

Artificial Intelligence Serves Legal Education: The Application and Challenges of Chinese AI-assisted Judicial Trials

Fan Bi^{1,*}, Xiong Yu¹, Zhaoying Chen², Mingyue Xu², Kun Xiao³

¹Law school, Jiangxi University of Finance and Economics, Nanchang 330013, China

²Data Law Research Center, Jiangxi University of Finance and Economics, Nanchang 330013, China

³Virtual Reality Modern Industrial School, Jiangxi University of Finance and Economics, Nanchang 330013, China

*Corresponding Author.

Abstract

In the digital era, with the development and reform of artificial intelligence and judicial systems, AI technology has gradually become involved in and assisting judicial trials. AI-assisted judicial trials is a new trial methodology based on digital technologies such as big data, the Internet of Things, and cloud computing. This methodology can fully leverage AI's ability to ensure judicial fairness and improve judicial efficiency in the field of judicial trials. In China, artificial intelligence, as an emerging technology, has become widespread in assisting judicial trials in the current digital era. The state provides policy guidance, while local judicial authorities innovate many convenient and efficient trial systems using artificial intelligence technology. However, the application of artificial intelligence technology still faces challenges, such as its own limitations, the lack of intelligent judicial talent, and insufficient depth and breadth of application scenarios. In the digital era, legal education should be deeply integrated with AI-assisted adjudication, and in the process of integration, measures such as improving data governance, broadening the scope of application, and strengthening the talent development for intelligent legal governance can be taken.

Keywords: Artificial intelligence (AI), judicial trial (JT), legal education (LE), intelligent court (IT).

1. Introduction

AI, big data, and blockchain, as different scientific technologies, all have various applications in the field of judicial trials. Generally speaking, AI-based judicial trials mainly utilize AI technology to provide intelligent question answering, intelligent recommendation, intelligent analysis. Big data-based judicial trials mainly utilize big data technology to provide big data analysis, big data mining, big data prediction. Blockchain-based judicial trials mainly utilize blockchain technology to provide data storage, data verification, data sharing, and other services.

AI is based on the support and collection of big data and applied to the specific performance and operation mode set by artificial intelligence under the premise of ensuring its safety by blockchain technology. The combination of these technologies can make things more intelligent. Therefore, the application of AI-assisted judicial trials discussed in this article is a deep intelligence AI-assisted judicial trial that integrates AI, big data, and blockchain technologies.

In addition, according to the different services of AI-assisted judicial trials, it can be divided into litigation service, trial assistance and judicial openness. Litigation service mainly provides litigation services for the whole process

including case filing, mediation, trial, and execution; trial assistance mainly provides trial assistance services such as case analysis, legal research, and judgment reference; judicial openness mainly provides judicial openness services such as live broadcast of court hearings, public disclosure of judgments and enforcement information.

The AI-assisted judicial trials discussed in this article refer to a comprehensive chain-like approach that incorporates various application scenarios mentioned above. Based on a summary of the development process and characteristics of China's comprehensive chain-like AI-assisted judicial trials, this article will explore the challenges faced by the "intelligence" brought about by AI-assisted judicial trials.

2. Policy Evolution and Application Characteristics of Artificial Intelligence in China's Judicial Trial

2.1 Policy development and current status of AI-assisted judicial trial in China

In order to give full play to the role of artificial intelligence technology in the judicial field, China has issued a series of policies on judicial development of artificial intelligence in recent years after decades of accumulation, aiming to promote the intelligentization of justice, especially deepening and consolidating the construction of intelligent courts.

In 1996, the Supreme People's Court issued the "National Court Computer Information Network Construction Plan", marking that the people's judiciary began to enter the network information era. Since 1999, every "Five-Year Reform Plan of the People's Court" has put forward requirements for information construction. In 2002, the national court computer information network construction unified network equipment, database and code table, providing basic conditions for WAN interconnection and network management.

Since 2008, each local courts have gradually realized the important role of data convergence in judicial assistance and judicial management, and have successively launched and implemented the project of large-scale centralization of case data.

