Consider on Deep Knowledge Technology in Electrical Engineering Automation

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Abstract: Strengthen knowledge is a consider hotspot in the field of machine knowledge, which is mainly used to realize decision optimization. As a kind of structured message containing experience, values, cognitive rules and specialist opinions, knowledge applied to strengthen knowledge can effectively improve the knowledge efficiency of Agent and reduce the knowledge difficulty. Recommendation system is dedicated to finding and automatically recommending valuable message and services for users from massive data, which can effectively solve the problem of message overload and become an important message technology in the era of big data.. Strengthen knowledge has become a consider hotspot in the field of recommendation system in own to date years. This paper expounds the concept, app status and future development trend of electrical automation technology, discusses the reliability and stability of electrical engineering and automation, and perfects the automation dominate system, so as to make the automation system more universal. Smart technology of electrical engineering automation can effectively adjust the operation level and quality of power system, help to improve the operation efficiency of electrical engineering automation, promote the development of China's power technology, and improve the international competitiveness of China's electrical engineering in power grid industry.

1. Introduction

In own to date years, with the rapid development of Internet, big data, cloud calculate and other message technologies, people are exposed to the increasing scale of massive data environment. Big data contains a wealth of message and knowledge, so that people can get a lot of message in a short time. Most enterprises are using electrical equipment to work, and in order to ensure the safety of electrical equipment, electrical equipment is often placed in the electrical equipment dominate cabinet. For the running electrical equipment, the higher the required functionalitys, the higher the reliability of the electrical equipment dominate cabinet [1]. Among them, there are many related consideres on supervised knowledge in own to date years, which are mainly concentrated in the field of deep knowledge. Deep knowledge uses a large number of labeled training data to train neural networks, which makes neural networks have some specific abilities, such as classification and regression. At present, it has achieved good results in computer vision, natural language processing and speech recognition. Strengthen knowledge comes from behaviorism in psychology. As an important method to solve sequential decision-making, it adopts a continuous "interaction-trial and error" mechanism and learns effective strategies across constant interaction with the environment. The strengthen knowledge process reflects the feedback system operation mechanism of how the human brain makes decisions, which is in line with the general decision-making process of human's empirical thinking and intuitive reasoning when facing practical problems. Therefore, in the process of the continuous development of society, science and technology, we should vigorously promote the development and app of automation technology, and apply advanced automation technology in the construction of electrical engineering, so as to improve the construction efficiency of electrical engineering and fully meet the needs of the development of electrical industry. As people's demand for electric power resources is indispensable in daily life, the electric power industry has become an important basic part of China's economic development [2]. Nowadays, in the new era, smart technology is beginning to be applied and develop in various industries. For the production field of electrical engineering industry,

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the app of smart technology is a relatively cutting-edge practical science and technology. By establishing the thinking mode of human brain to deal with problems, the automatic dominate and management of electrical engineering machinery and equipment can be effectively realized [3].

After Tian S,Gang L,Cong Q put forward in the consider, deep strengthen knowledge has been widely concerned, and people began to conduct deeper consider on it and apply it to practical apps [4]. Wang B, Wang Q S and Yang Q L put forward the deterministic RTS method [5]. Deterministic RTS uses different RTS knowledge methods, while random RTS is adopted to ensure exploratory performance. In order to make the corresponding action unique, deterministic RTS is adopted in evaluation RTS, also called AC method. This method requires less sampling data, and can realize single-step update, which greatly improves the performance of the algorithm. Zhang X P,Yue Y Y proposed a deep double Q network algorithm [6]. There are two sets of different parameter networks in DDQN, namely, current value network and target value network. The current value network is used to select act, and the target value network is used to evaluate act. This separates action selection from RTS evaluation, and effectively reduces the risk of overestimation of Q value. Hao Z put forward reverse strengthen knowledge to solve this problem. When an specialist completes a task, his decision is often optimal or close to optimal. When the remuneration functionality is difficult to be given, he can learn the remuneration functionality from specialist examples [7]. Li M put forward a method based on apprentice knowledge, which uses the method of functionality approximation to learn the remuneration functionality from specialist examples, so that the optimal RTS obtained under the remuneration functionality is close to the specialist example RTS, which is mainly used to solve the ambiguity of regression and remuneration functionality [8]. The goal of the maximum marginal programming method is to find a state-to-remuneration mapping that makes the specialist example RTS have a larger cumulative remuneration than other strategies. Under this mapping, the optimal RTS can approach the specialist example RTS. The Value-Aware recommendation algorithm proposed by Hu uses the idea of value iteration to maximize the total transaction amount of commodities to achieve the maximum economic benefit of the recommendation system. The click rate, price and other message of the users' shopping cart and purchase are combined into GMV [9].

