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Protection of workers' rights and interests in the problem of algorithmic discrimination: legal challenges and response strategies

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Abstract

With the widespread application of artificial intelligence and algorithms in the recruitment process, the problem of discrimination in algorithms' employ-ment is becoming increasingly prominent, posing new challenges to the rights and interests of workers. A thorough analysis of the main characteristics of al-gorithmic employment discrimination and discuss the infringements faced by workers in terms of individual privacy, data security and equal rights. Its real impact is demonstrated through typical cases, revealing the shortcomings of the current legal system in dealing with algorithmic discrimination, as well as the technical difficulties and lag of regulatory mechanisms in the process of respon-sibility identification. In order to effectively protect the rights and interests of workers, we propose response strategies such as improving legislative paths, optimizing judicial relief and innovating regulatory mechanisms, aiming to re-spect technological innovation while ensuring that workers' rights and interests are not affected by algorithmic employment discrimination.

Keywords

Algorithmic discrimination; legal challenges; regulatory mecha-nisms; legislation

1. Introduction

The problem of algorithmic discrimination is becoming increasingly severe, posing a threat to the fairness of the labor market. The advancement and widespread application of artificial intelligence technology have enhanced the role of algorithms in recruitment, resume screening, promotion, and dismissal decisions. These algorithms may directly lead to discrimination or exacerbate social inequality through implicit biases and systemic unfairness. To address this issue, four departments including the State Administration for Market Regulation and the Ministry of Public Security launched the "Clear and Bright - Governance of Typical Algorithmic Problems on Online Platforms" special campaign in November 2024, focusing on rectify-

ing algorithmic chaos that infringes upon the rights and interests of new employment form workers. Platforms are required to disclose algorithmic rules and establish complaint channels for workers, marking the extension of algorithm governance to the protection of workers' rights and interests.

2. The manifestations of algorithmic discrimination's infringement on the protection of workers' rights and interests

The main characteristics of algorithmic discrimination are its concealment, complexity and infringement of workers' data rights. This requires that laws and regulatory agencies have a high degree of flexibility and foresight in response to it to ensure fairness in the labor market and effectively safeguard the legitimate rights and interests of workers.

2.1. The core characteristics of algorithmic discrimination

Research on algorithmic employment discrimination reveals that it is characterized by its concealment and complexity. Automated systems make decisions using big data and machine learning algorithms, but data bias and algorithmic opacity can lead to discrimination that is difficult to detect and correct. For instance, in recruitment, algorithms may unfairly treat certain groups due to gender and age biases in the data set, thereby exacerbating employment discrimination.

When making decisions on job information push, algorithmic decision-making provides different quality information based on the characteristics of workers, causing unequal job search opportunities and undermining information symmetry and market fairness. For example, those with higher education levels may receive more high-quality job recommendations, while those with lower education levels receive lower-quality information, which intensifies market stratification.

Technically, algorithmic employment discrimination includes unequal treatment based on specific attributes and seemingly neutral but actually biased rules. These rules may unfairly affect protected groups, such as classification and decision-making based on gender, age, sexual orientation, and other characteristics that are legally protected. Algorithmic discrimination is implemented covertly, making it difficult to detect and prove. Algorithmic employment discrimination infringes upon workers' rights to equality and data rights because of the lack of transparency and explanation when algorithms process data. Workers find it hard to know how their data is used and to object to unfair decisions. Therefore, protecting workers' right to know and right to object, as well as enhancing employers' responsibility to explain and accountability mechanisms in data usage, are key measures to address algorithmic discrimination.

2.2. Specific dimensions of damage to workers' rights and interests

In the era of big data, employment discrimination caused by algorithms poses a challenge to the rights and interests of workers. Workers face infringement of information privacy,

data security and fair employment rights. When algorithms process personal data, the lack of transparency and right to know makes it difficult for workers to control their data. Algorithms automatically analyze data and make decisions. Workers usually cannot understand data processing and results and lack the right to question them.