In 2013, the Supreme People's Court issued the "Five-Year Development Plan for the Construction of People's Court Information Technology (2013-2017)", pointing out that through the construction of a court information system with full coverage of business, full interconnection of networks, full sharing of resources, efficient application of systems, and information security, and clearly proposed the construction of a national judicial information resource database, and decided to build a national court data platform.

By the end of 2013, the business network covering courts at all levels across the country had basically taken shape. While over 9,000 technological courts had been established nationwide, the data concentration and management platform of people's courts had also been built, realizing the real-time uploading of data of about 70,000 new cases every day to the platform. The application level of informatization in judicial trials and administration had been greatly improved.

From 2013 to 2016, four public platforms, including the China Judgment Documents Online, the China Trial Process Information Disclosure Online, the China Enforcement Information Disclosure Online, and the China Court Trial Disclosure Online, were successively launched and went online. The process information management system for the implementation of cases by people's courts had been promoted nationwide, realizing the online handling of enforcement cases across the country and controlling them according to process nodes.

In July and December 2016, the construction of intelligent courts was included in "the Outline of the National Development Strategy for Information Technology" and "the National Informatization Plan for the 13th Five-Year Plan Period", and formally upgraded to a national strategy.

In 2017, policy documents such as "the Opinions of the Supreme People's Court on Accelerating the Construction of Intelligent Courts" emphasized the importance of intelligent court construction and the core role of artificial intelligence in national informatization construction. In August of the same year, Hangzhou Internet Court was officially established. As the world's first Internet court, all litigation procedures involving network cases are conducted online, and the parties can participate in the litigation online without leaving home.

In 2021, the Supreme People's Court issued "the Five-Year Development Plan for the Informatization of People's Courts (2021-2025)", requiring the construction of judicial data platforms, intelligent court brains, and judicial chain integrated platforms based on big data management and service platforms, comprehensively expanding data and knowledge services. The intelligent court brain will gather the existing and potential common capabilities of artificial intelligence in people's courts, providing intelligent support for various applications; the judicial data platform will distribute, manage, and analyze various data from people's courts, providing interface services, data services, knowledge services, and decision support for various applications; and the blockchain integrated platform will provide unified data storage and verification capabilities for courts at all levels and the public, enhancing judicial credibility and judicial efficiency.

On December 9, 2022, the Supreme People's Court issued the "Opinions on Regulating and Strengthening the Judicial Application of Artificial Intelligence", aiming to promote the deep integration of artificial intelligence technology and judicial work, comprehensively deepen the construction of smart courts, and provide specific theoretical guidance for the judicial application of artificial intelligence. The "Opinions" require that by 2030, a judicial artificial intelligence technology application and theoretical system with rule guidance and application demonstration effects will be established to provide high-level intelligent support for the entire judicial process. The "Opinions" specifically put forward five principles. First, the construction and application of artificial intelligence must not violate the security and legality principles such as national security and the inviolability of personal information. Second, the principle of fairness and justice, AI products and services are free from discrimination and prejudice. The fairness of the processes and outcomes of trials shall not be impaired by the introduction of technology, either model nor data deviations. Third, the principle of supporting adjudication, the results from AI shall be for supplemental references only, for adjudication or judicial supervision and management, ensuring all judicial decision are made by the judicature, and all judicial accountability ultimately falls on the decision-maker. Fourth, the principle of transparency and credibility, it is required that all links of AI systems, including the collection and management patterns of judicial data, the process of legal cognitive semantics, and the logic of assisting judicial presumptions would accept examination, evaluation and registration with relevant authoritative entities with interpretability, testability and verifiability. Fifth, it is required that the application of judicial AI shall not damage public interests and social order, and avoid and resolve possible moral and ethical risks from the application of judicial AI, following the principle of abiding by public order and good customs.

From July to October 2023, the Cyberspace Administration of China and the Ministry of Industry and Information Technology successively issued documents such as the "Interim Measures for the Management of Generative Artificial Intelligence Services" and the "Guiding Opinions on the Innovative Development of Humanoid Robots," aiming to promote the healthy development and standardized application of generative artificial intelligence, safeguard national security and social public interests, and protect the legitimate rights and interests of citizens, legal persons, and other organizations.

