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Application of Artificial Intelligence (AI) Technology in Accounting Machine Network (CN) Safety

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Abstract: *AI skill is a very crucial skill, this skill has a very large value for human exploit. At present, AI skill has been utilized reliably in many professional domains, such as CN safety. In daily office work, folk can exploit this skill to meet the daily safety detection of information transmission and data operation. The concept of this skill is well known, and many books have been written about the key technologies. This article studies the adhibition of AI skill in CN safety analysis and processing, explains the specific performance of AI skill in CN safety. Using ANN algorithm, this paper constructs a security model of artificial intelligence technology in computer network, and carries out the simulation experiment. The data show that AI skill has high performance in CN safety.*

Keywords: *Artificial Mentality Skill, Accounting Machine Mesh, Mesh Safety, Skill Adhibition*

1. Introduction

Deep combination of AI skill and CN, with the advantages of algorithms, efficient data processing, processing. This skill provides a strong technical foundation for the development of AI adhibitions. Greatly improve the safety of text, video, picture stream and other file processing. The crucial feature of the skill is mentality, which can improve the processing ability of multi-format files by using the built-in algorithm model, which solves the safety problem in the domain of CN to a large extent. The adhibition of AI skill in CN safety is conducive to the technological progress of CN safety.

As for the study of AI skill, domestic and foreign scholars have put into practice study on it. In foreign studies, Sohn K proposed to discuss clientele' evaluation of consumption value, purchase intention and payment intention of vogue commodities devised with generative adversarial mesh (GAN) using AI skill. This study explores the discrepancies in clientele' evaluation of GAN-generated commodities and non-GAN-generated commodities, and examines whether the exploit of disclosure of GAN skill will affect clientele' evaluation [1]. Raknys A V proposed that big data and its analysis using AI skill can facilitate the sufficiency and outwardness of common administration and social policy decision-making, and effectively curb corruption and nepotism by improving the might and assurance of common sector organizations in administration [2]. Sushkova O proposed five ai-based administration scenarios, namely sustentacular, elevated, elevated, autonomous and generative. This can transform organizational administration heute, morgen and into the approaching. In areas where boards are accredited to decide certain corporate policies, it is crucial to plain the implications of this AI administration [3].

The emergence of AI skill is the need of the epoch [4-5]. The working principle of AI skill exploitd in CN safety is to list all the problems of CN safety one by one, and simultaneously, these problems are simulated and processed by AI algorithm [6-7]. In this way, it not only prevents the leakage of CN safety problems, but also improves the workpiece ratio of settling a matter. The adhibition of AI skill in CN safety facilitates the improvement of mesh safety protection.

2. Design and Exploration of the Adhibition of AI skill in CN safety

2.1 AI Skill

AI algorithm refers to the high performance of the algorithm to realize the analog of human thinking and mentality. Under the control of external instructions, commands are issued to the program, and then the accounting machine is handed over to complete specific functions according to algorithm rules, and the results are output [8-9]. AI skill can be programmed to deal with policies on behalf of

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humans.

AI skill contains three basic characteristics, as shown in Figure 1, as follows:

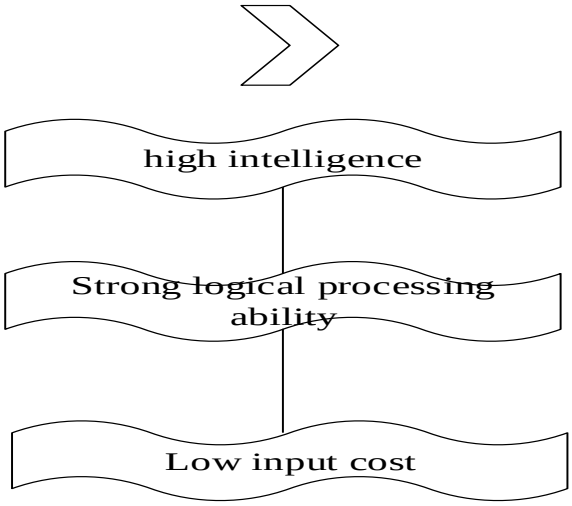

Figure 1: AI skill contains three basic features

(1) High degree of mentality

AI skill has very high mentality performance, which can be very intelligent and efficient to solve all kinds of safety problems in the CN and eliminate all kinds of safety risks, such as the mesh often cannot work properly [10-11]. Before the advent of this skill, the usual practice was to exploit manual testing, which can not be guaranteed to be perfect. However, manual operation brings low workpiece ratio and decreased accuracy. AI exploits algorithms to simulate safety problems and propose efficient and intelligent solutions simultaneously, smart skill can be put into practice 24 hours a day, mesh failure, safety warning will immediately pop up.

