



# Based on the ChatGPT-Like Large Language Model Analyze the Digital Governance and Construction of Digital Government in China

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**Abstract.** The ChatGPT-like large language model plays a crucial role in advancing the development of digital governance in our country. By integrating models like ChatGPT into government governance, intelligent, efficient, and citizen-friendly government services can be achieved. In the advancement of digital government construction in our country, the ChatGPT-like large language model has multiple applications across various scenarios. It enhances government efficiency, improves communication between the government and the public, increases the effectiveness of digital governance, and enhances the fairness and rationality of digital administration. However, while the ChatGPT-like large language model brings convenience to digital governance, it also poses various risks, such as concerns regarding data security, national sovereignty, and government data security. This paper will analyze and study the applications of ChatGPT-like large language models in digital government governance and construction, as well as the potential risks they may bring to digital governance. This will provide references for future theoretical discussions, technological applications, and institutional regulations.

**Keywords:** digital government governance; ChatGPT-like large language model; data security

## 1 Introduction

With the modernization of the national governance system and governance capacity in the new era, digital government governance has become an important component of national governance, combining its unique innovation, distinctiveness, and practicality. Since the 19th National Congress of the Communist Party of China (CPC), the Party and the state have repeatedly proposed the construction of digital government: The 19th CPC National Congress report proposed the strategic deployment to build a "cyber superpower, Digital China, and a smart society". The Fourth Plenary Session of the 19th CPC Central Committee and the Fifth Plenary Session of the 19th CPC Central Committee respectively proposed important decisions to promote digital government

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construction and strengthen digital society and digital government construction. The 20th CPC National Congress report clearly stated the goal to comprehensively promote the great rejuvenation of the Chinese nation with Chinese-style modernization and accelerate the construction of "Digital China". It can be seen that the Central Committee of the CPC attaches great importance to the construction of digital government in China.

As of now, the ChatGPT model developed by the American company OpenAI has undergone iterative upgrades from 2015 to 2023, culminating in the development of GPT-4. Leveraging Large Language Models (LLMs), ChatGPT possesses powerful self-learning capabilities, allowing it to autonomously form language patterns and automatically adjust model parameters to adapt to various algorithmic and contextual requirements<sup>1</sup>. The ChatGPT model autonomously generates intelligent responses by adapting its language to account for various subject differences. It integrates high-quality data and advanced algorithms to create effective rule paradigms and organizational structures, catering to diverse scenarios in fields like healthcare, education, finance, and technology. Currently, government departments in countries such as the United States, the United Kingdom, Japan, and Singapore have explicitly signaled their intention to collaborate with ChatGPT<sup>2</sup>. Large-scale language interaction systems, referred to as ChatGPT-like models, will play a crucial role in the comprehensive implementation of digital government governance and the construction of "Digital China" in the future. What scenarios and values do these models bring to China's digital government construction? What hidden dangers and risks do they pose once applied? How should we guide and regulate their future development?

## **2 Application of ChatGPT-Like Models in Digital Government**

### **2.1 Feasibility Analysis of Integrating ChatGPT-Like Models into Digital Government**

The technological feasibility refers to the interplay between actors' intentions and technical performance<sup>3</sup>. ChatGPT-like models represent a significant breakthrough in artificial intelligence and technological innovation. On one hand, the ChatGPT-like model offers feasibility for optimizing government functions. As described earlier, its large-scale language interaction capability, efficient information processing capacity, and precise algorithmic power provide powerful enabling features. By automatically generating decision reports, design diagrams, trend predictions, etc., the model can assist government personnel in forming effective work results according to job requirements, greatly enhancing efficiency and quality while reducing the occurrence of incidents. This offers unlimited development space for those engaged in public services and the construction of digital government. On the other hand, these models engage directly with the public, providing responses to inquiries about administrative procedures and policies, improving accessibility and transparency in government communication. ChatGPT-style generative artificial intelligence can integrate information based

on data from search engines and user queries, thereby generating answers more tailored to public needs<sup>4</sup>. Therefore, ChatGPT-style artificial intelligence enables the government to forecast trends, optimize resource allocation, and improve service delivery, facilitating interaction between government departments and information exchange with users, thereby contributing to the feasibility of building a digital government.

