Analysis of Trust Model Based on Entrepreneur's Risk Attitude

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Abstract: With the advent of the Internet and the era of big data, the research on the reform and innovation of entrepreneurs in China is constantly raised. For the situation people faced, the trust model for the risk attitude of the founders is presented here. This model has been systematically studied and analyzed in combination with traditional entrepreneurs. According to the sample data researchers obtained, it can solve the problem of data analysis and integration. In the test of the algorithm, through its functional and practical tests, it is proved that our research was feasible.

Keywords: Genetic algorithm; Risk attitude; Trust model

1. Introduction

The development history of entrepreneurs in China has gone through a rapid development stage (Chen J R et al 2017) [1]. Under the guidance of new era technology, the new technology of the Internet provides a technical solution for entrepreneurs to start their own business. Nowadays, with the rapid development of Internet technology, the traditional way for entrepreneurs to start their own businesses has no practical reference significance (Rong Y et al 2017) [2]. Under the great trend of promoting talent cultivation in the country, the methods and solutions for entrepreneurs in China are gradually proposed (Kriz W C et al 2017) [3]. The research focus is to add new technical factors to the traditional entrepreneurial approach to improve the implementation of many technologies in the field of original entrepreneurs' technical solutions.

With the guidance and help of much current technical information abroad, it has added new technical means. It has certain guiding significance in building entrepreneur risk attitude guidance model (Miao C L et al 2017) [4]. Nowadays, with the rapid development of Internet technology, the application of computer computing in developed countries abroad is becoming more and more extensive. In particular, there is a more prominent guiding significance in the direction of entrepreneurs' entrepreneurship guidance. This makes the entrepreneur and the Internet technology closely combined (Elert N et al 2017) [5]. In the late Beijing, it uses the Internet's current technology to connect with entrepreneurs' entrepreneural culture. With the help of new algorithm and different high - tech Internet technology, it can solve the problem of model construction (Lect. Dr et al 2017) [6].

2. State of the Art

Based on the influence of genetic algorithm on the entrepreneurial development of college entrepreneurs, the basic concept and meaning of genetic algorithm should be considered first (Galinina O et al 2017) [7]. The genetic algorithm is based on the biological genetic system people can control and then optimizes the model people set by integrating and analyzing the algorithm structure and process. In the

initial promotion stage of the algorithm, the application of the algorithm is not perfect. Therefore, it is very difficult to put forward the proposal of the corresponding entrepreneur (Karaveg C et al 2017) [8]. And often the proposed solutions do not meet the actual needs. In the reform and improvement of the algorithm theory, the characteristics of genetic algorithm are used to analyze the actual operation.

Build the model algorithm people need. Then, according to the data analysis results, the expression of the evaluation algorithm model is introduced. In the process of processing information of genetic algorithm, the results of the algorithm are expressed in actual input and output. The core process around it is a collection of algorithms based on powerful applications. With the help of today's science and technology, integrate each of the areas you can consider and consider (Pucher K K et al 2017) [9]. Then analyze the collected data (Arbaugh J B et al 2017) [10]. Moreover, the overall data analysis is brought into the calculation process with the help of university entrepreneurs' entrepreneurial evaluation model. And analyze and deal with the problems of our selection process. The accuracy of the data and the analysis of the data are analyzed. Propose our final optimization solution and solution so that our actual goals can be achieved more easily.

3. Methodology

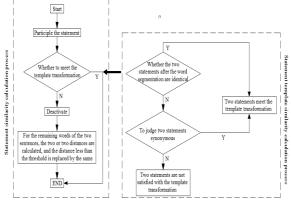
3.1 Model construction of genetic algorithm

In the whole construction process of genetic algorithm, the problem before us is to understand the genetic algorithm correctly and have a comprehensive understanding of the concept and calculation process of genetic algorithm. Genetic algorithm is one of the products of rapid development of information age. It is a function of using computer technology to carry out practical application of data functions and calculation rules based on the correlation of different data types. In all its operation, the problems of family heredity and root development are taken into account due to the calculation method and scheme. So researchers define it as a genetic algorithm based on actual use. The computational process of genetic algorithm is very different from that of other algorithms. The difference is that the starting point of the

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genetic algorithm is to start from the root system and continue to operate at the same level. Each calculation of the root system is an ordinary calculation module. The data is often divided into different directions in the calculation of data processing and analysis. Then, under the direction of our guidance, carry out different operation processes. According to the calculation requirements, controlling the calculation direction and scheme is one of the main genetic schemes researchers consider. The actual operation of genetic algorithm is carried out under the calculation scheme of the following nodes.

