

Algorithmic Discrimination Against Workers and Remedies Under the DeepSeek Context

Qiqi Guo^{1#}, Yutong Dong^{1#}, Xinran Xu^{1#}, Jiawen Liu^{1#} & Ruiyao Chen^{1#}

¹ College of Law, Tianjin Normal University, Tianjin, China

Correspondence: Qiqi Guo, College of Law, Tianjin Normal University, Tianjin, China.

These authors shared first authorships.

doi:10.63593/SLJ.2026.03.08

Abstract

With the rapid development of artificial intelligence technologies, algorithmic discrimination, while bringing development opportunities, has also exposed numerous existing problems. Issues of algorithmic discrimination urgently need to be addressed in job screening, wage distribution, and occupational stratification. Based on these issues, this paper proposes remedies for workers from three broad aspects: enhancing workers' capacity to safeguard their rights, improving industry self-regulation schemes, and refining national regulatory measures. Through in-depth and multi-dimensional research on algorithmic discrimination, and by comparing legal regulations across different countries, it helps to better understand the impact of algorithmic discrimination on workers' rights and interests, and provides a theoretical basis for subsequent policy-making and legal regulation.

Keywords: algorithmic discrimination, workers' rights and interests, legal regulation, algorithmic black box

1. The Necessity of Research on the Regulation of Algorithmic Discrimination

(1) Responding to the discrimination risks brought about by the rapid penetration of DeepSeek large-model technology: to explore how the application of algorithms in labor management (such as recruitment, performance evaluation, promotion, dismissal, task allocation, etc.) infringes upon workers' legitimate rights and interests, and to analyze the underlying legal issues and social impacts. This helps to identify and understand the specific types of algorithmic discrimination and their impact on workers' right to equality, providing a theoretical basis for solving practical problems.

(2) Helping to address workers' difficulties in producing evidence and safeguarding their rights in the face of algorithmic black boxes: the concealment of algorithmic discrimination is reflected in that workers find it difficult to know the real reasons for rejection or low performance evaluation, and even more difficult to prove the causal relationship between discrimination and algorithmic decision-making. Therefore, it is necessary to explore rules of evidence and mechanisms for the allocation of the burden of proof that conform to the characteristics of algorithmic discrimination, so as to provide workers with operable paths for rights protection.

(3) Contributing to better filling the institutional gaps in China's current labor law system regarding the regulation of algorithmic discrimination: China's *Labor Law* has established the principle of equal employment, but since large-scale intervention of artificial intelligence in labor relations had not yet emerged at the time of its enactment, it lacks specific regulatory provisions targeting algorithmic discrimination. Existing norms are mostly principled provisions and lack detailed implementation rules. By comparing the governance status of algorithmic discrimination in various countries and combining it with China's actual conditions, this study aims to propose targeted legislative improvement suggestions and promote the synchronous updating of labor law norms with the development of artificial intelligence technologies.

(4) Promoting the development of artificial intelligence technologies toward fairness, transparency, and responsibility: the issue of algorithmic discrimination is not only a legal issue, but also involves technological ethics and value orientation. At present, some enterprises excessively pursue efficiency and accuracy in the development and application of algorithms while neglecting considerations of fairness. Through in-depth analysis of the causes, types, and governance paths of algorithmic discrimination, this study aims to promote the deep integration of institutional development and ethical norms, and to facilitate the healthy development of the artificial intelligence industry.

2. Diversified Scenarios of Employment Discrimination Caused by Data Algorithms

The popularization of algorithms is often regarded as a tool to eliminate information barriers and promote social equality, yet its actual effect constitutes a paradox: while granting unprecedented opportunities to some groups, it also entrenches the marginal status of others, such as Black individuals who have long been subjected to racial discrimination, and women who are continuously subjected to implicit discrimination in certain countries and regions. The core crux of algorithmic discrimination lies not in technology but in society. It is not an accidental error of code, but an inevitable continuation of systemic and structural injustice in the real world within the digital domain. When algorithms are embedded within existing social frameworks, they often do not eliminate discrimination but digitally encode

existing developmental disparities, making them more concealed, efficient, and difficult to correct. Algorithms are not inherently the crystallization of intelligence, but rather a collection of computational rules set by humans. When these rules remain at a crude and simplified early stage, their operational outcomes are highly prone to deviate from the track of fairness, and may even inadvertently amplify social biases. These biases often exist throughout the entire process and all stages of employment.

