection and basic data processing.

These three levels are related in the edge computing architecture shown in Figure 3 [6].

Edge computing covers a wide range of technologies such as wireless sensor networks, distributed data storage, and augmented reality. This has made its way to becoming the core of the data center. The term "edge" refers to the computing devices that sit closer to the sources of data, where the digital world meets the real world. These edge devices typically reside away from the centralized computing available in the cloud and are being created with increasingly compute capabilities. Typical edge devices are smartphones, tablets, sensors, wearables, routers, switches, integrated access devices, multiplexers, smart TV, modern cars, and a variety of MAN/WAN access devices. Edge computing enables analytics and data gathering to occur at the source of the data.

Edge computing covers a spectrum of technologies such as cloudlets, fog computing, and mobile edge computing. A combination of edge and cloud computing is referred to as *fog computing* because it combines centralized and distributed computing resources into a single architecture. (Edge computing is a relatively new concept that should not be confused with fog computing.) It is practically unsafe and unnecessary to send such a large amount of data to the cloud. A comparison between cloud computing, edge computing is illustrated in Figure 4 [7]. Compared to cloud computing, fog computing and edge computing have the following five advantages [8]: (1) greater data transmission speed, (2) less dependence on limited bandwidths, (3) greater privacy and security, (4) greater control over data generated in foreign countries where laws may limit use or permit unwanted governmental access, and (5) lower costs because more sensor-derived data are used locally, and less data are transmitted remotely. Figure 5 shows edge computing [9], while Figure 6 shows how edge data is processed [3].

EDGE COMPUTING IN HEALTHCARE

The modern healthcare ecosystem is increasingly reliant on data. The rapid digitization generates massive volumes of sensitive medical data that must be processed quickly and securely. Devices such as wearable health monitors, smart pacemakers, insulin pumps, and advanced imaging equipment generate massive volumes of physiological and clinical data continuously. While traditional cloud computing has been the standard for storing and analyzing this data, the inherent limitations of centralized processing-specifically latency, bandwidth bottlenecks, and security risks-pose significant challenges in a domain where milliseconds can dictate patient outcomes. Edge computing addresses these limitations by shifting computational power, data storage, and analytics to the "edge" of the network, closer to the devices generating the data. By processing information locally on devices, edge servers, or gateways, healthcare organizations can achieve near-real-time insights, conserve bandwidth, and fortify data privacy [2].

The integration of edge computing into healthcare infrastructure represents a necessary evolution to meet the demands of modern, data-driven medicine. By moving computational power closer to the source of data generation-such as Internet of medical things

(IoMT) devices, wearables, and hospital sensors-edge computing significantly reduces latency, conserves bandwidth, and supports real-time decision-making in critical care scenarios. The architecture of edge computing is designed to allow edge nodes to actively respond to service demands, effectively reducing both bandwidth consumption and network latency. In healthcare, edge computing can help to detect, predict, and prevent health problems by dynamically deploying artificial intelligence (AI) algorithms across edge devices that will support low latency, mobility, location awareness, and privacy considerations [10]. As healthcare continues to embrace AI, IoT, and precision medicine, edge computing will serve as the foundational architecture enabling faster, safer, and more equitable patient care across the globe. Figure 7 is a representation of edge computing in healthcare [11].

APPLICATIONS OF EDGE COMPUTING IN HEALTHCARE

The application of edge computing spans across various facets of healthcare delivery, from the operating room to the patient's home. From empowering real-time remote patient monitoring and ultra-low latency telesurgery to ensuring robust data privacy through federated learning, edge computing is fundamentally enhancing the quality, speed, and security of medical care. Figure 8 represents the application of edge computing in healthcare [12]. Common applications of edge computing in healthcare include the following [2,13]:

- *Remote Patient Monitoring* (RPM): Remote patient monitoring (RPM) is perhaps the most widespread application of edge computing in healthcare. Edge computing is the backbone of modern RPM and telehealth. Wearable devices equipped with edge AI can continuously monitor a patient's vitals, such as blood glucose or cardiac rhythms. Instead of overwhelming the network with continuous raw data, the edge device analyzes the data locally and only alerts healthcare providers when an anomaly is detected. This capability facilitates “hospital-at-home” models, improving patient comfort while freeing up hospital beds. For example, an edge-enabled wearable can detect an anomalous heart rhythm and immediately alert the patient and healthcare provider, reducing clinical response times by an average of 8.4 minutes.
- *Telesurgery*: Telesurgery, where a surgeon operates on a patient remotely using robotic systems, demands absolute precision and zero lag. Delays of even a few milliseconds can be catastrophic. The convergence of 5G networks and edge computing provides the ultra-low latency required for real-time haptic feedback and high-definition video transmission. Studies have shown that 5G-enabled edge nodes can keep end-to-end latency below 50 milliseconds, making complex remote surgeries viable.
- *Electronic Health (eHealth):* Ehealth is an emerging topic at the confluence of traditional health and Information and Communications Technology (ICT), such as the usage of electronic medical records that contain patients' health records. People, procedures, and technologies are the three pillars of the eHealth revolution. While technology and procedures may alter people, the stronger impact routes are those that involve people modifying technologies and processes - through ingenuity, invention, and creativity. eHealth is also redefining the role of the public in healthcare by providing individuals access to health-related information and so shifting them from passive spectators to actively participating in the process of care. Health-related resources are a crucial component of the ability to use eHealth and are among the areas with the highest demand.
- *Medical Imaging*: Medical imaging modalities, such as MRI, CT scans, and ultrasound, generate massive datasets that require significant computational power to reconstruct and analyze. High-performance edge computing combined with high-bandwidth connectivity enables near-real-time processing of data-intensive medical imaging workloads. Radiologists can access high-resolution ultrasounds and MRIs instantly, without waiting for massive files to download from a centralized cloud. Edge AI can also assist in triaging images, highlighting potential abnormalities (like tumors or fractures) for immediate human review.
- *Public Health Surveillance*: The COVID-19 pandemic highlighted the need for resilient, real-time public health monitoring systems. Edge computing, integrated with IoT and federated learning (FL), offers a robust framework for pandemic management. Edge nodes can process data from thermal cameras and sensors to monitor adherence to bio-safety protocols, such as mask-wearing and social distancing, without transmitting identifiable video feeds to a central server. Federated learning allows AI models to be trained across decentralized edge devices holding local data samples, without exchanging the data itself. This approach enables the development of predictive models for disease outbreaks and

contact tracing while strictly preserving individual privacy.

- *Smart Healthcare:* Smart healthcare is one of the major components of smart cities. Smart healthcare depends on the cloud and edge computing. The field of smart healthcare emerges from the need to improve the management of healthcare sector, better utilize its resources, and reduce its cost while maintaining or even enhancing its quality level. Resources in the healthcare sector can broadly be classified to consumable resources and non-consumable resources. Consumable resources include those resources that they decay and expire by time like all medical aids and tools. Non-consumable resources, on the other hand, are those resources that do not expire by time. Among the non-consumable resources are the human resources such as physicians, nurses, registered nurses and all the human capital involved in the process of healthcare. The human capital of the healthcare sector is a very expensive resource and utilizing this resource in an efficient way is a step ahead towards a complete smart healthcare system. Figure 9 shows an edge based smart healthcare framework [14].
- *Smart Hospitals:* One can build smart hospitals by integrating various IoT devices such as medical equipment, wearables, and sensors. In smart hospitals, edge computing manages the vast array of connected clinical IoT devices. From smart beds that monitor patient movement to automated infusion pumps and robotic lab systems, edge nodes coordinate these devices to optimize hospital operations. By keeping computation close to the devices, hospitals achieve faster clinical user experiences, immediate alerting, and more efficient resource allocation. Figure 10 shows a hospital environment [15].

BENEFITS

The critical benefits of edge computing are clear: ultra-low latency for life-saving real-time decisions, robust protection of sensitive patient data, optimized network costs, and reliable operation even in the most remote or disconnected environments. Other benefits of edge computing in healthcare include the following [2,13]:

- *Ultra-Low Latency*: The most significant benefit of edge computing is the reduction of latency. In critical care settings, such as intensive care units (ICUs) or emergency departments, AI models deployed on-premises can aggregate vitals, lab results, and imaging in under 10 milliseconds. This rapid processing allows clinicians to respond instantly to anomalies, such as a sudden drop in blood oxygen levels detected by a wearable sensor.
- *Equitable Healthcare*: Perhaps the most compelling promise of edge computing is its potential to democratize healthcare access and bridge the digital divide. There is a perception that the delivery of healthcare equity is essential to the growth of any society. Equitable healthcare resource allocation may not always address disparities in healthcare demands. While there are disparities in gender, education, wealth, and racial and ethnic disparities that prohibit people from having access to health care, the availability of high-quality care may also be constrained. Significant disparities exist in healthcare access, with rural and low-income populations often lacking adequate medical facilities and reliable broadband Internet. Intelligent edge computing, combined with technologies like augmented reality (AR) and virtual reality (VR), offers a sustainable solution to this inequity. Distribution of resources and other procedures to address health inequalities are necessary for the equitable delivery of healthcare.
- *Enhanced Data Security*: Healthcare data is highly sensitive and a prime target for cyberattacks. By processing data locally, edge computing minimizes the amount of Protected Health Information (PHI) transmitted over external networks, reducing the attack surface. Furthermore, keeping data on a local network simplifies compliance with data sovereignty regulations and the Health Insurance Portability and Accountability Act (HIPAA).
- *Bandwidth Efficiency*: Hospitals generate massive amounts of data, particularly from high-resolution imaging (e.g., MRIs, CT scans). Sending all this data to the cloud strains network bandwidth. Edge computing filters and processes this data locally, sending only essential insights or compressed files to the cloud. Additionally, edge devices can operate autonomously during Internet outages, ensuring that life-saving monitoring systems remain functional.
- *Operational Reliability:* Edge computing enhances operational reliability. In remote or rural healthcare settings where Internet connectivity may be intermittent, edge-enabled systems maintain high functionality. Studies show that edge systems can maintain 92.6% of operational functionality during connectivity disruptions,

compared to just 26.8% for cloud-dependent systems.