## **2.2 The Application of ChatGPT-Like Models in the Context of Digital Government**

From a macro perspective, integrating the ChatGPT-like model into digital government construction can revolutionize the top-level design of digital government construction in terms of governance concepts, governance methods, and governance structures. The model's integration can innovate the existence mode of government organizations. Compared to the traditional bureaucratic administrative system, the ChatGPT-like model, with its technological advantages in data resources and precise algorithms, can collect and analyze government data, integrate government service resources across regions, sectors, and levels, thus achieving coordination and linkage between different levels, avoiding problems such as redundant institutional settings, cumbersome procedures, and functional overlaps among government departments, and significantly improving government efficiency. They enhance communication efficiency between administrative agencies, revolutionize government organizational forms, and facilitate coordination between different government levels. Moreover, they reshape government governance by integrating emerging technologies like artificial intelligence and big data, transitioning from text-based models to multi-modal ones. Additionally, they improve communication efficiency with the public and other organizations, integrating fragmented information resources and enhancing governance efficiency. In conclusion, ChatGPT-like models enhance the technical connectivity of digital government and improve the precision of government data collection.

## **2.3 The Value Application of ChatGPT-Like Models in Digital Government**

Firstly, ChatGPT-like large language models improve the fairness of digital administration. Historically, China has regarded fairness, openness, and justice as the starting point for administrative agencies to carry out administrative governance and enhance government credibility. Traditional decision-making is influenced by subjective factors, but digital governance aims for fairness and reasonableness. ChatGPT-like models reduce irrationality while upholding digital rule of law principles, minimizing personal influence and discrimination risk. Their advantages include diversification, simplicity, and intelligence, providing objective responses and enhancing public service fairness. It provides objective and intelligent responses, effectively reducing the risk of discrimination in administrative governance activities due to subject differences, protecting the fair rights and freedoms of digital citizens, and effectively enhancing the fairness and rationality of public service activities.

Secondly, ChatGPT-like large language models enhance the scientific nature of administrative behavior. They automate administrative procedures, enhancing precision and standardization. This automated model can adjust relevant parameters to meet the needs of different scenarios. Moreover, the ChatGPT-like large language model accurately identifies user needs and required textual materials through training databases. By combining administrative subjects, authorities, procedures, etc., it can generate optimal solutions to various governance challenges, thus enhancing the precision, standardization, and regularization of administrative governance activities.

### **3 Security Risks Associated with the Application of ChatGPT-Like Large Language Models in Digital Government**

With the application of ChatGPT-like large language models in digital government governance, artificial intelligence is gradually replacing manpower, becoming a double-edged sword. Along with its benefits come increased digital security risks. Recognizing these risks is of vital security significance for digital government governance in our country. Overall, these risks can be categorized into risks at the national level, risks at the governmental level, and risks at the individual level.

#### **3.1 Data Security Risks**

In the current era of big data development, data has become a new type of production resource for the government. To achieve comprehensive intelligent digital government construction, it is crucial to firmly grasp digital security issues. Therefore, data security and digital sovereignty have become important components of digital government construction. From a national perspective, data security is closely related to national sovereignty. If the ChatGPT developed by American companies, as the most representative artificial intelligence, is applied to digital government construction in our country, it will bring enormous risks. In the era of big data, digital security is highly valued. Once relevant data is invaded, it can lead to security issues such as "data pollution," "data theft," and "data attacks." The data of the ChatGPT model mainly comes from a large amount of text and information on the Internet, involving various fields such as politics, economy, culture, society, humanities, and science. Once the ChatGPT model is directly applied to digital government governance in our country. This undoubtedly leads to the leakage of sensitive information on an unprecedented scale, which has a significant negative impact on government confidential information and the personal privacy of the masses. Regarding the authenticity of information, the ChatGPT-like model only integrates data without making judgments on its sources and authenticity, which affects the credibility of government data resources and reduces the trust of the masses in the government.