2.1 Manifestations of Discrimination in Job Screening

First, in the recruitment stage, various online recruitment platforms automatically classify, rate, rank, and make decisions on users based on personal data such as gender, age, household registration, health status, and work performance, selectively displaying certain recruitment information while concealing others. Algorithms may screen resumes based on sensitive characteristics such as gender, age, and race in historical data, resulting in the automatic exclusion of disadvantaged groups. According to a joint survey by Northeastern University and the University of Southern California in the United States, advertisements for supermarket cashier positions on Facebook were shown to 85% female audiences, while taxi company jobs were shown to approximately 75% Black audiences. This indicates that recruitment platforms "label" labor groups based on historical data, causing the recruitment information they receive to be limited. Women receive more recommendations for low-skill, low-pay jobs, while men receive more recommendations for high-skill, high-pay jobs.

Second, algorithmic technology invisibly differentiates the labor value of different groups. Studies have found that automated recruitment systems tend to select applicants with "masculine" characteristics when screening resumes, thereby limiting opportunities for female applicants and making it difficult for them to obtain equal employment opportunities as men (Chen Bolin, 2024).

Third, unfairness exists in video interview analysis. Some enterprises use AI to analyze job seekers in video interviews, and algorithms may have biases toward specific accents, appearances, or body language, affecting the fairness of scoring. For example, job seekers with regional accents may be judged by algorithms as having "poor communication skills," while in reality this

is merely a difference in language habits. Such judgments based on superficial characteristics are not directly related to the actual working ability of workers, yet may become grounds for elimination.

2.2 Manifestations of Discrimination in Compensation

Article 46 of the *Labor Law of the People's Republic of China* provides: "Wage distribution shall follow the principle of distribution according to work and implement equal pay for equal work." The implementation of the principle of equal pay for equal work helps eliminate employment discrimination and ensures that workers compete under equal conditions and receive fair remuneration. However, algorithmic discrimination is undermining this principle.

First, algorithms perpetuate historical wage discrimination. If training data contain historical wage discrimination information, algorithms may continue or even amplify such disparities, infringing upon workers' right to equal remuneration. Studies have found that algorithms commonly exhibit gender and racial wage bias in recruitment scenarios. In the Google algorithm discrimination case, when people search for keywords such as "African American," more crime-related information is displayed (Shulman, D. R., 2014). Another example is the "Apple Card," jointly launched by Apple and Goldman Sachs in 2019, which was exposed for its algorithm granting significantly lower credit limits to female users than to male users (with a difference of up to 20 times), even when spouses filed taxes jointly and had similar credit records (Telford, T., 2019/2025). Scholars from Carnegie Mellon University found that Google recommends jobs with annual salaries above \$200,000 to men six times more frequently than to women. Moreover, studies indicate that recruitment algorithms exhibit bias against women, persons with disabilities, and certain ethnic groups when screening resumes, thereby limiting their opportunities to engage in high-income occupations (Engler, A., 2012). Such differences in recommendation directly lead to inequality between men and women in access to high-paying job opportunities.

Second, platform algorithms impose implicit penalties on specific groups. In the ride-hailing gig economy sector in China, female drivers, due to childcare responsibilities, tend to accept orders during off-peak hours (Didi reports show that the

number of orders taken by female drivers declines after 4 p.m.). Ride-hailing platform algorithms prioritize dispatching orders to drivers active during peak hours through a "travel score" mechanism, linking "continuous order-taking" with "reputation value." If women suspend order-taking due to childcare responsibilities, they face dual penalties of reduced income and lower dispatch priority. Such seemingly neutral algorithmic rules in fact constitute systemic discrimination against women who bear greater family responsibilities.