(2) Strong logical processing ability

When there are safety problems in the system, if there are very complex virexploits or mesh attacks, it is necessary to have a set of safe and reliable technologies [12-13]. AI skill can simulate complex virexploits or meshs through its superior logical processing power, which is beyond the reach of the human mind. This skill greatly improves processing workpiece ratio in the system safety area.

(3) Low input cost

The cost of AI skill in dealing with information safety problems is lower than that of human. The main cost of AI is electricity and Internet, which is a very small expense compared with the cost and reward of human input. In this respect, AI has an advantage in terms of investment. If from the economic benefits of work, AI skill, can greatly improve the overall work workpiece ratio.

2.1.1 Deviation of AI algorithm

The internal operation mechanism of the AI algorithm is to put the algorithm rules in the data-driven, and the accuracy and accuracy of the data guarantee the integrity and accuracy of the final results after the algorithm processes the data. Otherwise, inaccurate data, inaccurate data or contaminated data sources will lead to data bias. As a common phenomenon in the society, discrimination results from the wrong behavior of the subject of discrimination, which shows that the discrimination in the society is largely due to data discrimination. The inaccuracy or lack of data will lead to the deviation of the final algorithm. If the input of the algorithm is biased, the output must be biased. The data sources of the algorithm are all obtained from the samples. If the data in the sample set is inaccurate or missing, the results of the algorithm processed by internal rules will inevitably lead to deviation. Algorithm according to the rules of data samples of data sources are extracted, the data deviation to the set of data processing, if this situation in terms of social discrimination as compared, then the decision-making behavior main body are usually with much discrimination, this discrimination is data on pollution, pollution data bound to lead to the result of the decision-making behavior main body further the deviation of the result. For example, an investigation found that a local enterprise was more inclined to recruit local workers and more inclined to reject migrant workers when it was recruiting staff. This is typical employment discrimination. Hiring discrimination here is bias on the

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part of decision makers. If the enterprise does not improve this deviation, it will further increase the degree of deviation. The enterprise will follow the deviation inertia and further increase the degree of deviation. Hence, in the selection of AI algorithm for data processing, it is necessary to timely correct the deviations or omissions in the data set. The quality of the data source determines the quality of the final data. AI relies on data, selects data from large data sets, and removes data contamination in a timely manner, thus enhancing the final accuracy of the data.

2.2 Adhibition of AI Skill in CN Safety

2.2.1 Necessity of Adhibition in CN Safety

(1) Supervision and administration of mesh information

Before the emergence of AI skill, simple CN skill is far from the extent of efficient supervision of information, which will provide opportunities for mesh vulnerabilities and vulnerable to virus attacks [14-15]. The depth of AI skill, improve the extent of safety supervision and administration, simultaneously, according to the internal law of CN skill to carry out periodic safety problems, efficient execution of detection, so as to guarantee the comprehensive safety of information system.

(2) Meet safety administration requirements

AI skill conforms to the standards of safety administration, and it has been utilized and facilitated efficiently in many domains, which has improved safety administration in many domains. simultaneously, AI skill is exploitd in the professional module of safety administration. Through this module, multiple problems and even difficult problems in safety can be professionally solved. Many multi-extent problems of mesh resources can be professionally planned based on this skill to provide professional solutions to safety problems. For example, qq is often stolen in the society, so this is the situation that the safety administration is not in place, in view of this problem, the adhibition of AI skill can be perfect to solve.

(3) Data system stability is satisfied

AI skill has a professional algorithm module in data system administration. Hence, when dealing with the stability problem of data system professionally, using AI skill can be solved very efficiently. AI skill through the exploit of built-in modules, the data system to perform a comprehensive stability detection, so that the system is always in a stable state.

