Marketing System Based on Artificial Intelligence Technology Construction and Risk Analysis

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Abstract. Based on the construction of marketing system and risk analysis, artificial intelligence technology is used to reshape its structure, establish a prediction system for marketing risk analysis, and comprehensively promote the positive development of marketing system. In the process of marketing data information processing, the calculation quality and data integrity of artificial intelligence are fully guaranteed. However, due to the different data forms of marketing system, the operation efficiency is low, which is not conducive to the evaluation of marketing risk. On the premise of flexible application of AI technology, the marketing industry can strengthen the function of AI technology by accurately mastering the core of depth algorithm.

Keywords: Artificial Intelligence Technology · Marketing System · Construction · Risk Analysis

1 Introduction

From the perspective of the composition system of artificial intelligence technology, artificial intelligence technology involves technical disciplines such as Internet of things, cloud computing, big data and edge computing. Among them, the marketing analysis and prediction system is an important landing application scenario for agents at present. The construction of Internet of things scenario can comprehensively promote the landing application of marketing analysis and prediction system [2]. With the progress of artificial intelligence technology, it plays a great role in the risk prediction of marketing system [7].

There are many loopholes in marketing risk analysis, such as prediction advance, prediction error, judgment delay and so on, resulting in the loss of economic interests of marketing enterprises and the blow of market crisis [10]. Therefore, the marketing industry needs to constantly improve the risk prediction system to make the system more accurate and sensitive [15]. With the support of artificial intelligence technology, we can quickly change the traditional prediction model and standardize the market risk measurement mechanism (Fig. 1).

C. F. Peng et al. (Eds.): EIMT 2022, AHSSEH 3, pp. 230–236, 2023.
https://doi.org/10.2991/978-94-6463-012-1_26

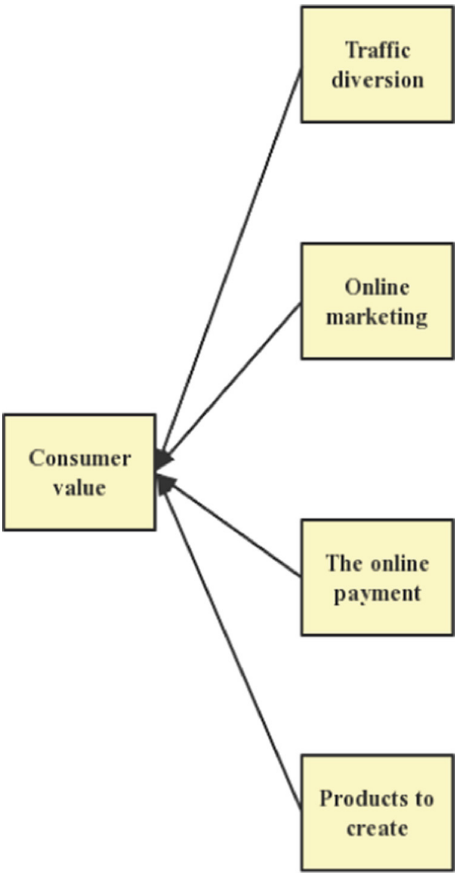

Fig. 1. Artificial intelligence marketing link

2 Intelligent Algorithm

Intelligent machine algorithm learning refers to the use of computer algorithms to simulate the same thinking mind as human beings, so as to find new data information [1]. As a key part of intelligent algorithm, machine algorithm uses a large number of data parameters and digital models compared with other operation programs, which further improves the accuracy of data operation [9]. The application of artificial intelligence is mainly reflected in the following aspects:

2.1 Intelligent Voice

Intelligent voice processing is mainly reflected in automobile automatic navigation and telephone voice recording. The auto navigation can be installed in the intelligent recognition system in advance, and the intelligent voice dialogue can be carried out by setting the fixed program and daily required instructions [16]. The user can communicate with