CHALLENGES

In spite of its immense potential, the widespread adoption of edge computing in healthcare faces several hurdles. Challenges include data privacy and security vulnerabilities, regulatory compliance issues, interoperability, standardization, skills gap, and the infrastructural and workforce limitations. Other challenges of edge computing in healthcare include the following [2,13]:

- *Cost:* Even if the costs of cloud storage are reduced, there is an extra expenditure on the local ends. This is mostly due to the creation of storage capability for edge devices. Also, there is a financial component to edge computing since outdated IT network infrastructure must be replaced or modernized to support edge devices and storage. Some businesses may discover that the price of migrating to an edge network is comparable to the price of constructing and maintaining a conventional IT architecture.
- *Security:* The most pressing challenge in healthcare edge computing is ensuring the security and privacy of sensitive patient data. While edge computing reduces data transit risks, it expands the physical attack surface. The decentralized nature of edge computing inherently expands the cybersecurity attack surface, exposing vulnerable medical devices to sophisticated threats. Each edge device-whether an infusion pump or a tablet-becomes a potential entry point for hackers. Implementing zero trust architecture, robust encryption, and continuous monitoring across all edge nodes is imperative. In a centralized cloud model, security efforts are concentrated on fortifying a single, highly secure data center. Conversely, an edge computing architecture in a hospital might involve thousands of interconnected devices and local servers, each representing a potential entry point for malicious actors.
- *Interoperability:* Healthcare facilities utilize a vast array of devices from different manufacturers, many of which use proprietary data formats. Ensuring seamless communication between these diverse edge devices and central electronic health record (EHR) systems remains a significant technical challenge. Achieving seamless interoperability-the ability of these disparate systems to communicate and share data effectively-is a significant barrier to the effective implementation of edge computing.
- *Bias*: There are human biases across every branch of research, but in medicine, these biases are more pronounced and contribute to diagnostic mistakes and medical blunders. As AI algorithms are increasingly deployed at the edge to assist in clinical decision-making, the risk of algorithmic bias becomes a significant ethical concern. AI models trained on unrepresentative datasets can perpetuate deeply rooted societal biases, leading to misdiagnoses or suboptimal care for racial, ethnic, and demographic minorities. Ensuring that edge AI systems are trained on diverse, inclusive datasets and are subjected to rigorous ethical auditing is paramount to preventing the exacerbation of existing health disparities.
- *Government Policies:* Policy support is among the most crucial environmental facilitators for the Internet of things. Numerous nations have previously enacted policies for eHealth and also have or are currently implementing policies regarding IoT infrastructure, funding, and deployment in healthcare coverage. Some governments have implemented specific policies and initiatives to support the growth of edge computing. For example, the United States Federal Communications Commission (FCC) has established a task force to explore the potential of edge computing and identify regulatory barriers to its deployment. The European Union has also supported the development of edge computing through initiatives such as the 5G PPP Edge Computing Working Group, which aims to accelerate the deployment of edge computing technologies in the EU.
- *Regulatory Compliance:* Healthcare is one of the most heavily regulated industries globally, governed by stringent frameworks designed to protect patient privacy, such as the Health Insurance Portability and Accountability Act (HIPAA) in the United States and the General Data Protection Regulation (GDPR) in the European Union. These regulations were primarily designed with centralized data processing in mind, creating significant friction when applied to decentralized edge computing models.
- *Data Sovereignty:* Edge computing complicates the concept of data sovereignty. In a distributed network, data may be processed on nodes located across different legal jurisdictions, each with its own specific privacy laws. This geographical diversity can lead to inconsistencies in data handling and severe compliance risks. Ensuring that data processing adheres to the specific

regulatory requirements of the patient's location, while simultaneously managing cross-border data flows in real-time, is a monumental legal and technical challenge.