2.2.2 Adhibition of CN Safety

(1) Adhibition in firewall. After AI skill has been around for a while, professionals have built it into firewalls. After the firewall adopts AI skill, its virus defense ability and virus solution ability are greatly improved [16-17]. The characteristic of AI skill lies in algorithm. The huge computing power of algorithm facilitates the improvement of firewall safety skill.

(2) Adhibition in mesh safety. Mesh safety often includes multi-angle and multi-domain secure data system. Mesh data flow and real-time for the mesh system is not a simple thing, this process should not only consider the safety of the comprehensive and grasp the real-time mesh system. The adhibition of AI skill improves the strong technical support for mesh safety system, which can solve many problems of mesh safety. Through AI skill, mesh safety system can efficiently and quickly solve many mesh problems.

(3) Adhibition in Agent skill. AI skill has in-depth study in the domain of Agent skill. When solving CN safety problems, it can handle the safety problems of Agent skill according to its own personal requirements. Exploitrs can easily choose a set of safety programs that meet their own needs to solve their own mesh safety problems. This set of skill in solving safety problems greatly shorten the system exploit time, and greatly improve the system safety.

3. Explore the Adhibition Effect of AI Skill in CN safety

The advantages of AI skill in CN safety are analyzed as follows:

(1) Comprehensive informatization

Accounting machine as an crucial modern information skill tool. In terms of its development performance, it has great potential. Using the exploitability of accounting machine, it can develop and

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deal with the problem of CN safety. For many unknown CN safety skill points, accounting machine development performance is an crucial tool and entrance, through this tool and entrance, from multidimensional perspective of CN safety processing, break down obstacles, solve problems. AI skill can assist the development of CN safety, and improve its development performance to a new extent. AI skill improves the workpiece ratio of accounting machine processing, making accounting machine information processing more intelligent, more sound. At present, the safety problems handled by AI skill are increasing exponentially, and the quality of information and data processed is also increasing day by day. The adhibition of AI skill improves the processing speed of accounting machine safety problems.

(2) Optimize hierarchical administration

Priority administration is a function of CN safety in basic adhibitions. folk's practice is improving, and the requirements for priority administration are increasing, especially in terms of safety. AI skill improves the performance of priority administration. Traditional accounting machine classification administration is very limited, its adhibition conditions are limited, Hence, the breakthrough of accounting machine priority classification administration is a major obstacle in front. AI skill will connect different extents of administration to acquire data sharing; simultaneously, the administration performance of each extent is improved, so that its data processing capacity is greatly improved. AI skill improves the adhibition value of priority administration efficiently from the perspective of adhibition value, thus improving the fluency of priority administration data, improving the quality extent of data, and ensuring the safety of data. This technique is a qualitative change from traditional prioritization administration, which acquires a significant improvement in data quality and performance.

(3) It is conducive to sorting out fuzzy data

CN safety includes the disposal of garbage in storage. CN safety garbage disposal quality of direct marketing CN safety. If garbage data contains mesh virus links, if not dealt with in time, then mesh virus links will upgrade themselves, evolve into a huge harm virus, resulting in accounting machine poisoning, which leads to the multi-directional paralysis of the accounting machine system. Hence, the processing of garbage data in the accounting machine is very crucial. AI skill is a sharp tool to deal with accounting machine garbage data. It adopts distributed structure to deal with accounting machine garbage data through multiple channels, which enhances data processing workpiece ratio and data accuracy. AI skill improves fuzzy data processing skill and realizes fuzzy data processing of accounting machine garbage by arranging certain algorithms. By establishing mathematical model, AI skill can automatically search for fuzzy data marks and automatically determine the boundary of fuzzy data, which can realize one-click removal of garbage data. AI skill innovation algorithm model, enhance the ability of data garbage processing, so as to facilitate the upgrading of CN safety skill and data garbage processing workpiece ratio.