2.3 Manifestations of Discrimination in Occupational Stratification

An important cause of algorithmic discrimination lies in the subjective factors of developers and users themselves; fundamentally, it is the shaping of technology by human subjective will. Algorithms are not objective truths generated out of nothing, but extensions of human cognition and will. Every choice in the design process deeply imprints the subjective traces of their creators. As individuals within society, developers' cognitive frameworks, life experiences, and professional backgrounds all contain inherent limitations, and they are by no means completely rational from a "God's-eye view." Secondly, if the data relied upon during the testing phase of algorithms contain biases, such biases are often fully inherited by the system, becoming one of the initial causes of algorithmic discrimination. These forms of discrimination are specifically manifested in occupational stratification as the solidification of career development pathways. Algorithmic discrimination not only affects workers' opportunities for entry into employment, but also affects their career development. When algorithms determine, based on historical data, that certain groups are "unsuitable" for specific positions or promotion opportunities, these groups are systematically excluded from development pathways. For example, algorithms may infer from historical promotion data that female employees have a lower probability of promotion, and thus automatically filter out qualified female candidates when recommending promotion opportunities. Such recurring discrimination intensifies occupational segregation and exacerbates social inequality. This inequality not only harms individuals' career development, but may also have negative impacts on social harmony and stability. At present, large-scale artificial intelligence systems

are almost exclusively developed by a small number of technology companies and a limited number of elite university laboratories. In the West, personnel in these laboratories often share several fixed characteristics: wealthy, male, and white. Data show that in 2023 only 5.6% of Google employees were Black (Google, 2023), and in 2022, women accounted for 25.8% of technical staff at Facebook, while Black employees accounted for 4.9% (Williams, M., 2022). When certain groups are long restricted to lower-level positions due to algorithmic discrimination and are unable to obtain fair development opportunities, social stratification will intensify, and social conflicts will escalate accordingly. Algorithmic discrimination has become a new factor exacerbating social inequality in the digital era.

3. Limitations in Current Governance

3.1 *The Identification of Employment Discrimination Lacks Clear Standards*

In China's current legal system, there is no law that explicitly defines and regulates "algorithmic discrimination" as an independent type of unlawful conduct. Machine learning decision-making is playing an increasingly important role in employment matching, yet China has not developed legislation addressing its role in employment discrimination. This means that although Article 12 of the *Labor Law* prohibits employment discrimination based on ethnicity, race, gender, and religious belief, and the *Employment Promotion Law* has expanded prohibited grounds of discrimination to include disability and carriers of infectious diseases, these provisions were all formulated prior to the algorithmic era. Their regulatory focus is on subjective discriminatory conduct by humans, rather than discriminatory outcomes of automated algorithmic decision-making. The lag in legislation makes it difficult to effectively regulate the risks of employment discrimination arising from technological applications.

3.2 *Ineffective Exercise of Regulatory Powers by Public Authorities*

First, current legal provisions in China regarding the protection of workers' equal employment rights are relatively general and abstract. Many provisions are declaratory, authorizing, or foundational in nature, lacking clear mandatory norms and corresponding punitive clauses. Although the law imposes certain obligations on employers, the relevant provisions often fail to

specify the content of these obligations, do not clearly define the legal liabilities for breach, and lack supervisory mechanisms for monitoring employer compliance. In the context of the widespread application of algorithmic technology in labor management, how to effectively supervise employers' use of algorithms in employment processes has become an important issue requiring urgent attention (Zhang Linhan, 2024).

