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Measurement Method and Application of a Deep Learning Digital Economy Scale Based on a Big Data Cloud Platform

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ABSTRACT

In recent years, with the acceleration of the process of economic globalization and the deepening of China's financial liberalization, the scale of international short-term capital flows has been extremely rapid. This article mainly studies the deep learning digital economy scale measurement method and its application based on the big data cloud platform. This article uses the indirect method to estimate the stock of renminbi circulating abroad. The results show that the application of big data cloud platforms can increase the development share of digital media and digital transactions in the digital economy and optimize the structure of China's digital economy.

KEYWORDS

Big Data, Cloud Platform, Deep Learning, Digital Economy, Scale Measurement Method

1. INTRODUCTION

The digital economy industry has become the most representative high-tech industry, deeply integrated with other industries, plays a significant role in improving industrial efficiency and promoting new industries, and has become a new driving force for China's economic transformation and upgrading. Countries around the world have regarded the development of digital economy as an important part of economic growth and improving international competitiveness (Kitouni 2018).

Today's world has entered an important period in which information technology, represented by the Internet, has penetrated into the field of traditional economy and promoted the transformation of various economies to digital economy. The innovation of business model and the change of economic format in digital economy have greatly reduced the economic cost and greatly improved the efficiency of International trade, which has a significant impact on the division of global value chain. With the enhancement of China's economic strength, the deepening of financial reform and the improvement of the market (Yeh nd), RMB will not only increase greatly in the scale of overseas circulation, but also continuously enrich its functions, and gradually transition from sovereign currency to international currency.

With the development of computer technology, all kinds of scientific industries have achieved unprecedented development. Long M thinks that domain adaptation generalizes learning models across source and target domains, which are sampled from different distributions. In order to enhance the invariance of depth representation and make it more transferable in various fields, he proposed

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a unified depth adaptation framework for joint learning of transitive representation and classifier, so as to make full use of the advantages of depth learning and optimal two sample matching to achieve scalable domain adaptation. The framework includes two interdependent paradigms, namely, unsupervised pre training using depth de-noising automatic encoder for effective training of depth model, and supervised fine-tuning using depth neural network for effective utilization of discrimination information. Both of them learn by embedding depth representation into regenerative kernel. Although his research is tenable in theory, there is no concrete experiment to prove it (Long 2016). Charalampous K proposed an unsupervised online deep learning algorithm for video sequence action recognition. Each computing node of his example forms a cluster and calculates the point representation (Lv 2020). Then, the first-order transformation matrix stores and continuously updates the continuous transformations between clusters. Viterbi algorithm deals with both spatial and temporal information. Although the algorithm he used has good performance, there are errors in the calculation results (Charalampous 2016). Zhang L believes that in the past few decades, people have developed machine learning tools, such as quantitative structure-activity relationship (QSAR) modeling, which can quickly and cheaply identify potential bioactive molecules from millions of candidate compounds. He summarized the history of machine learning and provided insights on the recently developed deep learning methods and their applications in rational drug discovery. Although his research is more comprehensive, many definitions are not accurate (Zhang 2017). Mahmud M believes that the improvement of computing power, along with the increase of data storage speed and the decrease of computing cost, has enabled scientists in various fields to apply these technologies to data sets that were difficult to process due to scale and complexity. He will conduct a comprehensive investigation on the application of DL, RL and deep RL technology in biological data mining (Feng 2020). In addition, he compared the performance of applying DL technology to different datasets in various application domains. Finally, he outlined the problems to be solved in this challenging research area and discussed the future development prospects. Although his research is comprehensive, there is a lack of experimental data (Mahmud 2017).

Based on the current mainstream economic theory, this paper makes a further analysis on the mechanism and ways of the impact of digital economy development on export trade. At the same time, the digital economy continues to spawn new industries and new formats, which will also have a direct or indirect impact on export trade. This paper analyzes the change of added value of value chain links in the process of value chain decomposition, integration, innovation and reconstruction from three levels of digital economy to micro enterprise value chain, meso traditional industry chain and macro global value chain, and then puts forward the theoretical mechanism of the influence of digital economy on China's division of labor in global value chain.

2. MEASUREMENT OF THE SCALE OF THE DEEP LEARNING DIGITAL ECONOMY

2.1 Big Data Cloud Platform

An open source, scalable, and distributed infrastructure for data processing (Z. Lv and B. Hu 2020). Hadoop can be deployed on one to several thousands of ordinary computer nodes, use distributed file system to provide storage of large amounts of data, and use parallel programming model to process and analyze large amounts of data stored in distributed file system. Each node in the Hadoop cluster provides local storage and local computing, and the local storage and local computing of all nodes are uniformly organized to form a larger and more efficient storage and computing cluster (Hao 2016).

The architecture of Nova's management virtual machine is shown in Figure 1. The API is the only way for the client to access Nova. The API accepts the requests passed by the client to Nova, converts these requests into AMQP messages and puts them in the Queue, and then returns the obtained data results to the client after Nova has processed them. It is precisely based on the above mechanism