Up to now, China has issued a large number of documents to regulate and standardize the application of information technology such as artificial intelligence in the judicial field, covering a wide range of areas. These documents have effectively guided the use of artificial intelligence technology in judicial trials and promoted the transformation of Chinese courts from traditional courts to smart courts. The development of China's smart courts has undergone three periods. The first period, starting in the 1990s, is the 1.0 period with digitalization as the core, and its main task is to convert paper court case files to electronic versions, thus completing the transition from paper-based to digitalization. The second period, starting at the beginning of the 21st century, is the 2.0 period with networking as the core, and its main task is to transform the way of handling court cases from offline to online. Around 2015, people's courts basically achieved online case filing, online case handling, and online office work. The third period, starting in 2016, is the 3.0 period supported by big data and artificial intelligence technology, characterized by online handling of all businesses, full-process disclosure in accordance with the law, and comprehensive intelligent services. In addition, some people advocate that the period starting in 2021, which focuses on building a stage with knowledge as the center, a smart court brain as the core, and judicial data platform as the driver, should be called the 4.0 period of informatization. Its characteristics including achieving

comprehensive intelligence, full-system integration, full-business collaboration, full-time and space ubiquity, and full-system autonomy.

Under the smart court system, judicial authorities make full use of advanced information and digital systems to provide numerous intelligent application scenarios where AI assists judicial trials. This has optimized the case handling model to a certain extent, improved the judicial efficiency of court case processing and adjudication, and promoted the development of China's judicial trials towards more specialization, digitization, and intelligence.

2.2 The full-chain application of Chinese AI-assisted judicial trials

At present, AI is widely used in various fields of China's courts, including litigation services, mediation before litigation, case trial, judicial management, and judgment execution, exhibiting the characteristics of full-chain application.

2.2.1 Application in case filing stage

AI technology can automate the review of pleadings and other legal documents through natural language processing and machine learning. It can quickly identify whether the documents meet the formal requirements, predict the case category, and provide real-time feedback on incomplete or wrongly formatted submissions^[1]. Jiangxi Court established "Receipt, Transfer and Dispatch E-center" to achieve intensive and intelligent management of the whole process of litigation materials' "receipt, transfer and dispatch".

The "2021 Work Report of the Supreme People's Court" pointed out that during the epidemic, the achievements of smart court construction have been fully demonstrated, and contact-free litigation services have been widely used. Parties can participate in litigation without leaving their homes, realizing "uninterrupted trial execution and unwavering fairness and justice."

Statistics from the Supreme People's Court show that 97.8% of courts nationwide supported online filing in 2019, with a significant increase in the proportion of high-level courts, reaching 99.3% and 97.6%, respectively. There were 5,149,570 first-instance civil and commercial cases and first-instance administrative cases filed online by courts across the country in the whole year, accounting for 66.9% of the total number of first-instance civil and commercial cases and first-instance administrative cases. A total of 2,018 courts nationwide supported online hearings, accounting for 58.2% of the total number of courts, including 23 high courts, 257 intermediate courts, and 1,738 grassroots courts that have implemented this function, accounting for 71.9%, 62.7%, and 57.4%, respectively. Courts at all levels utilize comprehensive case-handling platforms to achieve rapid online case review, circulation, and approval, greatly improving case-handling efficiency and quality.

2.2.2 Pre-litigation case analysis phase

Artificial intelligence technology assists judges in pre-litigation preparation by identifying key evidence and legal issues through predictive analysis and other techniques, helping judges to conduct in-depth analysis of cases. The AI-assisted judicial system eliminates the workload of frequently flipping through electronic files and can automatically classify overlapping elements of disputed cases, directly decompose and extract various chart data. There will be no errors in all types of data, which can help judges quickly clarify the handling ideas and save a lot of time. According to statistics, from January 1, 2024 to March 31, 2024, the Kunshan City Court in Jiangsu Province used AI's 'one-click review' function in 2,698 cases, making it a good assistant for judges.