Second, there is overlap in departmental responsibilities. Multiple government departments, such as cyberspace administration authorities and industry and information technology authorities, all bear corresponding responsibilities. However, the situation of "fragmented governance by different departments" has led to the fragmentation of algorithm governance. In comprehensive regulation, phenomena such as "multiple departments competing to regulate certain fields while regulatory gaps appear in others" have emerged. Moreover, regulatory authorities lack professional knowledge of algorithmic technology, making it difficult to effectively review and supervise complex algorithms. Technical barriers hinder regulatory bodies from penetrating the technological facade to identify discriminatory mechanisms.

3.3 *The Opacity of Algorithmic Technology*

The "black box" nature of algorithms, namely the concealment of their internal logic and the unknowability of their decision-making processes, constitutes a major legal challenge to the protection of workers' right to equal employment. In practice, employers rely on these opaque algorithmic outputs to make employment decisions with legal consequences. However, neither the workers affected by such decisions nor the employers who use them can fully understand the specific basis of algorithmic determinations. This state of "bidirectional opacity" renders discriminatory algorithmic decisions akin to a "black box" that cannot be opened. The discriminatory logic within is difficult to deconstruct and prove, ultimately creating an insurmountable "evidentiary gap" between workers and algorithmic decision-making (Li An, 2021).

3.4 *Difficulties Faced by Workers in Safeguarding Their Rights Due to Their Vulnerable Position*

First, the concealed application of algorithms and the opacity of their technical architecture

constitute the first barrier faced by workers after experiencing discrimination. The technological asymmetry between workers and employers forms an even stronger second barrier. This cognitive gap constructed by technology causes the algorithmic “black box” to become, to a certain extent, an artificially constructed “technical black box,” making it particularly difficult for workers to produce evidence (Liu Shuhan, 2024). In addition, there are few low-threshold channels for remedies. While a small number of cases may be resolved through negotiation, most cases involving emerging technologies such as artificial intelligence cannot be addressed through existing rights-protection mechanisms. This results in excessively high costs of judicial relief, making individual rights protection difficult and costly, and leaving workers trapped in a predicament of “lack of available remedies.”

Second, workers have become a “digitally disadvantaged group” under the large-scale application of generative artificial intelligence. The concept of “data-based alienation,” proposed by Italian scholar Daniele Ruggiu, provides a theoretical framework for understanding the vulnerable position of workers. First, the alienation of workers from their own data. Data generated by workers in the production process are used by platforms to optimize labor control—such as dispatch logic, performance evaluation, and monitoring mechanisms—which in turn reinforce control over workers. Second, the alienation of workers from themselves. Through data control, platforms continuously compress workers’ autonomous space, resulting in a “reduction of autonomy in the workplace.” This disadvantage exacerbates the severity of unfair treatment. Existing regulatory approaches have failed to effectively respond to such structural inequality, leading to an imbalance between technological innovation and the protection of workers’ rights and interests.

4. Remedies for Workers After Discrimination Caused by DeepSeek Algorithms

4.1 Clarifying the Criteria for Identifying Algorithmic Discrimination

The goal of algorithmic justice is to achieve social fairness in the field of labor employment, but this process cannot ignore the improvement in management efficiency brought about by the application of algorithms. The EU *Artificial Intelligence Act* has been widely criticized for