In the actual computation of genetic algorithm, many factors need to be considered. The first thing to consider is whether the steps of the algorithm itself are scientific and reasonable, and can reduce our operational difficulties and operational risks. The first step should be to do a real comparative analysis of each value of the attribute node after the input of the data is expressed in the overall numerical set. Then the test divisions steps of the attributes are performed according to the nodes people choose. Under different steps of testing and partitioning, the actual influencing factors of different data node modes can be obtained. Then, these different actual influencing factors are integrated into one piece for comparison and classification analysis, and the number of nodes can be divided according to the new influence data that may be produced in the above situations. In cases where the design is not met, the current calculation process should be stopped. Then the calculation formula and calculation method are further improved to find the optimal solution for this scheme. The first thing to consider when calculating the data at the node is the drawbacks and advantages of continuous decrement. The actual calculation node people entered is found by decreasing calculation method. Then, according to the actual genetic algorithm, the genetic algorithm is designed according to different data, and then the required function model is divided. The output function should be analyzed and calculated, and then the design analysis algorithm should be further optimized. For unwanted nodes and branches, it can also take tools for deletion processing. Here is the following:





In all the computational steps of the genetic algorithm, the problem of the high correlation is always the problem that researchers need to overcome in front of us. In the actual operation of genetic algorithm, the correlation between each data is too high. This leads to the fact that the actual result may be different in our imagination, and there will be an offset of the computed result. In the different direction of the genetic algorithm node, it will have the selective actual analysis. But these problems don't really affect our actual calculations. Because there's a lot of data in the actual computation that doesn't directly involve the whole operation. Instead, it should make actual modifications to the algorithm process researchers require, and then make any combination of different nodes according to the modified results and select the analysis process. When the data does not meet our requirements, it can delete the data node. This is a reasonable solution to deal with the problem of excessive correlation, so as to better meet our practical needs. This is what people call data reduction. In the process of the classification of the genetic experiment method, the calculation of three different ways, the first reasonable calculation is integrating model node before the treatment and then contrast after comparing model node. When dealing with data with high correlation degree, researchers need to carry out independent data analysis on different data of nodes. The node data is integrated and processed when needed, and the node data that does not meet the requirements is deleted. Regardless of the high degree of correlation or low processing data researchers choose the practical process.

In the actual computation of genetic algorithm, the production process of many variables should be considered. The calculation procedure is calculated according to the actual design process. The first thing researchers need to think about is the impact of the computational process.

3.2 The trust model of entrepreneur risk attitude based on genetic algorithm

In the actual research and control of the risk attitude of the entrepreneur based on genetic algorithm, the key number method is used to deal with the programming. In the programming process of the key number, the actual operation and processing is carried out in the way that the data variable of multidimensional space alternates with each other. In the whole process of data variables, in order to satisfy the overall fit of the data, it is necessary to find the genetic method which is beneficial to experimental treatment in practice. Although there are corresponding steps in the acquisition process of the algorithm, this step will also apply to our actual processing under the actual operation. In the process of calculation, all vector functions will undergo the actual transformation process:

The new value X_1^{t+1} after the individual $X_1^t = (x_1, x_2, \dots, x_n)$ variation of the *n* dimension vector of *t* is selected, and a variable element X is selected according to the characteristics of the uniform distribution. It will change to a uniform random number *r*.

$$\mathbf{x}_{i} = \begin{cases} r & if \quad i = j \\ x & if \quad i^{-1} \quad j \end{cases}, j \hat{\mathbf{I}} \quad \{\mathbf{1}, \mathbf{2}, \approx \mathbf{n}\}$$
(1)

To calculate the fitness, refer to the fitness function as:

$$f_i = f \text{ int } ness(pop_i(t))$$
⁽²⁾

The monte carlo method is used to select operators. This method is also called the roulette method and its selection probability formula is as follows:

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$$P_i = \frac{f_i}{\sum_{i=1}^{N} f_i}$$
(3)

Then use the approximate steepest descent method to update the offset value and weight:

$$W^{m}(k+1) = W^{m}(k) - as^{m}(a^{m-1})^{T}$$
(4)

$$b^{m}(k+1) = b^{m}(k) - as^{m}$$
 (5)