- *Consent Management*: Managing patient consent becomes highly complex in an edge computing environment. In centralized systems, consent parameters can be managed at a single point of entry. In contrast, edge computing involves data being temporarily stored and processed across multiple decentralized nodes. Ensuring that patient consent parameters-such as restrictions on data sharing or the right to be forgotten-are uniformly enforced across all edge nodes requires sophisticated, dynamic consent management frameworks.
- *Fragmented Ecosystems:* Many medical device manufacturers utilize proprietary protocols for data exchange, creating isolated data silos. For edge computing to deliver its full potential, a patient's vital signs monitored by a wearable device must seamlessly integrate with hospital electronic health records (EHRs) and clinical decision support systems in real-time. The lack of universal interoperability standards means that integrating these diverse edge devices requires complex, custom-built middleware, increasing deployment costs and system fragility.
- *Legacy System Integration*: Healthcare facilities often rely on legacy IT infrastructure that was not designed to support modern, high-speed edge computing networks. Integrating cutting-edge IoMT devices with decades-old hospital systems poses significant technical challenges. Upgrading this infrastructure to support edge computing without disrupting ongoing clinical operations requires meticulous planning and substantial financial investment.
- *Skills Gap:* The shift toward edge computing requires a workforce proficient in decentralized network architecture, edge AI implementation, and advanced IoMT cybersecurity. However, the healthcare sector is currently facing a severe shortage of specialized IT talent. A recent survey indicated that 43% of healthcare professionals view the lack of specialized tech skills as the primary challenge in adopting new digital technologies. Bridging this skills gap is essential for the successful deployment, maintenance, and securing of complex edge computing environments.

FUTURE OF EDGE COMPUTING IN HEALTHCARE

The future of healthcare lies at the edge. From empowering wearable devices to enabling 5G-driven robotic telesurgery, edge technologies are revolutionizing patient care and clinical workflows. However, realizing this future requires overcoming substantial hurdles related to cybersecurity, device interoperability, and algorithmic bias. As these challenges are addressed, intelligent edge computing stands poised not only to optimize medical operations but to serve as a powerful equalizer in global health, ensuring that high-quality, life-saving care is accessible to all, regardless of geography or socioeconomic status. Looking forward, the convergence of edge computing with 5G connectivity and federated learning will define the next generation of digital healthcare. These technologies will enable more sophisticated autonomous medical systems, hyper-personalized medicine, and highly resilient public health infrastructures [2]. Edge computing and edge analytics will only grow in their impact as they bring new opportunities to grow operational, clinical, and financial value across the care continuum.

CONCLUSION

Edge computing represents a critical evolution in healthcare data architecture. By decentralizing computation and bringing analytics to the point of care, it overcomes the latency, bandwidth, and reliability limitations of traditional cloud systems. As the Internet of medical things continues to expand, edge computing will undoubtedly serve as the foundational nervous system of modern, patient-centric healthcare.

Edge computing is a rapidly expanding and crucially important technology in healthcare. Edge computing holds immense potential to revolutionize healthcare by enabling real-time, data-driven medical interventions, reducing latency, and supporting the explosive growth of IoMT devices. To realize the benefits of edge computing, healthcare organizations, technology providers, and regulatory bodies must collaborate to develop robust, edge-specific security protocols, establish universal interoperability standards, and modernize regulatory frameworks. More information on edge computing can be found in the books in [16-18].

REFERENCES

[1] T. West, “Using edge computing for real-time marketing insights,” April 2024, https://www.vdigitalservices.com/utilizing-edge-computing-for-real-time-marketing-insights/

[2] https://manus.im

[3] "Harnessing edge computing for business growth," https://www.vertiv.com/en-us/solutions/vertiv-guide-to-edge-computing/

[4] M. N. O. Sadiku, A. M. Oteniya, and S. M. Musa, "Edge computing," *International Journal of Trend in Research and Development*, vol. 5, no. 4, July – Aug. 2018, pp. 553-554.

[5] A. Harper, "How is edge computing enhancing telecom speeds for end users? https://www.jevera.software/post/how-is-edge-computing-enhancing-telecom-speeds-for-end-users

[6] J. Gonzalez et al., "Edge computing architecture and use cases, "https://lfedge.org/edge-computing-architecture-and-use-cases/

[7] "Edge computing needs edge AI," August 2018, https://www.imagimob.com/blog/edge-computing-needs-edge-ai#

[8] D. C. Klonoff, "Fog computing and edge computing architectures for processing data from diabetes devices connected to the medical Internet of things," *Journal of Diabetes Science and Technology,* vol. 11, no. 4, 2017, pp. 647 – 652.

[9] "Edge computing definition and use cases," March 2020, https://jelvix.com/blog/what-is-edge-computing

[10] A. Rancea, I. Anghel, and T. Cioara, "Edge computing in healthcare: Innovations, opportunities, and challenges," *Future Internet*, vol.16, no. 9, September 2024.