“over-advanced regulation,” and the root cause lies in how to find a dynamic balance between promoting technological innovation and safeguarding workers’ rights and interests (Zeng Xiong, Liang Zheng & Zhang Hui, 2022). To this end, this paper proposes referring to scenario theory and adopting a context-oriented differentiated assessment of the risk levels of algorithms in labor management. Based on the subject of algorithmic decision-making, application scenarios, and the degree of impact on workers’ rights and interests, two types of algorithmic forms should be applied differently, so as to achieve legal regulatory objectives consistent with the realities of labor employment. Specifically: first, for algorithmic applications that only involve internal management efficiency of enterprises and do not directly affect major rights and interests of workers (such as attendance statistics and workflow optimization), policy-neutral algorithms should be applied to ensure the efficiency and objectivity of algorithmic decision-making. Second, for algorithmic decisions involving recruitment, rating, dispatch, dismissal, and other matters that directly affect important rights such as the right to equal employment, the right to rest, and the right to health, policy-oriented algorithms should be applied. In algorithm design, distributive justice and relational justice should be comprehensively considered, anti-discrimination requirements should be embedded in all stages such as variable selection, weight setting, and result output, and necessary protection should be provided to vulnerable groups. The distinction between scenarios is not absolute. In practice, employers often outsource the development and optimization of algorithms to third-party suppliers, and the actual control over algorithmic decision-making may be dispersed among multiple entities. In such scenarios, judgment should not be based solely on the identity of the decision-making entity, but should focus on factors such as the types of workers’ rights involved and the scope of influence of decision outcomes. At present, China has not yet established a scenario-based classified governance approach in algorithm regulation and lacks institutional arrangements tailored to the particularities of labor management. This institutional gap not only constrains the positive role of algorithms in improving management efficiency, but also places workers in a passive position with no basis for rights protection when

facing algorithmic discrimination. Constructing an algorithm regulatory framework that fits employment scenarios helps to seek a balance between technological innovation and rights protection and prevents algorithms from amplifying the risks of employment discrimination (Mao Junxiang & Guo Min, 2026).

4.2 Refining National Regulatory Measures

First, in terms of algorithm review, in order to effectively prevent employment risks caused by algorithms, the review mechanism should run through the entire process of algorithm design, deployment, and application, with a focus on ex ante prevention. At the level of internal governance, for decisions such as dismissal that have significant impacts on workers' rights and interests, a manual review channel must be established, with the human resources department of the employer exercising final decision-making authority and presetting error correction mechanisms, so as to safeguard the bottom line of rights while ensuring technological efficiency. At the level of external supervision, a multi-party collaborative review mechanism should be established. Labor inspection departments should take the lead, jointly involving industry trade unions and enterprise associations, and introducing experts and scholars from universities and research institutions to provide professional technical support, so as to ensure the professionalism and credibility of the review (Tian Silu & Zheng Chenyu, 2023). Enterprises must submit compliance reports before the launch of algorithms. Regulatory authorities should conduct regular spot checks by inputting sensitive variables such as gender and age to verify whether the algorithm's operational outcomes comply with the requirements of the right to equal employment. At the same time, enterprise compliance reports may serve as a basis for algorithm filing. By drawing on disclosure mechanisms in the field of consumer rights protection, lists of enterprises with non-compliant algorithms should be publicly disclosed to help workers avoid employment risks; and a stepped fine system should be implemented, determining penalty amounts based on the degree of infringement and the enterprise's profit level and making them public, so as to play a warning role within the industry. In setting review standards, the idea of risk-based classification governance should be adopted, and differentiated review should be conducted

according to the types of rights involved. For algorithm systems involving survival rights such as the right to rest and the right to health, strict review should be carried out throughout the entire process of data collection, variable screening, model construction, and result output; for algorithm systems involving the right to equal employment and the right to fair treatment, the focus should be on examining the correlation between input variables and output results to prevent discriminatory treatment; for relatively simple algorithms such as personnel attendance, the main task is to identify risks of differential treatment based on identity characteristics such as gender and ethnicity. To improve review efficiency, review institutions may issue self-assessment checklists, guiding enterprises in the form of questionnaires to conduct self-evaluation on key aspects such as data processing, sensitive indicators, and result variables, so as to identify and correct compliance deficiencies prior to formal submission, thereby reducing institutional costs (Zhang Xin, 2021).

