# CLOUD AND FOG COMPUTING IN HEALTHCARE INDUSTRY 4.0

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***ABSTRACT***

*Healthcare Industry 4.0 in information and communication technology is thoroughly changing both production and services worlds. That is mainly true for the healthcare domain, where the Cloud and Fog Computing technologies are developing its entire ecosystem and eHealth system, influencing it towards the 4$^{th}$ generation healthcare industry. The integration of Healthcare Industry 4.0 technologies utilized in the healthcare domain is developing a new path to offer traditional products and services. Healthcare Industry has developed from 1$^{st}$ to 4$^{th}$ generation. It is high time to develop the healthcare system. Fog and cloud computing in Healthcare Industry 4.0 provides a massive contribution to healthcare.*

**Keywords:** Healthcare Industry 4.0, Cloud Computing, Fog Computing, Information technology.

## INTRODUCTION

Cloud Computing abbreviates operation, as it needn't bother with a cautious dimensioning and estimate of required resources, permitting pay-per-use charging on a transient premise, without forthright duty by the user.

Additionally, cloud customers get the benefit of actually unlimited resources on demand. They are capable of either deliver or leverage everything-as-a-service: the most general services are considered as Platform, Software, or Infrastructure-as-a-Service (PaaS, SaaS, and IaaS, respectively), with more differences, for example, Function-as-a-Service (Kaur & Chana, 2014). The specific advantages of Cloud Computing in covering integration costs as well as optimizing resources are incredibly substantial in the healthcare industry.

On the other hand, with modern technological developments such as cloud and fog computing Parvez, et al. (2019), these complications are lessened with a minimum investment in these technologies and storage abilities referred to as the patients' data. The motivation of this work is the exploration of the role of cloud computing and fog computing to offer incessant context-aware facilities to the end-users as and while needed. These types of work also provide a three-layer patient-driven Healthcare framework for real-time transmission, processing data, or collection. It provides targets to the end-users for the appropriateness of fog devices in Healthcare Industry 4.0 environment for present and future applications.

Cloud Computing relates the IT requirements of the healthcare area to improve wellbeing measures, encourage the selection of medical care best practices, and foster and inspire more advancements Bharati (2021).

Outline, Mobile Edge, Fog, and Cloud Computing Robel,et al. (2019) create a big part of Healthcare Industry 4.0, with positive effects on both healthcare services and research improvement. These approaches are originated from the IT field and completing the envisioned Healthcare Industry 4.0 innovation.

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