[11] E. Thomas, "Edge computing in healthcare: Revolutionising real-time data processing," February 2024, https://10decoders.com/blog/edge-computing-in-healthcare-revolutionising-real-time-data-processing/

[12] "Use cases of edge computing healthcare devices edge computing it," https://www.slideteam.net/use-cases-of-edge-computing-healthcare-devices-edge-computing-it.html

[13] V. Lakshminarayanan et al., "Health care equity through intelligent edge computing and augmented reality/virtual reality: A systematic review," *Journal of Multidisciplinary Healthcare,* vol. 16, September 2023, pp. 2839-2859.

[14] S. Oueida et al., "An edge computing based smart healthcare framework for resource management," *Sensors,* vol. 18, no. 12, December 2018.

[15] "Edge computing revolutionizes healthcare industry," November 2024, https://wotdev.com/edge-computing-revolutionizes-healthcare-industry/

[16] N. Kumar et al. (eds.), *Integrating Cloud, Fog, and Edge Computing in Healthcare: Federated Learning and Blockchain Approaches.* Springer, 2026.

[17] R. Sridhar et al. (eds.), *Edge-of-Things in Personalized Healthcare Support Systems.* Academic Press, 2022.

[18] S. Vyas et al. (eds.), *Edge-AI in Healthcare.* Boca Raton, FL: CRC Press, 2023.

Figure 1 The symbol of edge computing [2].

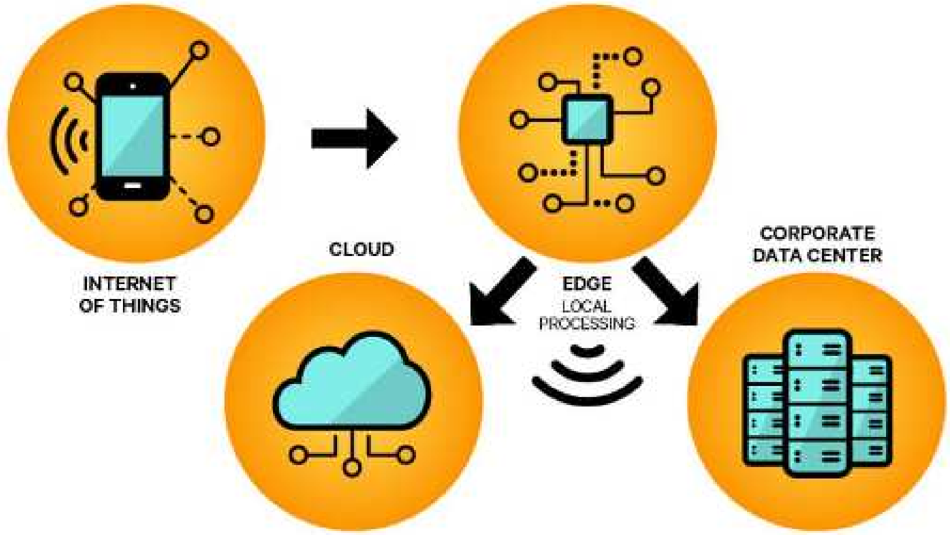

Figure 2 How edge computing works [3].

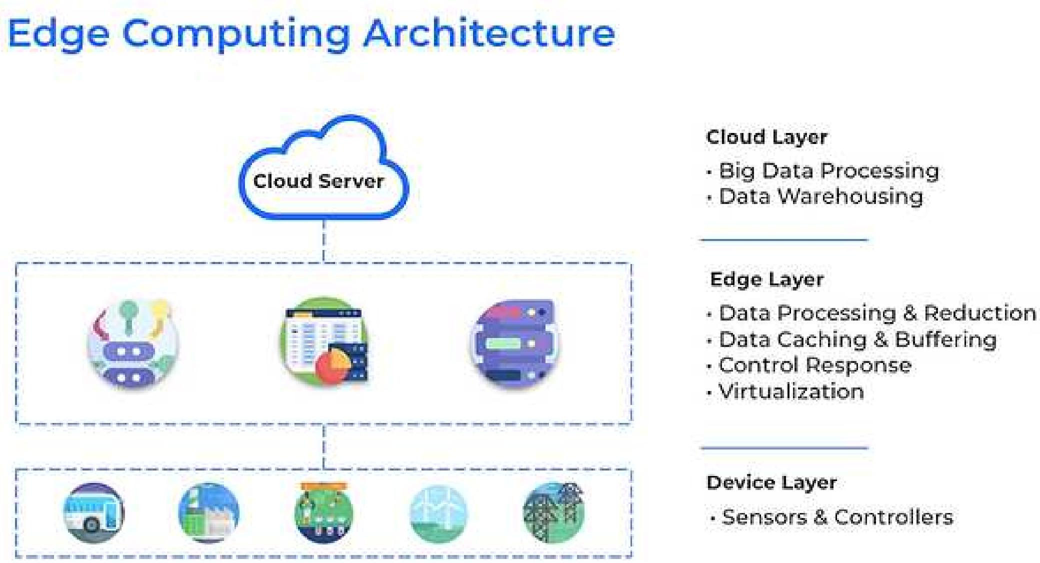

Figure 3 Edge computing architecture [6].