Second, in terms of algorithm accountability, the state needs to clearly establish an algorithm accountability system and define responsibility mechanisms, so that individual workers can identify the responsible party when safeguarding their rights. The algorithm accountability system should allocate responsibility for the social impacts of algorithms and urge algorithm developers, designers, deployers, and users to fulfill their responsibilities through responsibility clarification, responsibility requirements, and accountability mechanisms. Since, under the current level of technology and legal framework, artificial intelligence does not yet have the capacity to bear civil liability, the principles of product liability may be applied by analogy to impose joint liability on the developers and operators of algorithms. This means that if defects in algorithmic products cause damage, both developers and operators should bear corresponding legal responsibility, so as to protect workers' rights and interests. As employers are the beneficiaries of algorithms, they must bear responsibility for algorithmic discrimination (Yang Yunxia & Xie Min, 2025). However, in algorithm-driven recruitment practices, employers and algorithmic orientation are not necessarily aligned, and employers often outsource the development and optimization of algorithm systems to third-party suppliers. These suppliers develop algorithm models, train data,

and continuously adjust models, playing a substantive role in shaping the models. Therefore, responsibility should not be imposed solely on employers; suppliers should also be included within the scope of accountability, and required to undertake obligations of explanation, proof, and corresponding legal duties, so as to ensure fairness in the allocation of responsibility and protect the rights and interests of job seekers (He Chao & Yu Yifan, 2025).

4.3 Improving Industry Self-Regulation Schemes

For example, generative AI such as DeepSeek has developed rapidly in China. The algorithmic quasi-rights behind it have not been fully recognized by law, yet possess functions similar to rights. Algorithmic quasi-rights are not explicitly stipulated in written law, rely on morality, industry norms, or case recognition, lack compulsory enforceability, need to be realized through negotiation, public opinion, and other means, and may evolve into statutory rights with technological development or consensus. In response to the ambiguity of algorithmic quasi-rights, the industry needs to carry out self-regulation through the following measures.

First, in terms of industry standards, enterprises should transparently disclose the core algorithmic indicators that affect workers' rights and interests, and present them through user-friendly and understandable visual interfaces, so as to ensure that workers clearly know when and how their rights are infringed. The disclosed content should include two aspects: "data collection" disclosure and "algorithm application" disclosure (Luo Yichen & Zhou Xinheng, 2025). "Explanations that have clear technical pathways and can accurately measure correctness and precision should be called 'hard explanations'; in contrast, explanations that are only presented through graphics and textual descriptions that are difficult to quantify and evaluate in detail should be called 'soft explanations' (Su Yu, 2024)." The core difference between DeepSeek and other artificial intelligence models lies in open source and the transparency of the chain of thought: the chain of thought makes the decision-making process traceable and provides a basis for all parties to assess reasonableness; open source supports comprehensive algorithm testing to ensure fairness and safety, allows the review of data compliance to avoid privacy risks, and facilitates continuous tracking by regulatory authorities.

More importantly, open source encourages technical peers and users to participate in supervision, helping to identify problems in a timely manner and reduce compliance risks (Wang Wenxuan & Wang Dan, 2025). Algorithm developers should introduce algorithm explanation procedures to enable the public to understand the operation process of algorithms, thereby enhancing public trust in algorithmic decision-making. Given that workers' understanding of algorithms varies, enterprises should also use intuitive visualization forms such as charts and provide real-time feedback to help workers identify risks of infringement (Su Yu, 2024).

Second, in terms of industry norms, relevant industries should establish governance standards for algorithmic discrimination, with industry associations taking the lead in formulating standards, playing a bridging role between the government and enterprises, reducing administrative regulatory costs, and helping enterprises avoid algorithmic risks (Li Chang'an, Sun Yuyi & Han Weipeng, 2024). It is necessary to proceed from both industry self-discipline and government guidance: on the one hand, strengthening the ethical self-discipline of practitioners and establishing industry norms; on the other hand, the government should define ethical standards, strengthen supervision and review, and promote the implementation of systems, guided by the maintenance of social fairness and justice and the protection of workers' rights and interests. It is necessary to draw on the internal audit experience of foreign enterprises such as Google to establish a localized algorithm governance framework and balance technological innovation and rights protection. International experience shows that enterprise internal audit mechanisms can effectively reduce algorithmic discrimination: large technology companies such as Google and Microsoft have issued internal solutions to address algorithmic discrimination, and some companies have introduced AI recruitment audits similar to traditional recruitment fairness audits to examine whether recruitment decisions made using AI are discriminatory (Yang, J., Minjae, I., Choi, S., et al., 2021). Domestic enterprises such as Tencent, Alibaba, and Baidu have all established internal technology ethics committees (Li Chang'an, Sun Yuyi & Han Weipeng, 2024). At the same time, certification marks may be issued to enterprises with compliant algorithms, accompanied by