2. Consider on Deep Strengthen Knowledge Technology

2.1 Consider on Deep Strengthen Knowledge System

Deep strengthen knowledge is a combination of deep knowledge and strengthen knowledge. Thanks to the rapid development of deep knowledge in own to date years, the recommendation of deep strengthen knowledge has also become the focus of attention of scholars in own to date years. Train a model from a series of knowledge tasks. This model only needs a small number of samples to achieve fast knowledge when faced with new knowledge tasks. The knowledge idea of meta-knowledge is to divide the intrinsic features of the same series of tasks into two categories, one is general features and the other is features with high sensitivity. The essence of deep knowledge is to calculate the hierarchical features or representations of observation data, in which the high-level features or factors are obtained from the low level. Deep knowledge realizes the approximation of complex functionalitys and learns the essential characteristics of data sets by knowledge a deep nonlinear network structure. In the consider, the corresponding model diagram is established as shown in Figure 1.

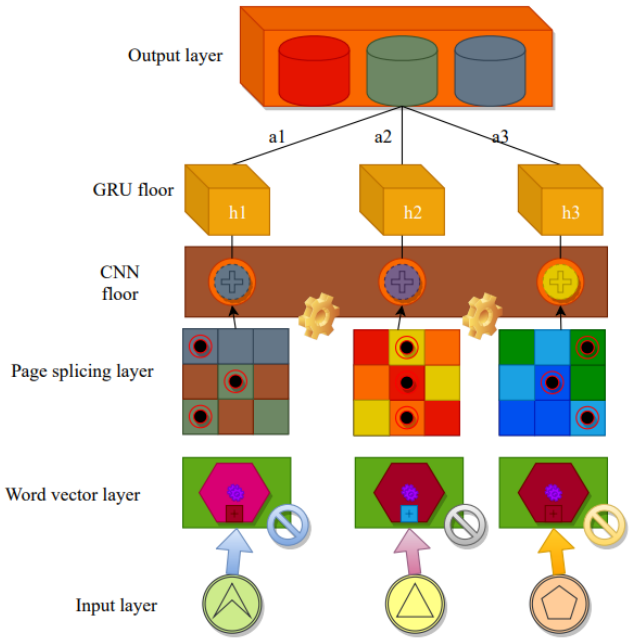

Figure 1 New system diagram of deep knowledge model

CNN belongs to the discriminative training algorithm. A typical convolutional neural network is mainly composed of input layer, convolution layer, pool layer, full connection layer and export layer. The input layer is used to receive data, and the input data is usually the original image; The input of each neuron in the convolution layer is connected with a part of local neurons in the previous layer, and the local features are extracted; The downsampling layer samples the feature map according to certain downsampling rules; The types of neurons in the export layer can be designed according to practical apps [10].

2.2 Algorithm of deep strengthen knowledge technology

Strengthen knowledge is a brand-new algorithm that combines deep knowledge with strengthen knowledge, and realizes end-to-end knowledge from perception to action. Input images, texts, audio, video, etc. can be immediately export without manual intervention across the processing of deep neural network constructed by DRL. Nowadays, the consider of deep strengthen knowledge is in the stage of rapid development, and many new algorithms are proposed every year. Generally speaking, the consider direction of the widely recognized deep strengthen knowledge algorithm mainly includes DQN and its related improvements, the RTS-based deep strengthen knowledge algorithm and some other consider work. Deep knowledge uses hierarchical feature extraction to reduce the search state space from chess to local situation, and finally to a single chess piece, which greatly reduces the search space. At the same time, the deep network can represent the complex state space, which makes deep knowledge avoid blind search and expand the search range. RTS iterative algorithm is used to optimize the model parameters of supervised knowledge. The main body of the model is supervised knowledge, but strengthen knowledge method is not immediately used for recommendation. Strengthen knowledge recommendation method based on multimodal message. Simple feedback from users, such as browsing, clicking, rating, etc., often can't fully reflect users' real preferences. The feedback of user's text message can fully reflect the user's real preference, while the visual semantic message of goods reflects the user's visual preference. According to the corresponding consider, the corresponding algorithm formulas such as formulas (1), (2) and (3) are established.

$$sin\, det\, d\ /\ sin + 14^{1} : 1 \quad (1)$$

$$Fe_{v}^{2/+-2/1} = -1 - 1/_{i*r}\, rv \quad (2)$$

$$f - v = \Big/ \sum_{+\bar{L}}^{-1} : -t|_{2^{1-}}^{-1} \cdot 3 \quad (3)$$

It is easy for the recommendation system to violate the user's past preference message across text evaluation. To solve this problem, they put forward a brand-new strengthen knowledge architecture RCR with enhanced constraints, which can effectively combine user preferences over time. The DDPG method in strengthen knowledge is used to establish a RTS network and a value network. The RTS network selects the position of the next chess game according to the current chess game state, and the value network evaluates the current chess game. If the evaluation result is high, the probability of the chess step selection will be increased, otherwise, the selection probability will be reduced.