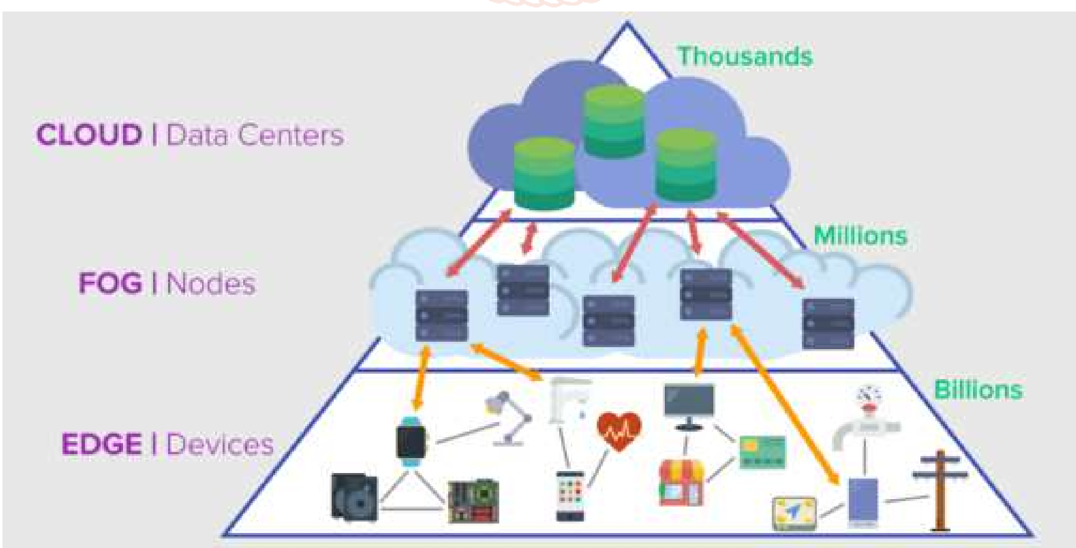

Figure 4 The relationship between cloud computing, edge computing, and fog computing [7].

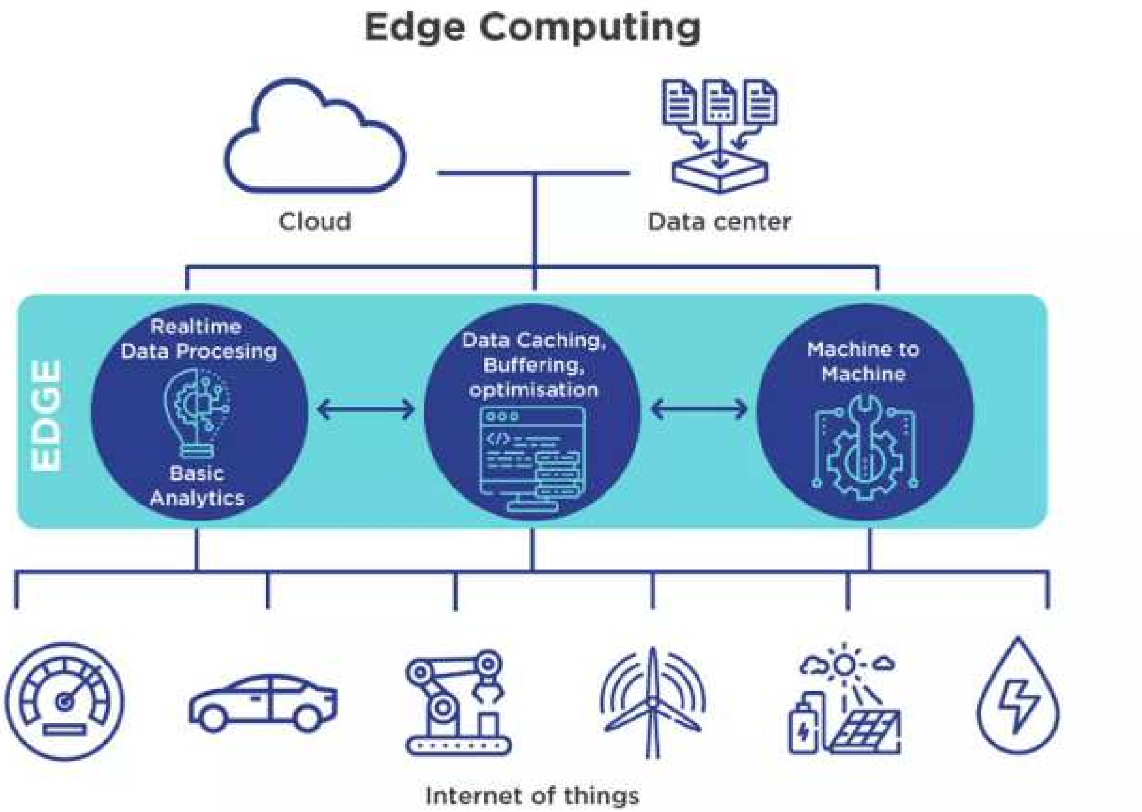

Figure 5 Edge computing [9].