Data security issues are becoming increasingly serious because algorithms rely on large data sets containing sensitive information. Data breaches or abuses may threaten workers' privacy, and employers may over-monitor their employees and infringe on their rights. Workers often don't understand data security and usage, which increases risks. Asymmetry in information acquisition and use may lead to discrimination in recruitment and management, exacerbating social inequality.

In order to effectively respond to these infringes, it is necessary to establish a sound algorithm review and supervision mechanism, and through a two-pronged approach to legislation and law enforcement, to minimize the negative impact of algorithmic discrimination on the protection of workers' rights and interests [1].

2.3. Typical case analysis

Amazon found in its early AI recruitment system that it automatically lowered the ratings of job seekers whose resumes contain vocabulary "women", resulting in them being at a disadvantage in the recruitment process. Due to this gender discrimination problem, Amazon eventually had to give up on this recruitment program. Another typical case is a transportation company using an algorithm to screen potential employees, which includes commuting time. Any resumes of job seekers who fail to meet the maximum commuting time set by the company will be automatically excluded by the system. This standard seems neutral, but because most workplaces are located near urban business centers, job seekers living outside the city are actually disadvantaged, which raises the problem of geographical discrimination [2].

Case shows that algorithms may cause discrimination in recruitment, and existing laws are difficult to cope with this implicit discrimination caused by algorithms and big data. Therefore, it becomes crucial to improve legislation, enhance algorithm transparency and interpretability. At the same time, legislation should protect workers' right to know and object to data so that they can question algorithmic decisions. These measures aim to improve algorithm fairness and strengthen the protection of workers' employment rights.

3. Legal challenges under algorithmic discrimination

The current legal system has flaws in dealing with the issue of algorithmic discrimination. Our country's laws are not perfect in protecting employment equality rights, and lack clear standards for determining employment discrimination, making it difficult to determine discrimination in actual operations. The concealment and complexity of algorithmic discrimination make the problem even more serious. Existing

laws fail to cover all complex forms of algorithmic discrimination, making it difficult to accurately identify discriminatory behaviors.

3.1. Limitations of the current legal system

The opacity of the algorithm makes it difficult for workers to prove discrimination, causing information asymmetry, and putting them at a disadvantage in protecting their rights. The current law is insufficient to protect workers' right to know and data control, and does not require employers to provide detailed descriptions on data processing and algorithm applications, which encourages algorithm discrimination.

The current legal system has not established a complete algorithm review and supervision mechanism, and there is a lack of effective monitoring of algorithmic discrimination. The law does not clarify how employers conduct algorithm testing, ensure that algorithms are fair and transparent, and how to deal with discrimination risks in algorithm upgrades. This not only harms the fairness of the algorithm, but also increases the risk of unfair treatment for workers. Therefore, it is necessary to establish a complete algorithm review system and regulatory mechanism, and clarify responsibilities and obligations through laws to protect the rights and interests of workers.

3.2. Technical barriers to responsibility identification

The difficulty in identifying the responsibility for discrimination in algorithms in employment is mainly due to the opacity and complexity of the algorithm. The algorithmic decision-making process is difficult to understand, and even designers are difficult to explain. Technical opacity makes it difficult for legal accountability and it is difficult for workers to prove algorithmic discrimination. Algorithm learning is based on historical data, which can amplify and solidify biases, leading to discriminatory decision-making. The legal system needs to clarify the boundaries of algorithm responsibility, and employers should bear the burden of proof, prove that the algorithm is not discriminated against, and accept third-party reviews to ensure that the algorithm is fair and transparent. Through technical and legal efforts, standardize the application of algorithms, solve the problem of responsibility identification, and protect the rights and interests of workers.