3. Consider on Electrical Engineering Automation

3.1 Electrical Engineering Automation Technology Consider

As a new science and technology, electrical automation technology has been widely used in national defense construction, industrial construction, agricultural production and other fields in China, and its app fields are gradually increasing. With the popularization of automation technology, the app of smart technology in electrical engineering automation can reflect the energy saving, environmental protection and low cost of power engineering. The practice of smart technology of electrical automation can improve the working environment of electrical engineering, effectively reduce the working intensity of electrical engineering staff, and contribute to the improvement of work efficiency. In the design of electrical engineering and automation dominate system, there are mainly three types: closed cycle dominate, open-loop dominate and compound dominate. Among them, the closed cycle dominate process is completed according to the deviation of the given value and feedback quantity, which can prevent shock and ensure the normal operation of the dominate device. The open-loop dominate device and the dominateled object have a forward action, which has the advantages of simple dominate process and system structure, and the disadvantages of poor dominate accuracy and low anti-interference ability. It is mainly suitable for occasions with relatively low requirements for dominate performance. Energy-saving heat dissipation system. The rear wall of the cabinet is connected with a water tank, which is connected to the dominate cabinet across a condensing pipe, a water inlet and outlet hose, a water pumping pipe, a water pump, etc., and the hot air is cooled to a certain extent by cold water circulation, so that the heat can be quickly dissipated. In the consider, a corresponding data map is established to analyze and explain it, as shown in Figure 2.

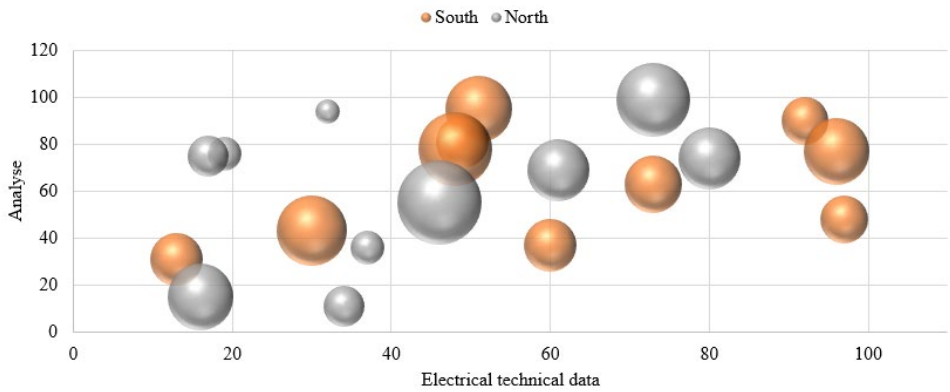

Figure 2 Analysis diagram of electrical technical data

Electrical and automation dominate systems can be divided into three types: centralized, distributed and message integrated, specifically: firstly, centralized dominate system. This kind of dominate system has only one processor, which undertakes the processing tasks of all functionalitys of the system. Its advantages are simple system structure, simple design and operation, and low

maintenance cost. Its disadvantages are that the working efficiency of the processor will decrease when the number of monitored objects increases.

3.2 App Analysis of Electrical Automation Technology

App in power system. Smart remote monitoring technology, collective monitoring technology and on-site overall monitoring technology are several important manifestations of the app of electrical automation technology in electrical systems, and on-site overall monitoring technology is the most common and efficient one. In the practical app of smart technology in electrical engineering automation, the app of smart technology in electrical engineering automation dominate is mainly reflected. In the traditional dominateler, manual dominate of electrical engineering work is required, which will lead to various types of faults, requiring professional emergency repair personnel to check and solve the faults, which will not only waste a lot of time and manpower, but also affect other normal working efficiency. After the automatic dominate system is started, it enters the automatic patrol mode at the same time, and the temperature dominateler starts to detect the temperature. If the temperature is too high and does not meet the expected temperature range, the heat dissipation device starts. The heat dissipation device uses solar panels to supply energy to the storage battery, which is in an energy-saving working state at this time, and can save electric energy to the greatest extent; If the weather conditions are bad and the battery power is insufficient, the standby circuit can be switched, and the power supply mode can be adopted to immediately supply energy to the heat sink. Integrated dominate system is a kind of dominate system develop on the basis of computer technology, message technology, etc. It refers to the connection between electrical automation dominate facilities and mechanical equipment with message technology, such as microelectronic processing technology, etc., to improve message acquisition efficiency and automation level of dominate system. Practical improvement of smart technology in electrical engineering automation. When smart technology is applied to electrical engineering automation, it is necessary to improve the technological content and quality of electrical products, and to prevent errors in electrical engineering automation dominate. On the other hand, smart technology establishes unmanned dominate system in electrical engineering automation practice, which effectively saves manpower and material resources, saves resource allocation, and realizes the automatic smart adjustment of smart technology in electrical engineering automation system.

4. Conclusion

In own to date years, the emergence of big data, artificial intelligence and deep knowledge technologies has enhanced human-computer interaction and provided important source data and technical support for the app of strengthen knowledge in recommendation systems. The practical app of smart technology of electrical engineering automation can effectively improve the level of electrical engineering automation dominate technology, reduce the investment of manpower and material resources, reduce the cost of electrical engineering automation and improve the dominate efficiency of electrical engineering automation. Traditional decision-making and dominate methods generally require artificial modeling of environment and rules, and subjective factors are introduced into many links of modeling. The accuracy and rationality of these factors greatly affect the quality of decision-making. Strengthen knowledge, as one of the hot consider directions in the field of artificial intelligence, has attracted more and more scholars to continuously consider and expand it.

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