2.2.3 Application in the trial record stage

AI can record the process of court hearings in real time and make corresponding transcriptions through its own natural language processing technology, even achieving the transcription of dialects. Specifically, the contents expressed by the parties and their agents in court can be directly projected on the screen through the AI voice transcription function, and the clerk can make appropriate fine adjustments to the text transcribed by AI.

With the help of IFLYTEK's Lingxi voice assistant, the Suzhou Intermediate People's Court has specifically optimized the recognition of Chinese accents, and the speech recognition rate has reached more than 90%. Compared with manual input of text materials by clerks in court hearings, the court hearing speech recognition technology has greatly improved the efficiency of court hearing records. After comparative tests, the court hearing

time has been shortened by 20% to 30% on average, and the time of complex court hearings has been shortened by more than 50%. The completeness of court hearing records has reached 100%.

In addition, observing the expressions of the parties in court hearings can help judges make more comprehensive judgments, but the judges' energy during the hearings is limited and they cannot pay attention to the expressions of every party throughout the process. Through the analysis of the parties' expressions by AI's image acquisition technology, it can assist judges in further examining the inner world of the parties.

With the intervention of AI technology, the lawyer's court hearing language can be basically presented to the parties in a complete and original form, greatly improving the satisfaction of the parties and the trust of lawyers in the judges' ability to handle cases.

2.2.4 Application of evidence analysis

AI technology first utilizes advanced image and voice recognition technology to quickly screen out key evidence in a case. Then, it leverages its natural language processing capabilities to help interpret the case content and reveal any inconsistencies. Finally, it employs data mining techniques to discover patterns and correlations hidden behind vast amounts of data, thereby enhancing the ability to identify and process complex evidence.

The Shanghai Criminal Case Intelligent Assistant Case Handling System (referred to as the "206 System") developed by the Shanghai High People's Court primarily relies on AI technologies such as image and text recognition, natural language understanding, and intelligent voice recognition to achieve full visualization and supervision throughout the handling process of criminal cases, thus reducing or preventing the occurrence of miscarriages of justice. The most significant feature of this system is its evidence standard and evidence rule guidance function, which realizes intelligent review of evidence materials and provides standardized guidance for case handlers. The Guizhou Provincial High People's Court, together with the Guizhou Provincial People's Procuratorate and the Guizhou Provincial Public Security Bureau, has jointly formulated unified evidence standards and embedded element-based and structured evidence standards into the case handling system based on big data technology^[2]. The comprehensive application of these intelligent tools has accelerated the evidence review process, improved the accuracy of judgments, and provided judges with more objective and comprehensive evidence evaluation support.

2.2.5 Application in the stage of judgment document generation

AI inputs relevant data such as key information and case facts, and the system automatically matches and retrieves the case topic library for intelligent indexing of similar cases, thus achieving accurate case pushing. Using vast amounts of similar case judgment data as a coordinate system, AI imitates judges' predictions and judgments of pending cases, providing relatively standardized and consistent sentencing suggestions to assist judges in sentencing.

In November 2023, the Suzhou Intermediate Court piloted the construction of a generative AI-assisted case-handling system. Based on various types of electronic case files, legal knowledge, and other data, this system utilizes "general AI large models" technology to build a specialized large language model for courts. It can simulate judges' thinking logic and generate relevant legal documents. The accuracy of parties' information and the "fact-finding" section exceeds 95%, and the completion rate of "judgment documents" reaches around 70%. The entire process has been shortened from at least one hour to approximately 20 minutes. Guangdong province use intelligent-assisted trial systems, the "ZHI system" can achieve a 95% intelligent generation rate for judgment documents. The economically underdeveloped Dongsheng District People's Court in Ordos, Inner Mongolia, using the "full-chain element-based trial system" has resulted in an 80% completeness rate for the initial draft of judgment documents, a nearly 40% reduction in actual court session time, and a 15-day decrease in the average case handling duration.

Moreover, AI can synchronize the translation of generated judgments into foreign languages. The Supreme Court's Vidhik Anuvaad Software (SUVAS) can translate daily orders and judgments into 9 languages, including Bengali and Hindi, to explain the Supreme Court's judgments in local languages.

