Research on the Synergistic Mechanism of Artificial Intelligence and legal Escort in theProtection of Ethnic Minority Villages in Guizhou Province

Deng,Zhaoxia

Guizhou University of Finance and Economics, Guiyang, Guizhou, 550025, China

Abstract: This paper aims to explore the synergistic mechanism of artificial intelligence and legal escort in the protection of ethnic minority villages in Guizhou province. By analyzing the current situation and problems of the protection of ethnic minority villages in Guizhou, the application potential of Artificial intelligence in cultural inheritance, ecological protection and security prevention is expounded, as well as the important role of legal escort in providing legal norms, rights and interests protection and dispute resolution. Then, the necessity and feasibility of the synergy between the two are studied, and the strategies and suggestions for constructing the synergy mechanism are put forward to promote the sustainable protection and development of ethnic minority villages in Guizhou.

1. Foreword

Ethnic minority villages in Guizhou carry rich ethnic culture, unique architectural style and precious ecological resources, and are an important embodiment of the cultural diversity of the Chinese nation. However, in the process of modernization, these villages are faced with many problems, such as cultural erosion, ecological destruction, rights and interests disputes, and urgently need effective protection measures. The rapid development of artificial intelligence technology has provided a new means and means for the village protection, and the legal escort is the key guarantee to ensure that the protection work is carried out in accordance with the law and regulations. The synergy between the two is expected to create better conditions for the protection and development of ethnic minority villages in Guizhou.

2. Artificial Intelligence's Use in Guizhou's Ethnic Minority Village Protection

(1) Preservation of cultural heritage through digital means

With the help of cutting-edge artificial intelligence technologies like speech recognition, picture identification, and big data analysis, we can start a comprehensive digital protection program for the cultural treasures of Guizhou's ethnic minority villages. With the use of these technologies, we can create a thorough cultural heritage database by painstakingly gathering, preserving, and analyzing minute information about indigenous languages, handicrafts, and clothing. This database is essential to the spread and promotion of this rich cultural legacy in addition to making inheritance and in-depth research easier. The complex patterns of Miao clothing, for example, can be categorized and interpreted using clever picture recognition technology, illuminating the profound cultural

---

meanings ingrained in these designs. We guarantee the preservation of these cultural objects and improve their accessibility for academics and the general public by digitizing and studying them.

(2) Monitoring of the ecological environment and early warning

Advanced data analysis models and artificial intelligence sensor technology can be used to protect the pristine natural environment of ethnic minority communities in Guizhou. These instruments make it possible to monitor a variety of ecological indicators in real time, such as soil conditions, water quality, and air quality. By keeping a close eye on these indications, possible environmental problems can be identified early and warning signals can be sent out to stop negative effects. In particular, intelligent water quality monitoring devices must to be placed thoughtfully in the settlements' main water sources. This device can quickly notify the appropriate agencies in the event that anomalous water quality is detected, allowing them to take prompt and efficient action to stop the pollution's spread and lessen any possible ecological harm.

(3) Intelligent management and safety prevention

Installing intelligent security systems can improve the general administration and security of Guizhou's ethnic minority communities. These devices improve security surveillance in the villages by utilizing cutting-edge artificial intelligence technology like behavior analysis and facial recognition. By leveraging these technologies, we can effectively mitigate the risk of security incidents, such as theft and fire, thereby safeguarding the safety and well-being of the villagers. Additionally, the implementation of an intelligent management platform enables us to obtain real-time insights into population dynamics and resource utilization within the villages. This data-driven strategy facilitates more efficient resource allocation and enhances management capabilities, ultimately promoting the sustainable development of these ethnic minority communities.

3. The Role of Legal Escort in the Protection of Ethnic Minority Villages in Guizhou

(1) Provide legal norms

Laws and regulations related to the protection of ethnic minority villages shall be formulated and improved, clarifying the ownership and protection standards of cultural heritage, ecological environment, land resources, so as to provide a legal basis for the protection work.

(2) Protection of rights and interests

The legal rights and interests of ethnic minority villagers in economic development and cultural inheritance should be guaranteed through legal means, so as to ensure that they can fully participate in decision-making in the process of village development and protection, and obtain reasonable compensation and benefits.

(3) Dispute settlement

We will establish and improve diversified dispute resolution mechanisms, including mediation, arbitration and litigation, to promptly deal with all kinds of disputes caused by the protection and development of villages, and maintain social stability.