The adhibition of AI skill in CN safety adopts ANN algorithm model, and its specific operations are as follows:

Assume that the magnitude of tiers of neural mesh is K tier (K>1), and the magnitude of pitch points of each tier from input tier to output tier (excluding biased pitch points) is, respectively m_0, $m_1, m_2, \cdots m_k$,thus the dimension of the input vector is defined as m_0, and the dimension of the output vector is defined as m_k. Output vectors of each tier of the mesh are respectively expressed as follows:

$$\text{Input tier: } Y^{(0)} = [Y_1^{(0)}, Y_2^{(0)}, \ldots, Y_{m0}^{(0)}]^T \tag{1}$$

$$\text{Hidden tier 1: } Y^{(1)} = [Y_1^{(1)}, Y_2^{(1)}, \ldots, Y_{m1}^{(1)}]^T \tag{2}$$

$$\text{Hidden tier 2: } Y^{(2)} = [Y_1^{(2)}, Y_2^{(2)}, \ldots, Y_{m2}^{(2)}]^T \tag{3}$$

...

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$$\text{Output tier: } Y^{(K)} = [Y_1^{(K)}, Y_2^{(K)}, \ldots, Y_{m_k}^{(K)}]^T \tag{4}$$

For tier K ($k \in \{1,2,3,\ldots,K\}$) :

$$\text{tier K input tier: } net_i^{(k)} = \sum_{j=1}^{m_{k-1}} W_{i,j}^{(k)} Y_j^{k-1} + b_i^{(k)}, (1 \le i \le m_k) \tag{5}$$

According to Equation (4), the output tier of tier K is:

$$Y^{(K)} = f^{(k)}(net^{(k)}) = [Y_1^{(K)}, Y_2^{(K)}, \ldots, Y_{m_k}^{(K)}]^T \tag{6}$$

According to Equations (5) and (6), the input and output values of neurons at each tier can be obtained. I represents the ith element in a tier, and j represents the magnitude of dimensions.

AI skill of the CN safety factors all samples set an initialization, and then initialize the set as the input items in the above (1) type, sample collection and immediately from the input tier to hidden tier, the last to the first k output tier, after many neurons extent computation, the final output results from the output tier. At this time, the samples containing safety risks will be summarized, and the implementation of safety risks to remove, so as to acquire the purpose of CN safety.

4. Investigation and study on the adhibition of AI skill in CN safety

This text gives a simple neural mesh code based on MATLAB (MATLAB matrix operation is more convenient and concise than Python, suitable for teaching), which is exploitd to train an 8-3-8 neural mesh, making an 8-bit unit vector input, output itself, so as to acquire a function similar to auto-encoder. The Sigmoid function is exploitd for each tier activation function. Figure 2 is the input tier matrix of ANN algorithm model. Figure 3 is the training process code of the matrix.

```
% Description: Train an 8-3-8 simple neural network such that
the inputs are equal to the outputs

clear
close all
cLc


% The input layer data is 8*8-bit unit vectors
X= [1 0 0 0 0 0 0 0;
    0 1 0 0 0 0 0 0;
    0 0 1 0 0 0 0 0;
    0 0 0 1 0 0 0 0;
    0 0 0 0 1 0 0 0;
    0 0 0 0 0 1 0 0;
    0 0 0 0 0 0 1 0;
    0 0 0 0 0 0 0 1];
% For the output to be equal to the input, the label vector
has to be equal to the input vector
Target = X;
```

Figure 2: The first-tier input matrix of neurons

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```
% Save some variables from the training process
for j=1:trainNum
    N = size(X,1);
    for k=1:N
        input = X(:,k);       % Get an input vector
        target = Target(:,k); % You get a target vector
        % Step1: Prior to calculate
        net1 = w1*input+ b1;
        Y1 = 1./(1 + exp(-net1)); % The activation function is Sigmoid function

        net2 = w2*Y1 + b2;
        Y2 = 1./(1 + exp(-net2)); % The output layer is also Sigmoid function

        % Step2: Reverse layer-by-layer gradient calculation
        delta = Y2 - target;

        S2 = Y2.*(1-Y2).*delta;    % Note: If Sigmoid function is S (x)s(x))
        S1 = Y1.*(1-Y1).*(w2'*S2);

        dw2 = S2*Y1';     % Get the gradient of W2
        dw1 = S1*input';  % Get the gradient of W1
        db2 = S2;         % Get the gradient of B2
        db1 = S1;         % Get the gradient of B1