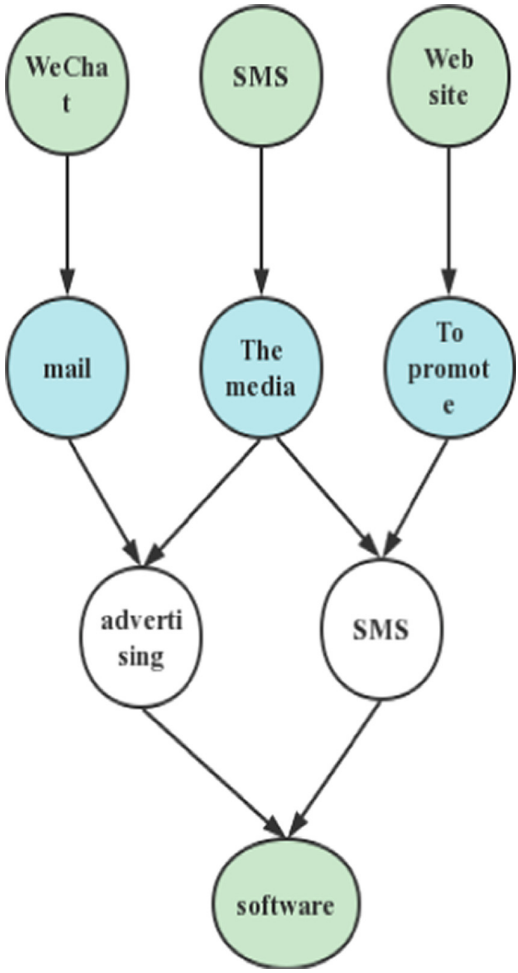

Fig. 2. Marketing system architecture technology

the on-board intelligent voice system only by pressing the intelligent voice dialogue key, such as commanding the system to find a map, make a phone call, locate and find. In telephone voice recording, automatic recording can be carried out according to the telephone records required by users, and the results can be analysed (Fig. 2).

2.2 Service Front End Identification

The service front-end mainly extracts the features of data information and manages and analyzes the special aspects of data. It can also eliminate echo, wake-up, word recognition and other functions [6]. At the same time, the service front end can further enhance the voice effect [12].

2.3 Semantic Recognition

It is to decode and convert various languages, including machine language, programming language and human language, to form a systematic semantic recognition system, and judge the actual needs of users according to different semantics [13].

2.4 Speech Synthesis

It is generally applicable to text analysis, language analysis and language analysis [17]. Speech synthesis can mix other sound materials based on the user's voice to form a synthesis system.

3 Marketing System Data Risk

3.1 Marketing Strategy

In the process of marketing enterprises formulating sales strategies, due to the initiative error of leaders or the lack of control over market risks, marketing strategies often fail and waste all kinds of resources [14]. However, when leaders learn how to use artificial intelligence system, they can conduct market environment research and market analysis and research, and further understand the development trend of the market [1]. And artificial intelligence technology can clearly analyze the prospect of customers, products, production lines, sales and other links, predict the development direction and future development status of the work, and so on. Artificial intelligence technology goes deep into the market environment, can clearly predict the risk crisis, help enterprises reasonably reduce economic losses, adjust marketing strategies and so on [10] (Fig. 3).

3.2 Marketing Execution

In the marketing system, the implementation of marketing strategy needs strong executive ability. If the implementation of marketing strategy is not completed, the effect and quality of the whole marketing will be affected [8]. Therefore, enterprises need to take strong marketing execution, use artificial intelligence technology to gradually follow up the execution strength and degree in the implementation process, and ensure that the implementation links of each step are perfect, so as to improve the active implementation of marketing strategies and maximize marketing results [11]. Artificial intelligence technology can also evaluate the work quality, resource allocation and other links in the process of marketing implementation, and optimize the allocation of resources.

3.3 Marketing Publicity

Marketing is inseparable from publicity activities. The application of artificial intelligence technology strengthens the management of marketing enterprises. Marketing enterprises can use various communication channels to publicize activities [4]. For example, screen advertising, web pages, short video platforms, chat software and mobile terminals can improve the publicity of marketing activities and product competitiveness. In this process, artificial intelligence depth algorithm is used to analyze the publicity behavior to ensure the quality of publicity work.

