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Patent Search

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Abstract:

IMPLEMENTATION OF EDGE COMPUTING-BASED IOTS WITH MACHINE LEARNING-DRIVEN LATENCY OPTIMIZATION Abstract: Computing in the network's periphery, where computer resources close to end users, could be a valuable component of IoT networks. However, an IoT network requires a significant amount of spectrum so that devices can interact and submit computing tasks to an edge server. This remains a worry even if users of IoT devices have been trained to do increasingly complicated computations. Many developing IoT applications require both computer and communication services, however the vast majority of IoT devices are incapable of performing significant computation. Low latency is also becoming increasingly crucial for a range of applications, including self-driving cars and augmented reality. We offer a new architecture that makes advantage of edge computing resources and the full-duplex approach at edge nodes to provide IoT terminals with low-latency computing and communication services. We take these measures to ensure that we can supply the aforementioned services to fulfil the demands of industrial IoT software.

Complete Specification

Description: Descriptions

By 2024, it is anticipated that 5G mobile edge computing would be a multimillion-dollar industry, with enterprise deployments valued at more than \$73 million. The industry becomes increasingly difficult to grasp each year. Networked computer systems have become more sophisticated due to the widespread adoption of on-demand and flexible service models. The popularity of always-on services like web surfing, video streaming, online gaming, voice over IP, and the Internet of Things has caused a significant increase in bandwidth demand among Internet service providers (ISPs). Due to the aforementioned challenges with on-demand services, considerable modifications are required to both fixed and mobile access networks. Currently, fifth-generation mobile networks are being developed to accommodate the growing number of users and traffic. Cloud computing is gaining popularity as network operators explore new ways to meet their clients' complex traffic requirements. 5G networks will utilize software-defined networks and network function virtualization to minimize the operational costs of mobile networks. Then, we will be able to provide services whenever they are needed. Long-term consumers will benefit from the fact that 5G is designed to provide low-latency, high-availability, and high-bandwidth communication for a variety of use cases. Autonomous vehicles and autonomous robotics in the industrial internet of things are examples of cases that cannot be delayed. This assessment of the challenges and potential of intelligent mobile edge computing for 5G networks could not have arrived at a more opportune time, considering the recent building of 5G networks in a number of nations with the support of international telecoms companies. As a result of 5G's design, customers will experience faster connection speeds and enhanced security. Network segmentation and traffic prioritisation are two ways of resource sharing. This will be made possible by 5G technology. Edge-based networks can also provide low latency and conserve bandwidth by storing and processing data as close as feasible to the point of usage. This is achieved by the decentralisation of application

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Application Details

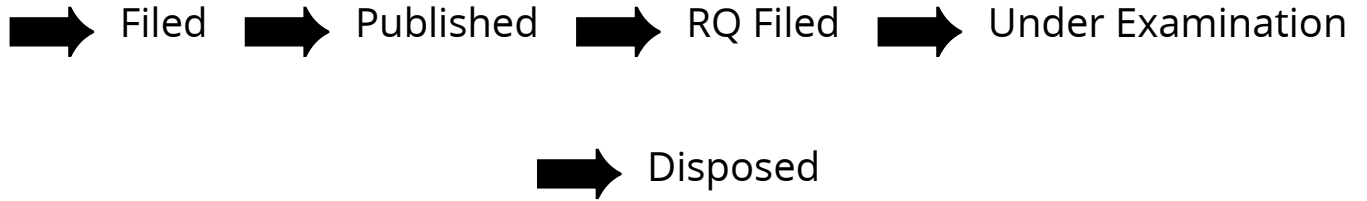
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