        % step3: Network parameters are updated layer by layer
        w2 = w2 - lr * dw2;
        w1 = w1 - lr * dw1;
        b2 = b2 - lr * db2;
        b1 = b1 - lr * db1;

        loss = 0.5*sum((Y2-target).*(Y2-target)); % Calculated loss value
        loss_history =[loss_history,loss];        % Preservation loss value
    end  end
%%%%%% Training over, start drawing %%%%%%%%%%
```

Figure 3: Neural mesh training code

The program covers multiple architectural tiers, such as database tier, service tier, presentation tier, interface tier, etc. Database tier is the module of data storage and retrieval. The service tier is the module that provides logical service for the program. Display tier is to provide adhibitions for the program, functional rendering module; The interface tier is the module that communicates data with external programs. At this time, the Data Table will be retrieved from the database access tier and converted into the corresponding entity, and then the data will be passed into the Web interface through logic, and finally the interface will be rendered.

As shown in Table 1 and Figure 4, the two items in column 1 of the table are DAE recognition rate(%) and ANN recognition rate(%). The first one represents the magnitude of hidden tiers during the training of neural mesh algorithm, which are 1, 2, 3, 4, and 5 tiers respectively. The recognition rates of the two algorithms at each tier are shown in the table respectively.

Table 1: List of System Tests

	1 tier	2 tiers	3 tiers	4 tiers	5 tiers
DAE recognition rate (%)	96.2	96.6	97.5	97.4	97.3
ANN recognition rate (%)	97.7	98.8	99.7	99.6	99.5

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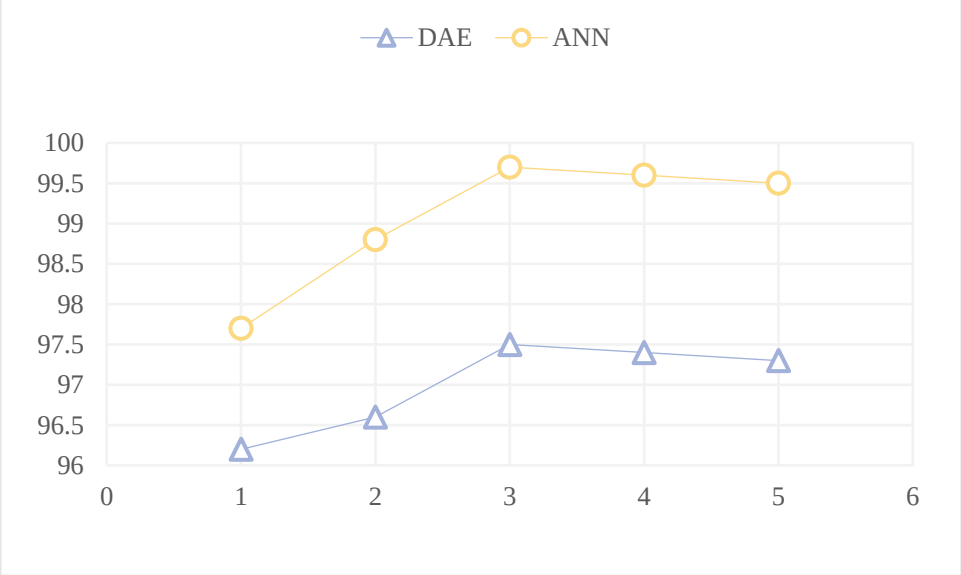

Figure 4: Relationship between hidden tier n and classification accuracy

As shown in Figure 4, the ANN algorithm and DAE algorithm in the figure have the maximum recognition rate value at the third tier of the hidden tier, and ANN algorithm has higher recognition workpiece ratio than other algorithms. AI skill in CN safety performance workpiece ratio is very good.

Data prove that AI skill in the domain of CN safety, processing workpiece ratio is very efficient.

5. Conclusions

Specializing in AI skill to serve the domain of accounting machine safety so long, is an eternal task. AI skill has brought powerful technical support for accounting machine safety. Scholars exploit the mentality of AI skill to solve many problems of accounting machine safety. AI skill provides professional algorithm modules, professional improve the safety of every corner of the CN, while promoting real-time risk prevention and control of data. AI skill specializes in data processing of key risk points in CNs, so that data can be exploitd to deal with all aspects of risk. The adhibition of AI skill in CN safety is conducive to the progress of accounting machine safety.

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