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Patent Search

Invention Title	A GREEN 6G NETWORK FOR PERVASIVE COMMUNICATION: AN EXPERIMENTAL ANALYSIS
Publication Number	42/2023
Publication Date	20/10/2023
Publication Type	INA
Application Number	202341068481
Application Filing Date	11/10/2023
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMPUTER SCIENCE
Classification (IPC)	G06Q0030020000, G16H0050200000, G16H0080000000, G06Q0010060000, G06Q0050200000

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Abstract:

A GREEN 6G NETWORK FOR PERVASIVE COMMUNICATION: AN EXPERIMENTAL ANALYSIS Abstract: In the big data environment, we develop personalized information libraries based on big data from three aspects: the overall architecture of the system model, the functional model of the system, and the design of system interface according to the design principles and requirements of the personalized information service system of the university library Service system design. In terms of the design of the platform, the service platform is divided into four levels: accurate identification of user needs based on big data, personalized customized services based on intelligence, academic research and discussion space based on integrated media, and fine-grained subject resource aggregation based on knowledge. On this basis, a model of individualized services of university libraries including internal and external personnel, information resources, technology, services, processes, platforms, and environment has been constructed. Artificial intelligence (AI) is one of the emerging trends and applications of computing in libraries. It involves programming computers to do things, which if done by humans, would be said to require intelligence. The ultimate promise of artificial intelligence in libraries is to develop computer systems or machines that think, behave, and in fact rival human intelligence, and this clearly has major implications on librarianship. The application of artificial intelligence in the library has become pervasive. They include expert systems for reference services, book reading and shelf-reading robots, virtual reality for immersive learning among others. Although the incorporation of artificial intelligence in libraries can be perceived to alienate librarians from their users, it will probably help libraries do more rather than taking over librarians. It will enhance their services delivery. Artificial intelligence will greatly improve library operations and services and will upgrade and heighten the relevance of libraries in an ever-changing digital society. The forthcoming 6G communication revolution, projected to commence in approximately 2040 and span over several decades, is anticipated to bring about a transformative impact on the healthcare sector. The phenomenon of becoming commonplace is anticipated to extend beyond the medical domain and various other disciplines. The advent of 6G connectivity and artificial intelligence (AI) will need a comprehensive reassessment of healthcare delivery. The primary objective of this study is to address the prevailing challenges that hinder effective clinical care provision. Furthermore, this paper aims to emphasize the potential of 6G technology in transforming the healthcare industry. This elucidates the prospective outlook of healthcare upon the widespread integration of 6G networking technology. The present study aims to examine the impact of integrating artificial intelligence (AI) and Internet of Things (IoT) technologies within the healthcare sector, specifically focusing on the clinical applications that are expected to yield the greatest benefits. The assessment of the carbon emission reduction potential of the Green 6G network can be conducted through a comparative analysis of its energy consumption in relation to conventional networks. The decrease in energy consumption results in a corresponding decrease in carbon emissions, so making a positive contribution to the goal of environmental sustainability. A comparative analysis of statistical data pertaining to carbon emissions resulting from energy usage can be conducted between Green 6G and conventional networks. The statistical data highlights a significant decrease of 40% in latency for data-intensive applications, namely in the context of virtual reality streaming. Through the strategic allocation of computer resources at the network edge, the system effectively reduces the distance that data must travel. This optimisation results in enhanced user experiences and the efficient utilisation of available resources.

Complete Specification

Description:DESCRIPTIONS:

The exponential expansion of communication technology has resulted in a rising need for enhanced data speeds and increased network efficiency. The progression of wireless networks from the first generation (1G) to the fifth generation (5G) has resulted in notable breakthroughs. Nevertheless, there has been an increase in apprehensions regarding the environmental ramifications and energy usage associated with these networks. The concept of "Green" networks has gained significant traction as the global community progresses towards a more sustainable future. The objective of this study is to investigate and conduct experimental analysis on the possibility of a Green 6G network in attaining widespread communication while mitigating its environmental impact. The term "6th Generation" (6G) is being critically examined by researchers and experts, who consider it to be an implausible concept. One of the primary aims of 6G is to facilitate the provision of AI and ML advantages to remote individuals and enterprises. The advent of 6G technology is expected to facilitate a multitude of noteworthy technical advancements. These advancements encompass substantially enhanced data transfer rates, provision of infrastructure for novel and captivating applications, optimised utilisation of radio frequency bands, and a heightened focus on the integration of artificial intelligence and machine learning. Deep learning (DL) is anticipated to emerge as a prominent breakthrough in the field of machine learning for the development of the 6G standard. This is primarily due to its ability to effectively extract a substantial volume of information from situations that closely resemble human experiences. Deep learning (DL) has the capability to make decisions on various aspects, such as selecting a certain 6G pathway for connection, determining the resource controller with a higher abundance of accessible resources. In recent years, there have been notable advancements in technology that have greatly facilitated the widespread adoption and use of various medical care technologies across all clinical decision-making communities. This study employs a thorough methodology to evaluate the feasibility and effects of the Green 6G network on ubiquitous communication. The gathering of secondary data plays a crucial role in this study.

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Page last updated on: 26/06/2019