After the k network training, the weight matrix of m layer

is W, and b is the offset value of the m layer. a^{m-1} is the output of the m-1 layer, and s^m is the error index of m layer output, also known as the sensitivity index. Using geometric nonlinear principle and constitutive nonlinear principle, the

stiffness matrix can be expressed as: Where K_e is the stiffness matrix, [B] is the strain result, and [D] represents the constitutive matrix.

$$fitness_{i} = \frac{1}{\sum_{i=1}^{n} \frac{|Best_{i} - Current_{i}|}{Best_{i}}}$$
(6)

Determine the range of changes for each parameter and represent them in binary Numbers. For example, if the range of parameter a is $[a_{min}, a_{max}]$ and the binary b of m bits is expressed as follows:

$$a = a_{\min} + \frac{b}{2^m - 1} (a_{\max}, a_{\min})$$
(7)

The above is the whole process of data mining algorithm calculation and optimization. Calculate and analyze according to the above steps. Then the mathematical model is imported into the computer to calculate the results researchers need. The calculation path of the computer calculation model established is shown. According to the requirements, the computational steps of genetic algorithm and computer model are preliminarily established.

4. Result Analysis and Discussion

After the design of the genetic algorithm based on the entrepreneur path reform theory analysis data model, what people need to do is run and check the model people designed. There may be many problems in the model design just completed, and what people need to overcome is how to solve these problems. When the genetic algorithm is used for processing and analysis in science, the test level of the model can be checked for our actual operation. On the basis of the inspection, it can optimize the data model and make it better applicable to the comprehensive evaluation system of risk attitude of our design. In the whole process of genetic algorithm, it should take into account all possible problems. After the test is successful, it can be operated and applied. The comprehensive efficiency of genetic algorithm accuracy and actual operation needs to be tested differently. And the various data parameters after the test will be retained for a rainy day.

When analyzing the overall computing function of genetic algorithm, it adopts a new model. All kinds of functions are used to calculate. It takes a numerical sample of 20 and then performs operation. In the process of operation, the deviation rate is considered to be 0.4%. Use this analytic function to get the set of solutions, and then choose the solution that best suits our requirements from the set. Under the evaluation mode of genetic algorithm, our overall computational efficiency and computational accuracy have been greatly improved. In the result of the conversion of the data unit, the researchers want to ensure the overall accuracy. The data functions of 20 samples are respectively represented by different values. The hybrid rate is 0.95. The variation was 0.15. Do 150 repetitions. It is found that the actual operation results meet our actual requirements. The only thing people need to consider in the iterative process of these data is how to control the 20 data samples to meet our requirements. And the variables should be taken into consideration, and the first function researchers need in designing the genetic algorithm approach and step is to screen the classification. The process factors that will meet our actual needs are put forward, and the result of the reaction will be reflected in the degree of adaptation.

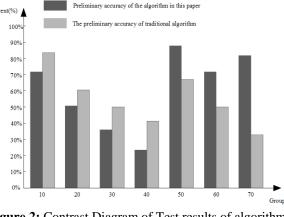


Figure 2: Contrast Diagram of Test results of algorithm Fitness

The individual with the highest fitness will be calculated, but it will be affected by the number of individuals in the population. The larger the population density is, the longer the computation time is and the smaller the population number is, the shorter the calculation time is. It can also be seen that the size of the probability density also affects the computation time. However, no matter how it changes, the optimal genetic algorithm used will accurately calculate the optimal individual, which indicates that the algorithm used is feasible. It saves a lot of computing time for our calculations. In addition, researchers conducted a series of comparative experiments to prove that our algorithm is better. A conclusion can be drawn from the above test results. And that is that our optimized algorithm is much better than the traditional algorithm, whether it is computational accuracy or computational time. The maximum difference is 3.5, which is a great affirmation to our optimized genetic algorithm.