4. The Necessity and Feasibility of Coordination between Artificial Intelligence and Legal Escort

(1) Necessity

Improve protection efficiency

The rapid data processing capability of artificial intelligence and the standardization of legal escort can more

efficiently deal with complex problems in village protection, such as rapid identification and handling of cultural infringement, and timely settlement of ecological and environmental violations.

Enhance the protection effect

Through the accurate monitoring of artificial intelligence and the force of legal escort, the protection goals of cultural heritage and ecological environment can be better realized, and ensure that the protection measures can be effectively implemented.

Promote sustainable development

The coordination between the two contributes to the rational development of village resources on the basis of protection, realize the benign interaction between economic development, cultural inheritance and ecological protection, and provide guarantee for the sustainable development of the village.

(2) Feasibility

Supporting technology

The continuous development and maturity of artificial intelligence technology has provided a solid technical support for its application in village protection. At the same time, the continuous improvement of the legal system also provides an institutional guarantee for the legal escort.

Data sharing

In the information age, artificial intelligence systems and legal departments can establish a data sharing platform to realize information exchange, and provide a data basis for collaborative work, such as the combination of environmental monitoring data and legal law enforcement basis.

Personnel training

With the continuous emergence of interdisciplinary talents, interdisciplinary talents who understand both artificial intelligence technology and legal knowledge can provide intellectual support for the coordination between the two and promote the effective operation of the coordination mechanism.

5. Strategy of Constructing the Coordination Mechanism between Artificial Intelligence and Legal Affairs Escort

(1) Establish a joint working platform

To build a joint working platform integrating the application of artificial intelligence technology, legal information release and communication, case processing and other functions. On this platform, the AI system can push abnormal situations and potential risks in village protection in real time, while the legal department can release laws and regulations, policy interpretation and typical cases in a timely manner to realize the rapid sharing and exchange of information.

(2) Formulate the collaborative workflow

Make clear the collaborative working process of AI technology and the legal department in monitoring, early warning, evidence collection and other aspects in the case filing, investigation, trial and other links. For example, when the AI system monitors the destruction of cultural heritage, it will automatically start the legal procedure and transmit the relevant evidence quickly to the law enforcement department, who will investigate and handle the process in accordance with the legal procedures, and feedback the processing results to the AI system, so as to optimize the subsequent monitoring strategy.

(3) Strengthening the construction of talent teams

Cultivate and introduce a group of compound talents who master both artificial intelligence technology and legal knowledge, and enrich the work team of village protection. At the same time, the training of existing staff should be strengthened to improve their ability to apply artificial intelligence technology and legal knowledge, and promote the organic combination of the two.

(4) Promoting public participation

Artificial intelligence technology is used to build a public participation platform, and ethnic minority villagers and all sectors of society are encouraged to actively participate in the supervision and reporting of village protection. The legal department verifies and deals with the clues provided by the public in a timely manner, and protects the rights and interests of informants through legal means to form a good atmosphere for the participation of the whole society.

6. Conclusion

The protection of ethnic minority villages in Guizhou is a systematic and arduous task, and the coordination mechanism of artificial intelligence and legal escort provides new ideas and methods for it. By giving full play to the advantages of artificial intelligence in the technical level and legal escort in legal norms and rights and interests protection, both cooperate and promote each other, can effectively improve the efficiency and quality of village protection, realize the sustainable development of Guizhou minority villages, let these precious national cultural treasures and ecological resources in the new era coruscate new vigor and vitality. In the future practice, we should constantly improve the coordination mechanism, strengthen technological innovation and legal system construction, and make greater contribution to the protection of ethnic minority villages in Guizhou.

References

[1] Yang M ,Wu C ,Gong L , et al.Coupling Coordination Relationship between Cultural Landscape Conservation and Socio-Economic System in Ethnic Villages of Southeast Guizhou[J].Land,2024,13(8):1223-1223.

[2] Gan L .Research on Professional Development of Preschool Teachers in Ethnic Villages in Yunnan Province Under The Background of Education Informatization[J].International Journal of Social Science and Education Research,2024,7(5):.

[3] Jun L ,Xiaoli W ,Yi Z , et al.Visualization system of Hlai ethnic village landscape design based on machine learning[J].Soft Computing,2023,27(14):10001-10011.