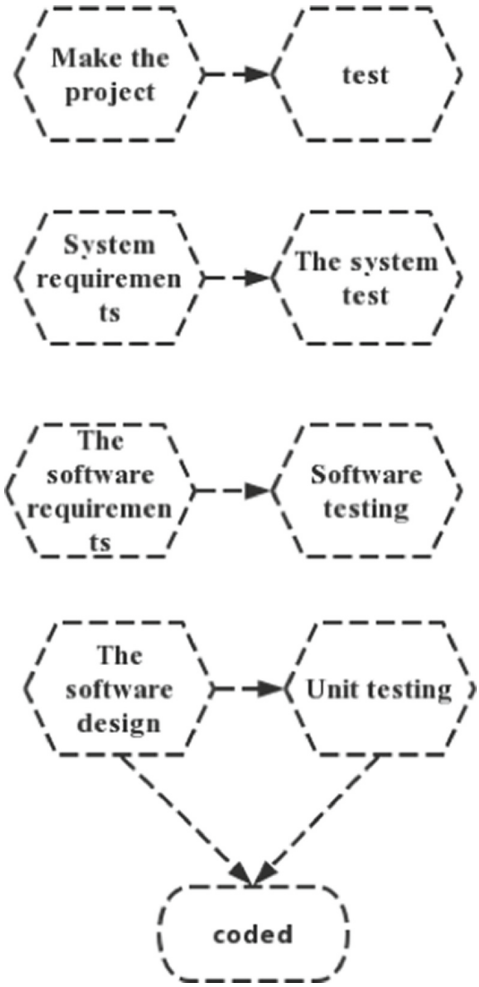

Fig. 3. Intelligent system design

4 Conclusions

This paper is based on the in-depth research on the model construction and system upgrading of artificial intelligence technology in the construction of marketing system and risk analysis. Artificial intelligence technology uses intelligent data model to improve the marketing system, establish intelligent marketing strategy, overthrow the traditional marketing mode, and further improve the development quality of marketing industry. Artificial intelligence technology uses the deep learning method to divide the marketing risk analysis system into collection stage and response stage. In fact, it is to establish a neural network model for the marketing risk system on the basis of artificial intelligence, and quickly obtain the results when the information is introduced into it. The application of artificial intelligence technology has greatly improved the anti risk ability of the

marketing industry and formed a set of risk prediction system for the exclusive marketing industry.

References

1. Chen, Jie, and Qiuhua, Liu. Research on construction of quality evaluation index system of power marketing professional talent training based on CIPP evaluation model: A case study of Nanjing Institute of Technology. *Journal of Nanjing Engineering College (Social Science Edition)*, 2015(01): 46–49. https://doi.org/10.13960/j.issn.1671-3753.2015.01.011.
2. Kuang, Jianling. 2019. Research on the theory, path and evaluation system of the marketing of express industry in China under the background of new retail–The ninth course of logistics marketing. Mark World 2019(38): 102+104.
3. Ni, H.R. 2016. Application of marketing theory in innovative marketing system. *Modern Business* 30: 57–58. https://doi.org/10.14097/j.carolcarrollnki.5392/2016.30.026.
4. Si, Jingbo. 2008. Analysis on existing problems and countermeasures of agricultural and livestock products marketing system in black soil economic zone of cold region. *Shopping Mall Modernization* 12: 122.
5. State Economic and Trade Commission proposed to strengthen the construction of enterprise marketing system. *China Commerce and Trade*, 1998(11): 5.
6. Su, Kun. 2020. Research on tourism management practice curriculum system based on entrepreneurship and innovation ability cultivation–Taking tourism marketing as an example. *Modern Trade Industry*, 9(02): 178–179. https://doi.org/10.19311/j.carolcarrollnki.1672-3198.2020.02.087.
7. Sun, Jinhua. Spokesperson Ge, and Jian Hu. 2019. Exploration of "four-in-one" practice teaching system for marketing specialty based on application-oriented talent training objective. *Education and Teaching Forum*, 2019(23): 89–90.
8. Tan, Li, and Wenmei Fei. 2021. Construction of tourism product marketing system based on the integration of industry and education: A review of tourism marketing. *Journal of Tropical Crops*, 42(07): 2196.
9. Wang, Dongliang. 2013. Modern economic information, 2013(12): 356. (in Chinese).
10. Wu, Guangyu, Xiaohua Li, Saijilaf, and Rongjun Liu. 2018. Higher vocational marketing professional core career capacity analysis and system research. *Journal of Education Modernization*, 5(44): 27–29. https://doi.org/10.16541/j.carolcarrollnki.2095-8420.2018.44.010.
11. Lei, Xiong. 2007. Innovative thinking as a leading manager–The management thoughts of Wu Zuzhuo, Director of Nanchang Post Bureau. *China Post* 06: 54–55.
12. Na, Yang. 2013. Reform and practice of practical teaching system of marketing specialty in applied universities–Taking the construction of marketing specialty in Liaoning University of international business and economics as an example. *Heilongjiang Education (Higher Education Research and Evaluation)* 10: 61–63.
13. Yi, Zhengwei. 2015. Construction of quality evaluation system for multi-talent training of marketing specialty in higher vocational colleges. *Vocational Education Communication*, 2015(29): 21–26.
14. Zang, Ningning. 2016. How to build marketing system for electric power companies under electric power system reform. *China Energy*, 38(04): 44–47.
15. Zhang, Chunrong. 2010. Reconstructing application-oriented undergraduate curriculum system based on vocational competency-Taking marketing major as an example. *Vocational and Technical Education* 31 (35): 22–24.

16. Zhang, Ruilin, and Changhua Liu. 2020. Exploration on the construction of output-oriented practical Curriculum system of marketing specialty in applied universities: A case study of Wuchang Shouyi College. *Journal of Hubei University of Economics (Humanities and Social Sciences)*, 17(10): 154–156.
17. Zhou, Huaigu. 2019. Exploration of building SPOC Curriculum and evaluation system by "Mobile Cloud Platform"–Taking "Marketing" course of Zhixing College of Northwest Normal University as an example. *Journal of Higher Education*, 2019(06): 65–67.
18. Zhou, Jing. 2014. Curriculum system construction based on university-enterprise cooperation in applied universities–Taking marketing major as an example. *Journal of Zhaoqing University* 35 (04): 85–88.