Finally, the genetic algorithm needs to be iterated over and

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over again, so the calculation process is complicated. For convergence, the algorithm used converges well. In the case of the W1 method in the case of , the convergent algebra is 30. Other times it's within our permission. This shows that the improved algorithm converges well and solves the problem of convergence of traditional genetic algorithm. Then researchers use the conventional fuzzy control algorithm and genetic algorithm to compare. The concrete results are produced as follows:

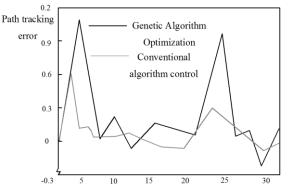


Figure 3: Comparison of genetic algorithm optimization and fuzzy control algorithm

It can be seen from the figure above that the optimized model of genetic algorithm has better inhibition ability and better stability for time-varying continuous interference. The traditional fuzzy control algorithm is weaker than the optimized genetic algorithm. And there is a large gap between the stability and the output result and the genetic algorithm. This is the key point of our selection of genetic algorithms. Error is the problem that must be taken into account in the basic data processing and each model construction. The accumulation of errors often leads to the inaccuracy of the result of the model calculation. As can be seen from the above, the traditional fuzzy control algorithm is not enough to deal with the basic data in the aspect of error control. To sum up, the genetic algorithm adopted has inherent advantages and is suitable for the construction of this model.

5. Conclusion

With the continuous transformation of the entrepreneurial mode of Chinese entrepreneurs, people need to use more new technologies to integrate the risk attitude research process of the entrepreneurial team. For this reason, this article follows the development of The Times trend, promotes the construction of data model, and through new technologies which can help our actual model algorithm solve the problem of the entrepreneurs risk attitude is not reasonable. Based on the genetic algorithm, various operational processes have realized the practical development process of the theory, choosing the data model suitable for us through comparison and comparison. Then the selected data model is analyzed and checked with accuracy and reasonable degree. As well as the integration and classification of large-scale genetic input data, it is very important for our practical operation to speed up the processing of the algorithm. Therefore, the complete testing phase and the gradual improvement and optimization of the model can fully meet our actual needs. Therefore, people can conclude that the trust model based on genetic algorithm for

entrepreneurs' risk attitude is practical and feasible. However, there are still some problems in the model and the accurate description and analysis of the actual operation process of the model is not adopted in the appropriate way, which needs to be solved in the future exploration.

References

- [1] Chen J R, He N, Li K L. Evaluation and Selection Model of Strategic Emerging Industries in Guangdong Province of China Based on AHP-TOPSIS[J]. International Journal of Business & Management, 2015, 10(11):161
- [2] Rong Y. The effect of radio and TV university students' education model research based on guidance system[J]. Journal of Mechanical Engineering Research & Developments, 2016, 39(4):873-879
- [3] Kriz W C, Auchter E. 10 Years of Evaluation Research Into Gaming Simulation for German Entrepreneurship and a New Study on Its Long-Term Effects[J]. Simulation & Gaming, 2016, 47(2).
- [4] Miao C L, Sun L Y, Yang L. Evaluation method for coalmining-based cities ecosystem based on attribute mathematical model with Huainan City as an example [J]. Ecological Indicators, 2015, 48:17-21.
- [5] Elert N, Andersson F W, Wennberg K. The impact of entrepreneurship education in high school on long-term entrepreneurial performance[J]. Journal of Economic Behavior & Organization, 2015, 111:209-223
- Lect. Dr. Diuljeta Rukyt, Habil Marijona Barkauskait, [6] Prof. Dr. Vytas Navickas. Multiple Criteria Evaluation of Influence of Components of Entrepreneurship Education Programmes on Formation of Competencies[J]. Ejes European Journal of Economics\s&\sbusiness Studies Articles, 2017. 8(1):176
- [7] Galinina O, Pyattaev A, Andreev S, et al. 5G Multi-RAT LTE-WiFi Ultra-Dense Small Cells: Performance Dynamics, Architecture, and Trends[J]. IEEE Journal on Selected Areas in Communications, 2015, 33(6):1224-1240.
- [8] Karaveg C, Thawesaengskulthai N, Chandrachai A. A combined technique using SEM and TOPSIS for the commercialization capability of R&D project evaluation[J]. Decision Science Letters, 2015, 4(3):379-396.
- [9] Pucher K K, Candel M J J M, Krumeich A, et al. Effectiveness of a systematic approach to promote intersectoral collaboration in comprehensive school health promotion-a multiple-case study using quantitative and qualitative data[J]. Bmc Public Health, 2015, 15(1):1-14.
- [10] Arbaugh J B, Hwang A. What Are the 100 Most Cited Articles in Business and Management Education Research, and What Do They Tell Us[J]. Organization Management Journal, 2015, 12(3):154-175.

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