3.3. Lag in regulatory mechanisms

The regulatory mechanism seems to be lagging behind in dealing with algorithmic discrimination. The current laws have unclear regulations on the application of AI algorithms, especially in data processing and analysis. Existing anti-employment discrimination laws fail to fully cover algorithmic discrimination, and insufficient supervision of new technologies and complex data processing. Therefore, although algorithms may have discriminatory biases in recruitment decisions, these biases

are difficult to detect or confirm. Regulators lack the ability to review and regulate the application of algorithms, and mainly rely on manual review, which is not matched with modern algorithm technology. They do not have a deep understanding of algorithm models, lack technical means, and it is difficult to effectively evaluate employer's algorithms. At the same time, due to information asymmetry, workers are often at a disadvantage in complaints and find it difficult to obtain effective relief.

4. Coping strategies for protecting workers' rights and interests

It is crucial to ensure that consumers are not affected by algorithmic discrimination. It not only requires the joint efforts of the government and enterprises, but also requires the incentive for cooperation between the academic and industry. Through continuous research and practice, the algorithm is continuously optimized to achieve a balance between technical protection and workers' rights and interests. Through a series of institutionalized and technical regulatory innovation measures, algorithmic employment discrimination can be more effectively prevented and a fair and just employment market environment can be built.

4.1. Path to improve legislation

First, the definition and scope of algorithmic discrimination should be clarified in existing laws, and the anti-employment discrimination laws should be revised and specific provisions for algorithms should be added. In addition, laws specifically targeting artificial intelligence and algorithms, such as the Artificial Intelligence Application Law or the Algorithm Fairness Law, should be formulated to clarify the responsibilities of enterprises when using algorithms. Secondly, data protection laws need to be improved, such as revising the Personal Information Protection Law and the Cybersecurity Law, strengthening the protection of consumer personal data, and ensuring the transparency and security of data processing.

Algorithm transparency requirements should be clarified and enterprises should disclose algorithm design, application and evaluation[3]. Establish an algorithm transparency filing system, force enterprises to regularly disclose algorithm audit reports to ensure that the algorithm is fair, just and transparent. Legislation should introduce the principle of flexibility and use advanced legislative technology to reserve space for technological development.

Establish a cross-departmental cooperation mechanism to promote information sharing and collaboration among regulatory departments. Build a legislative consultation mechanism with multi-party participation to ensure that the legal formulation process is open and transparent, and widely listen to opinions from all parties.

Strengthen pre-regulation and post-accountability. Legislation should clarify the responsibilities and authority of regulatory agencies to ensure that potential discrimination of algorithms is detected and corrected in the early stage. For the algo-

rithmic discrimination that has occurred, the law should clarify corporate responsibilities, establish a strict punishment mechanism, increase the cost of violations, and prevent algorithmic discrimination.

4.2. Judicial relief optimization

Judicial relief optimization targets algorithmic employment discrimination, aiming to protect the rights and interests of workers. At present, judicial remedies have lag and complex problems in evidence collection, responsibility identification and implementation of remedial measures. To solve these problems, it is recommended to introduce authoritative professional appraisal institutions to quickly verify algorithms and data processing, clarify biases and their impact, and provide appraisal reports as evidence. The appraisal cost shall be borne by the loser to reduce the burden on the workers.

Adjust the allocation of burden of proof and balance the status of labor and capital. For example, when preliminary evidence shows that algorithmic discrimination is shown, the court may require the employer to provide self-certification of key materials such as algorithmic models, data sets and management processes. This helps improve litigation fairness and encourages companies to be more cautious in algorithm design and application and reduce discrimination.

The introduction of data protection and fair algorithm experts in the judicial process will help improve the quality of trials of algorithmic discrimination cases. These experts will participate in court trials, provide opinions and evaluate relief measures to protect the rights and interests of workers. The state should establish an expert database in courts at all levels to ensure the professionalism and independence of experts through open selection and strict management.