policy incentives such as tax reductions and priority in government procurement; through a dual mechanism of “credit rewards and penalties + economic leverage,” enterprises are guided to internalize algorithmic fairness as a core competitiveness, thereby promoting the transformation of compliance into competitive advantage. This ensures a dynamic balance between the advancement of AI technology and the protection of workers’ rights.

4.4 Strengthening Workers’ Capacity for Rights Protection and Safeguards

First, efforts should be made to broaden the channels for remedies in algorithmic discrimination cases. In response to the current predicament of limited low-threshold remedy channels and excessively high costs of judicial relief, diversified dispute resolution mechanisms may be explored: giving full play to the proactive supervisory functions of labor inspection departments, encouraging trade unions to participate in mediation, and supporting industry self-regulatory organizations to play a role in resolving disputes at an early stage; at the same time, drawing on the model of public interest litigation, trade unions or consumer organizations may be allowed to initiate representative litigation for widespread algorithmic discrimination, thereby reducing individual rights protection costs. In addition, to address the difficulty of proof for workers, rules of reversal of the burden of proof may be introduced in algorithmic discrimination cases, requiring employers or algorithm developers to prove that their algorithmic decisions do not involve discriminatory treatment. On this basis, data literacy should be improved and deep participation in intelligent employment should be promoted. Data literacy includes understanding the operational logic of algorithms, awareness of personal data rights, and a sense of active participation in intelligent employment environments. Only with such literacy can workers shift from passively accepting algorithmic management to actively participating in algorithm supervision, effectively identifying and preventing potential risks of algorithmic discrimination. To address the technical threshold of algorithmic management, workers, in their career development, should actively utilize abundant digital resources, a wide range of digital tools, and digital platforms, carry out exploration, master basic skills such as operating smart

terminals and viewing and exporting data, and regularly participate in special digital capability training organized by trade unions or human resources and social security departments (for example, the series of training on improving teachers’ digital literacy organized by the Teacher Development Center of Dalian University of Technology), so as to narrow the knowledge gap with technological development. Workers should independently master digital learning skills and actively integrate into the current intelligent employment environment (Gan Tian & Ma Liang, 2024).

5. Conclusion

Against the backdrop of the rapid development of artificial intelligence technologies, algorithmic discrimination poses a significant threat to workers’ employment opportunities and equal treatment. As the core of artificial intelligence, algorithms, and the biases in their decision-making processes, not only affect the rights and interests of individual workers, but also pose challenges to fairness and justice in society as a whole. After defining algorithms and explaining their regulability, this paper reflects on several traditional approaches to algorithm regulation, clarifies that anti-algorithmic discrimination should place greater emphasis on the protection of vulnerable groups, and highlights the need to consider the relationship between identity factors and the protection of vulnerable groups. This issue should not be viewed in isolation; rather, algorithms should be regulated in connection with different scenarios and contexts. This paper points out that algorithmic discrimination should be analyzed from multiple dimensions, with in-depth examination of the potential unfair treatment it may cause to specific groups, thereby promoting a comprehensive understanding of algorithmic discrimination. In addition, by comparing the laws, regulations, and governance measures on algorithmic discrimination in different countries, and combining them with China’s actual conditions, more targeted improvements to legal regulation can be made.