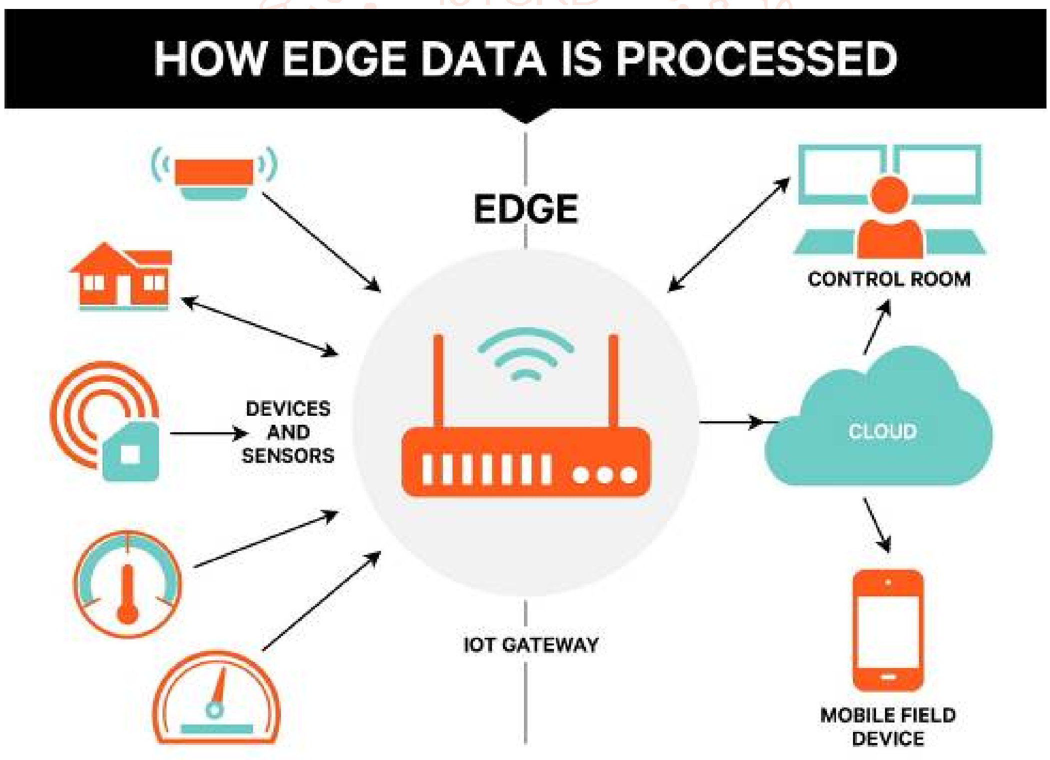

Figure 6 How edge data is processed [3].

Figure 7 A representation of edge computing in healthcare [11].

