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Edge Cognitive Computing based Smart Healthcare System

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Abstract

With the rapid development of medical and computer technologies, the healthcare system has seen a surge of interest from both the academia and industry. However, most healthcare systems fail to consider the emergency situations of patients, and are unable to provide a personalized resource service for special users. To address this issue, in this paper, we propose the Edge-Cognitive-Computing-based (ECC-based) smart-healthcare system. This system is able to monitor and analyze the physical health of users using cognitive computing. It also adjusts the computing resource allocation of the whole edge computing network comprehensively according to the health-risk grade of each user. The experiments show that the ECC-based healthcare system provides a better user experience and optimizes the computing resources reasonably, as well as significantly improving in the survival rates of patients in a sudden emergency.

Keywords: Cognitive computing, Edge computing, Healthcare system.

1. Introduction

The economic development and environmental changes in human society have raised the morbidity of the chronic diseases, so that they now represent

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