2.2.6 Application in adjudication and execution

In the execution phase, artificial intelligence technology enables cross-platform data aggregation and rapid inquiries into the financial status of the person subject to execution, including bank deposits, real estate, vehicles, stocks, and other investment products, providing accurate execution evidence for the executing judge. Furthermore, through big data analysis, AI can predict potential delays or evasion of execution, issue warnings in advance, allowing the execution bureau to intervene early and take corresponding measures.

2.2.7 Application of Trial Management

Trial management mainly relies on manual work, and this traditional method of case quality review has been unable to meet the management needs of the entire process of supervision for a large number of cases. The Shanghai Second Intermediate People's Court utilizes a trial supervision and management platform to achieve penetrative and precise management through data integration. By marking and scheduling the relevant responsible parties that fail to meet the standards, the number of long-term unresolved cases over 12 months has decreased by 62.9%, the average trial days for cases have been shortened by 3 to 4 days, and the rate of satisfaction with judgments at the first instance has jumped to 75.9%.

In summary, utilizing artificial intelligence to assist judicial trials not only frees judges from repetitive mechanical labor, but also improves trial efficiency, alleviates the issue of "too many cases and too few judges," and ultimately limits judges' arbitrary exercise of power in the judicial adjudication process, preventing inconsistencies in judgments, judicial corruption, and judicial injustice^[3].

3. Challenges Faced by AI-assisted Judicial Trials

3.1 Lack of publicly available adjudicative data and uneven quality

Data is the core of AI. AI without data is like water without a source or a tree without roots. Only sufficient data can ensure the adequacy of AI learning samples and the scientific application of algorithms.

At present, the total amount of publicly available judicial data for AI in China is relatively low. In the field of judicial trials, the main source of data for AI is the publicly available judicial documents on the China Judgments Online. However, according to relevant statistics, the number of publicly available judicial documents on the China Judgments Online in some years only accounts for 50% of the total number of closed cases^[4]. See Table 1 for statistics on the number of cases concluded by courts nationwide and the number of Chinese judicial documents put online over the past 10 years. This indicates that a large number of judicial verdicts of adjudicated cases have not been made publicly available online. Moreover, while there are numerous judicial verdicts and court hearing transcripts among the publicly available judicial data, there is still a lack of data such as relevant laws, regulations, policy documents, and meeting summaries. Additionally, the limited sources of publicly accessible judicial big data and the lack of smooth information flow and sharing among judicial authorities are also reasons for the insufficiency of judicial big data^[5].

Table 1 The statistics of the number of cases concluded by Chinese courts and the number of Chinese judicial documents uploaded to the internet in the past 10 years.

Year	The number of Chinese judicial documents uploaded to the internet (Case)	The number of cases concluded by Chinese courts (Million Cases)	Percentage
2013	1,424,726	12.947	11.01%
2014	6,929,284	14.797	46.82%
2015	9,739,005	16.714	58.26%
2016	12,549,194	19.772	63.47%
2017	16,736,699	22.754	73.55%
2018	19,352,888	25.168	76.89%
2019	23,054,331	29.022	79.44%
2020	233,880,552	28.705	81.48%
2021	16,686,151	30.104	55.43%
2022	9,031,983	30.81	29.31%
2023	4,387,042	33.27	13.18%

In addition, publicly available data in China's AI judicial adjudication field still has quality flaws. The quality of judicial documents not only directly affects the functioning of the intelligent court system, but also determines whether fairness and justice can be ultimately achieved^[6]. Among the judicial documents publicly available on judicial document websites, a considerable number of documents simply present the facts of the case and the judgment results, without specifically explaining the judge's reasoning and other key information that affects the judgment during the adjudication process. If such simple judicial documents are used as the data source for AI systems, it may be difficult for intelligent adjudication support systems to provide judges with high-quality adjudication suggestions.