### 3.2 The Risk to National Data Sovereignty

In addition to the risk of information leakage, the language interaction behavior of the ChatGPT model carries strong value tendencies, which differ from the principles of Chinese socialism and Marxist ideology upheld by our country. Through intelligent algorithms autonomously learning to generate corresponding decisions, and even guiding human decisions in applications. Therefore, from a national perspective, data security is closely linked to national sovereignty. Since the ChatGPT-like model has not truly achieved independence from human intervention, and Western countries have continuously suppressed our country's economic development through technological monopolies and data surveillance, national sovereignty faces severe challenges in terms of data security and sovereignty. To safely apply the ChatGPT-like large language model to digital government construction and governance work, it is necessary to correctly recognize and prudently handle the risks of algorithmic expansion in administration. Not only are there security issues between nations, but there are also significant security risks between the state and capital. In recent years, capitalists have invested capital in big data and intelligent scientific technologies to pursue capital value. This may lead to changes in the state's power structure, affect the relationship between government departments and other power agencies, and create security risks to national sovereignty.

### 3.3 Citizens' Digital Rights are Under Threat

Firstly, there is a risk of excessive collection of citizens' personal information by the ChatGPT-like model. The operation of large language models relies heavily on extensive database support. Currently, there is no guarantee that the ChatGPT-like model will not excessively infringe on citizens' private privacy to improve the efficiency of the model's operation. In each interaction with the ChatGPT-like model, the model collects and learns to mimic users' preferences and predict their needs. Users, in pursuit of more intelligent responses, are often lured by the ChatGPT-like model to reveal a large amount of detailed personal information, including names, addresses, ages, occupations, and more. When the information mastered by the ChatGPT-like model reaches a certain level, it can create complete user profiles and may even understand users' needs better than the users themselves, through its powerful integration capabilities. Moreover, the ChatGPT-like model does not necessarily protect users' information and may share users' information, leading to the risk of personal privacy leakage. In the process of digital government construction, the ChatGPT-like model is highly likely to cause citizen data leakage due to improper data processing. This not only infringes on citizens' "data personalities" but may also lead to citizen anxiety and resistance, potentially causing the digital government construction to enter a "cicada effect"<sup>5</sup>. According to Article 19 of the Personal Information Protection Law, there is a time limit for the storage of personal information, and it should not be retained indefinitely. Unless otherwise stipulated by laws and administrative regulations, the retention period of personal information should be the shortest time necessary to achieve the processing purpose. It is clear that when the ChatGPT model collects, analyzes, and processes personal data, it

must obtain the consent of the data subject in a clear, comprehensive, and objective manner. It is evident that our country has not clearly stipulated the duration of personal information protection.

## 4 Conclusion

The integration of the ChatGPT-like large language model into digital government governance and construction, as a significant breakthrough in the field of artificial intelligence technology, has both positive and negative impacts. On one hand, the ChatGPT-like large language model effectively improves the efficiency of digital government governance and construction. On the other hand, it brings risks to national sovereignty and data security in China's digital government construction. It is clear that unilateral rejection or acceptance is not the optimal solution. It is essential to strike a balance between development and security. Only by effectively regulating technological risks, establishing comprehensive technical management, and building relevant legal and ethical frameworks can we overcome the dilemma of "technological Leviathan" and integrate the ChatGPT-like large language model into the governance and construction of China's digital government in a healthy, inclusive, and sustainable manner, promoting the construction of "Digital China." Furthermore, accelerating the independent and controllable research and application of technology in the field of digital government governance in China is crucial to avoid being technologically dependent. Strengthening the technical support for China's digital government construction and governance is essential. This will enable the ChatGPT-like large language model to maximize its value in China's digital government construction and governance, optimizing the government's operational processes.

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