In accordance with Article 26 of the Employment Promotion Law of the People's Republic of China, we will strengthen the data governance responsibilities of employers, clarify the responsibility for avoiding algorithmic discrimination, and strengthen supervision and punishment. Regulatory departments should regularly check the fairness of the algorithm and impose economic and credit penalties on enterprises that violate regulations. Workers can seek judicial relief through litigation, reporting and other means to deal with algorithmic discrimination. This will maintain fairness and justice, promote the healthy development of the economy and technology, and form a virtuous circle.

4.3. Innovate regulatory mechanisms

According to the actual needs of the current labor market, it has become a trend to make full use of artificial intelligence technology to accurately match job seekers and job needs and achieve efficient job matching. However, this technology still faces many gaps and challenges at the regulatory level. In order to avoid the infringement of the rights and interests of workers by algorithmic employment discrimina-

tion, innovation must be made in the regulatory mechanism. Establishing a comprehensive algorithmic regulatory system should include mandatory transparency requirements and accountability mechanisms. Transparency requires that the algorithm’s decision-making process and data usage be clearly disclosed so that workers and regulators can understand the principles of the algorithm and identify potential discriminatory behaviors. The establishment of an accountability mechanism is aimed at ensuring that enterprises follow the principles of fairness and justice when using algorithms, and clear punitive measures must be formulated for illegal or irregular behaviors[4].

It is also crucial to promote cross-departmental and multi-subject collaborative governance. A linkage mechanism should be established for different departments, such as human resources and social security departments, data protection and privacy regulatory agencies, anti-monopoly committees, etc., to form a comprehensive governance network of governments, enterprises and social organizations. On the one hand, government regulatory departments should actively formulate and promulgate relevant data protection and fair employment laws and regulations, and regularly review and evaluate the application of corporate algorithms to ensure their compliance. On the other hand, social organizations and technical experts should be encouraged to participate in algorithmic risk assessment and audit, provide technical support and legal aid to workers, and build a regulatory environment for the participation of the whole people.

Technical means are also an important part of innovative supervision. For example, developing and applying technical tools for reviewing and evaluating algorithms can effectively identify and uncover potential discriminatory factors in algorithms. These tools can include "white box" testing that simulates the algorithm's decision-making process, and "black box" testing that conducts statistical analysis of the algorithm's output results, etc. Through diversified evaluation methods, we can comprehensively check the possible risk points of the algorithm. In addition, by establishing a special algorithm review and evaluation committee, the algorithms submitted by the enterprise are independently reviewed, providing enterprises with professional guidance and rectification suggestions on algorithm compliance operations.

5. Conclusion and prospect

The current law has flaws in dealing with the issue of algorithmic discrimination and lacks specific implementation details. The law fails to effectively regulate the employer's use of algorithms, resulting in potential improper operations that are difficult to control. Inadequate algorithm transparency may cause concealment of users to discriminate, and it is difficult for workers to prove that their rights and interests are damaged. At the same time, the law does not clarify the employer's interpretation obligations when making decisions using algorithms, which makes in-

dividuals lack complaints and guarantees in the face of adverse decisions.

In order to meet legal challenges, legislation should be improved to clarify anti-discrimination standards and strengthen the protection of workers' data rights. Legislators need to define algorithmic discrimination to ensure that workers can identify and defend. At the same time, workers should be given control and the right to know about personal information, and employers should be required to pay special attention to the use and protection of personal information. In terms of supervision, we should innovate optimization mechanisms, establish algorithm review agencies, and regularly review the application of algorithms of employers to ensure compliance with anti-discrimination laws and social fairness principles.

To sum up, in order to ensure workers' equal employment rights in the algorithmic era, legal and regulatory agencies urgently need to carry out comprehensive institutional innovation and optimization. This move not only helps curb the spread of algorithmic discrimination, but also provides valuable reference and guidance for algorithmic applications in other fields. Future research should further explore legal issues such as algorithm transparency and the protection of workers' data rights and interests, aiming to build a more fair and reasonable algorithm application environment and ultimately promote common progress and development of society[5].

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