3.2 Insufficient depth and breadth of judicial trial application scenarios

The application of AI technology in judicial decisions has its own limitations in terms of depth and breadth. First, from the perspective of breadth, the application scope of AI systems is limited. In judicial practice, it is only used in a few aspects of judicial activities such as policing and face recognition. However, for the key and difficult issues in judicial decision-making, the application of the system is still relatively rare, with poor applicability, lack of targeting, and inefficiency. In addition, there is a lack of innovation in specific applications, and the applications in different regions are relatively similar, without sufficient major intelligent application achievements with distinctive features. Second, from the perspective of depth, the effectiveness of existing applications is not significant enough. AI technology can only play an auxiliary role in the final decision-making of cases in judicial decisions. It is only suitable to be an assistant to help judges in adjudicating cases, and cannot completely replace judges in reviewing cases. The fit between some applications and the real needs of judicial practice is not sufficient, the service capabilities and levels are still inadequate, and the low user experience satisfaction hinders the full exertion of effectiveness.

3.3 Algorithm black box

The operation of artificial intelligence relies on algorithms, which input verified human experience in programming languages to build models that simulate human thinking patterns. However, there are currently difficult-to-explore secret layers in the operational logic of this technology's algorithms, known as the "black box"^[7]. The "algorithm black box" refers to a system whose internal state of AI technology cannot be opened or directly observed from the outside by humans.

The direct problem caused by the algorithm black box is insufficient computing power. Computing power is the fundamental guarantee for judicial intelligence. Insufficient computing power will prevent AI from effectively processing a large amount of judicial data, resulting in questionable accuracy of the judicial recommendations output and inability to provide fair judicial recommendations to judges. In terms of China's current computing power level, due to the lack of supporting large-scale servers and constraints such as the relatively limited level of independent research and development of core technologies in China's AI system, the overall development of computing power exhibits a trend of large-scale development but low technical level. As a limited technical resource, the allocation of computing power for judicial intelligence applications requires balancing values and making overall plans among different social fields such as judicial practice computing power needs, economic development computing power needs, and special situation handling computing power needs, thereby balancing individual case fairness and overall social fairness. If the pursuit of judicial intelligence development is excessive, and the allocation of computing power of the intelligent system cannot meet the needs of judicial practice, it will inevitably affect judicial efficiency.

Another problem caused by the algorithm black box is algorithmic discrimination. Since legal AI developers are influenced by factors such as social experience and subjective consciousness, and developers often unconsciously bring their subjective biases into program development, algorithmic discrimination is often unconscious, concealed, and difficult to avoid^[8]. If there is bias in the algorithm process of the AI-assisted trial system, the conclusions drawn by the AI system will inevitably be biased, which undoubtedly will undermine judicial fairness.

3.4 Lack of legislative guidance and institutional guarantee

Up to now, China has not issued special legislation on AI trials, only judicial interpretations issued by the Supreme People's Court and judicial policies issued by relevant departments. As the superstructure, the law has a lagging nature, and the development of the law lags behind the development of the economy. To promote the high integration of AI with judicial trials, clear legislation must be used as a guide, which can also provide a unified standard for courts across the country to adjudicate specific AI trials. Sometimes, in the process of integrating AI with judicial trials, it is inevitable for the parties to misunderstand. The parties may think that the case involving their own interests is handed over to a robot for trial. Will the final judgment be fair? At this time, we need the law to regulate it, so that the parties can realize the role of this intelligent trial system. It is not that the judge ignores the case completely and allows AI to freely judge, but that a more accurate and fair judgment can be made through the combination of "human and machine".

There is also a lack of corresponding institutional guarantees for the application of AI in judicial trials, such as the lack of unified supervision of AI systems. If there is no corresponding institutional guarantee, AI, as an intellectual property right, is easily abused, which will lead to uneven AI technology and cannot provide beneficial AI system options for courts. Therefore, it is urgent to strengthen the institutional guarantee of AI system.

3.5 Lack of AI judicial talents

Currently, China's AI is still weak AI, and there is a certain technological backwardness in the construction of smart courts and judicial big data, which is ultimately due to the lack of corresponding intelligent legal talents. In the process of judicial application in China, some judicial personnel are backward in consciousness and concept, and reject the application of advanced technologies such as AI technology, so they cannot keep up with the pace of intelligent trials, nor can they reasonably use intelligent and modern case-handling auxiliary software system platforms. Courts are in dire need of judicial talents proficient in AI. When facing problems with the system itself, the usual practice is to seek technical development companies to solve related problems rather than relying on themselves, which will greatly prolong the process of case trials, and the effect of AI-assisted judicial trials is also not satisfactory.