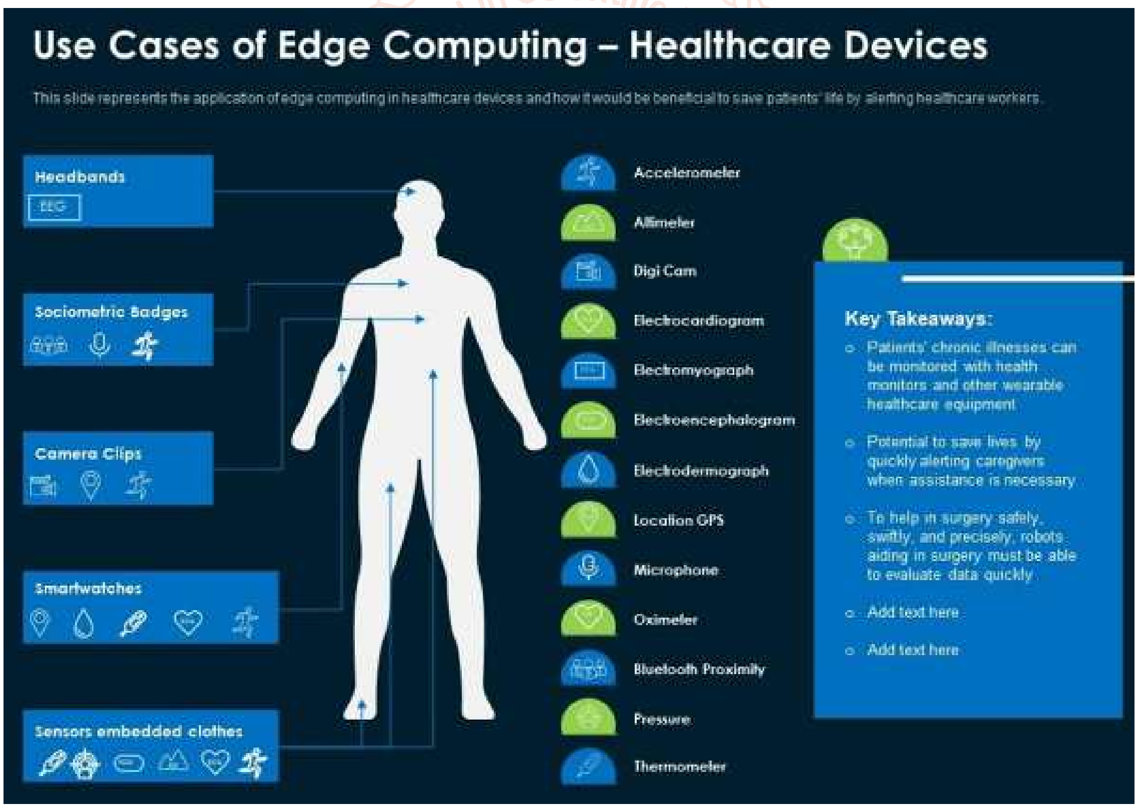

Figure 8 Application of edge computing in healthcare [12].

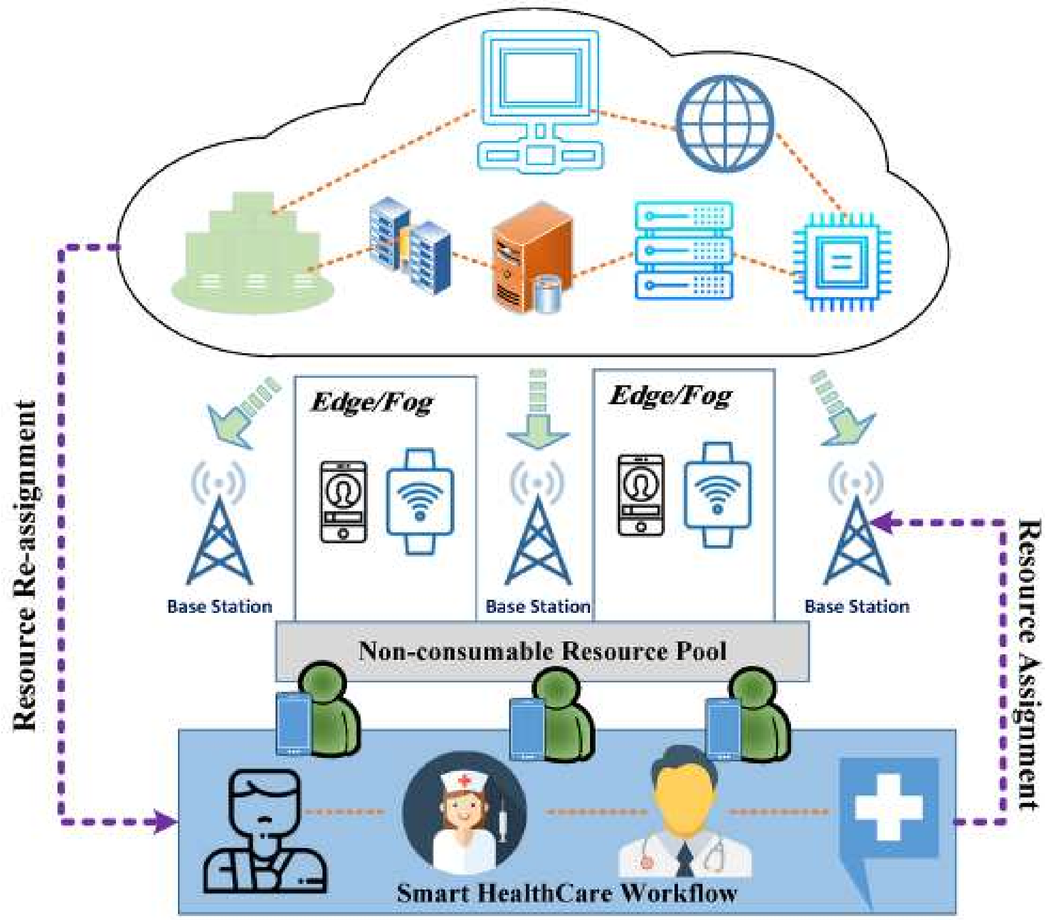

Figure 9 An edge based smart healthcare framework [14].

Figure 10 A hospital environment [15].