Although AI technology has been around for a long time, in China, top universities started offering AI majors relatively late. "In 2017, the Wuzhen Think Tank issued a list of global universities in the field of AI, and none of China's universities were among the top 30^[9]." This shows that the cultivation of AI talents in China is still far behind other developed countries in the world. With the prominent contradiction of many cases and few people in China, courts in various regions have accelerated the process of building "intelligent courts." However, there is a serious lack of technical talents within the courts, and there is a lack of training and recruitment of technical personnel. Most courts often invest most of their energy in training talents in judicial work, resulting in fewer intelligent legal talents in the courts, which cannot meet the requirements of China's smart court construction for talents.

4. Application Strategies for AI-assisted Judicial Trials

4.1 Establishing a comprehensive legal system for AI

With the rapid development and wide application of AI technology, China has actively established supporting laws and regulations and promulgated and implemented the "Interim Measures for the Management of Generative AI" in 2023. However, this law cannot meet the requirements for establishing a comprehensive AI legal system in China, and there is still an urgent need to build a legislative system for AI with Chinese characteristics to regulate the development and application of AI technology. Based on this, China can establish a comprehensive AI legal system from the following aspects: Firstly, at the legal level, it is necessary to clarify that the national and local governments should include AI development in their respective national economic and social development plans^[10]. Secondly, specialized regulatory agencies should be established or designated to oversee, guide, and coordinate the risk assessment and management of AI systems. Clarify regulatory powers and responsibilities: Clarify the powers and responsibilities of regulatory agencies, including formulating evaluation standards, overseeing evaluation processes, reviewing evaluation results, and taking measures to address risks.

Thirdly, establish a coordinated cooperation mechanism among various departments, clarify the main responsibility entities for AI, establish an accountability mechanism, and gradually establish a comprehensive framework for the judicial legal system of AI.

In 2024, the annual legislative work plan of the State Council of China plans to submit the “Draft AI Law” to the Standing Committee of the National People’s Congress for deliberation. This is not only crucial for promoting the healthy development of the domestic AI industry, but also an important way to establish a comprehensive judicial legal system for AI in China.

4.2 Improve data governance

To address the issue of limited data sources and resources, first, courts at all levels can establish a shared platform for data and information and improve data information systems to ensure the comprehensiveness, authenticity, and accuracy of the data. At the same time, efforts should continue to be made to enrich the case database of the Judicial Documents Network and expand the data samples.

To address the issue of data quality defects, it is necessary to strengthen the construction of case entry, review, and updating of the People’s Court Database. To address issues such as inconsistent reasoning in judicial decisions on the Judicial Documents Network, leading to “different judgments for similar cases” and affecting judicial fairness, the Supreme People’s Court launched the construction of the People’s Court Database at the end of July 2023. It aims to include representative and guiding judicial cases into the People’s Law Database, requiring courts at all levels to adhere to the judgments of cases included in the database when making decisions. By the end of February 2024, 3,711 typical cases had been publicly disclosed in the database, including 1,453 criminal cases (39.15%), 1,643 civil cases (44.27%), and 405 administrative cases (10.91%). To promptly unify judicial decisions and ensure fairness in AI-assisted judicial trials, more representative and guiding cases should be publicly disclosed in the database.

In addition, strengthen the full utilization of artificial intelligence systems and big data. Fully explore and analyze massive amounts of data to establish judicial decision-making models that are common to the judicial work of various courts, providing useful references for judges in hearing and adjudicating cases.

The Fifth Plenary Session of the 18th CPC Central Committee pointed out that it is necessary to deepen judicial transparency, leverage information technology to improve the efficiency and quality of judicial transparency, ensure the authenticity of data, and ensure interconnection, interoperability, and social sharing among data^[11]. Only by continuously improving data governance and promoting judicial transparency can we extract important information from data sharing systems and fully utilize the function of artificial intelligence systems in assisting judicial trials.

4.3 Strengthen the construction of smart legal talents

In the context of rapid development of artificial intelligence (AI), merely cultivating talents proficient in law is insufficient to meet the requirements of law for talents in the new era. Therefore, it is necessary to vigorously cultivate intelligent legal talents with knowledge of computer technologies such as AI and legal knowledge, to serve as the guarantee for the operation of intelligent systems and continuously strengthen the talent base in the field of AI judicial application.

Professor Bai Jianjun once stated, “Only by stepping out of the framework of law and observing it carefully can we help law acquire stronger vitality^[12].” Similarly, China’s legal education model also needs to step out of the original legal teaching framework to cultivate high-quality intelligent legal talents. In addition, judges in courts around the country should abandon the idea of reluctance to accept new technologies, actively learn about computer technology, improve their ability to use artificial intelligence, and meet the requirements of building a high-quality legal team in the new era.

5. Conclusion

AI-assisted adjudication is not only an inevitable trend for China’s judicial field to meet the development of the new era, but also an important embodiment of China’s artificial intelligence in judicial practice. The combination

of artificial intelligence and judicial adjudication is not only conducive to improving the efficiency of judges' adjudication, but also provides convenience for the people to safeguard their rights and interests through legal means, further highlighting the justice of law. Although China's AI adjudication is still in its initial stage of development, there are some problems such as the lack of adjudication data and quality defects, algorithm black box, and the shortage of intelligent legal talents. However, a series of measures can be taken to promote the better service of AI to adjudication in China, including constructing a complete legal system, improving data governance, and strengthening the cultivation of intelligent legal talents, so as to effectively solve the new problems arising from the development of AI adjudication. Science and technology is a "double-edged sword". We should actively use scientific and technological development to deepen the reform of the judicial field and the field of legal education, further integrate AI technology with judicial adjudication and legal education, and achieve the grand goal of building a socialist country under the rule of law.

References

- [1] Zhang Mingrui. "Research on the reform of civil trial from the perspective of AI," *Legal System Review*, 2024, (06): 91-93.
- [2] Tang Yu, Liu Guobin: "Big data becomes the 'Accelerator' for the reform of Guizhou's litigation system," *Democracy and the Rule of Law Times*, July 16, 2017, Page 6
- [3] Xu Hui, Li Junqiang. "The possibilities and limitations of generative AI in assisting judicial adjudication," *Journal of Taiyuan University of Technology (Social Science Edition)*, 2023, 41(06): 24-32.
- [4] Ma Chao, Yu Xiaohong, He Haibo, "Big Data Analysis: Report on the online publication of Chinese judicial verdicts," *China Legal Review*, 2016 (4), pp. 213-239.
- [5] Zhao Jue. "A preliminary study on the collaborative sharing mechanism of big data information in law enforcement and justice," *China Procurator*, No. 23, 2022, pp. 11-14.
- [6] Li Guangde: "The value orientation and legal reflection of the online system of judicial documents," *Studies in Law and Business*, Vol. 39, Issue 2, 2022, p. 22.
- [7] Wu Jiaojun, Guo Wan'er. "Legalized governance of algorithm black boxes in the age of artificial intelligence," *Science and Technology and Law (Chinese and English)*, 2021, (01): 19-28.
- [8] Zhang Yanan. "Research on the application of legal AI in judicial trials," *Changchun University of Technology*, 2024.
- [9] Wuzhen Think Tank: "Wuzhen Index: Global AI Development Report (2017) (Framework)", 2017 Edition.
- [10] Zhang Linghan. "What kind of 'AI Law' does China need? — Basic logic and institutional framework of China's AI Legislation," *Journal of Legal Science (Journal of Northwest University of Political Science and Law)*, 2024, 42(03): 3-17. DOI: 10.16290/j.cnki.1674-5205.2024.03.009
- [11] Wang Xiaomei. "Internet + Sunshine Justice: An important dimension of smart courts," *Forum of Chinese Party and Government Officials*, 2017, (10): 63-66.
- [12] Liu Yanhong. "Criticism of anti-intellectualism in legal research on artificial intelligence," *Eastern Jurisprudence*, 2019, (05): 119-126.