Therefore, in the face of algorithmic discrimination, the existing legal framework needs to be further improved to ensure that workers’ right to equal employment is not infringed. This not only requires strict legal regulation of the design and application of algorithms, but also requires strengthening supervision over the processes of data collection and processing to prevent the formation and

dissemination of data bias. At the same time, society should advocate algorithmic transparency and fairness, and encourage algorithm developers and users to take measures to eliminate bias in algorithms, so as to ensure the fairness and reasonableness of algorithmic decision-making. Through multi-dimensional efforts in law, technology, and ethics, the impact of algorithmic discrimination on workers' employment can be gradually mitigated and even eliminated, thereby achieving a more fair and inclusive social environment.

References

- Chen Bolin. (2024). An Analysis of Legal Governance Paths for Gender Discrimination in Employment. *Journal of Qilu Normal University*, (6).
- Engler, A. (2012-03-12). Auditing employment algorithms for discrimination. [2024-02-11]. <https://www.brookings.edu/articles/auditing-g-employment-algorithms-for-discrimination/>.
- Gan Tian, Ma Liang. (2024). Algorithmic Gender Discrimination: Characteristics, Types, and Governance. *Journal of Shandong Administration Institute*, (02), 97–105.
- Google. (2023-06-30). *Google Diversity Annual Report 2023*. [2024-04-15]. https://static.googleusercontent.com/media/about.google/zh-CN//belonging/diversity-annual-report/2023/static/pdfs/google_2023_diversity_annual_report.pdf?cachebust=2943cac.
- He Chao, Yu Yifan. (2025). Legal Regulation for Achieving Women's Equal Employment Rights under Algorithmic Gender Discrimination. *Journal of Hainan Open University*, 26(02), 45–50+59.
- Li An. (2021). Algorithmic Impact Assessment: Institutional Innovation in Algorithm Regulation. *Journal of Intelligence*, 40(3), 148.
- Li Chang'an, Sun Yuyi, Han Weipeng. (2024). Research on Algorithmic Discrimination in the Digital Economy Era. *Journal of China Institute of Industrial Relations*, 38(04), 58–66.
- Liu Shuhan. (2024). Research on the Protection of Labor Rights of Platform Workers from the Perspective of Algorithmic Discrimination. Huazhong University of Science and Technology, 2024. DOI: 10.27157/d.cnki.ghzku.2024.001196.
- Luo Yichen, Zhou Xinheng. (2025). Types and Normative Paths of Gender Discrimination in Algorithmic Automated Decision-Making. *Human Resources Development of China*, 42(01), 92–103.
- Mao Junxiang, Guo Min. (2026). Toward Algorithmic Justice: The Social Construction of Algorithmic Discrimination and Its Governance Strategies. *Journal of Central South University (Social Sciences)*, 32(01), 32–47.
- Shulman, D. R. (2014). What's the Problem with Google? *Sedona Conference Journal*, (15).
- Su Yu. (2024). The Systematic Construction of Algorithm Explanation Mechanisms. *Oriental Law*, (1), 81–95.
- Telford, T. (2019-12-11/2025-07-22). Apple Card algorithm sparks gender bias allegations against Goldman Sachs. <https://www.cs.williams.edu/~andrea/cs374/Articles/Apple-CardWashingtonPost.pdf>.
- Tian Silu, Zheng Chenyu. (2023). The Crisis of Subjectivity of Workers in the Digital Era and the Response of Social Law. *Journal of Central South University (Social Sciences)*, 29(05), 79–94.
- Wang Wenxuan, Wang Dan. (2025). Core Characteristics, Value Transcendence, and Future Directions of China's Generative Artificial Intelligence DeepSeek. *United Front Studies*, 9(02), 94–107.
- Williams, M. (2022-07-19). *Embracing Change Through Inclusion: Meta's 2022 Diversity Report*. [2024-08-15]. <https://about.fb.com/news/2022/07/metadiversity-report-2022/>.
- Yang Yunxia, Xie Min. (2025). Research on the Regulation of Algorithm-Induced Gender Discrimination in Employment. *Journal of Shaanxi Administration Institute*, 39(02), 35–41.
- Yang, J., Minjae, I., Choi, S., et al. (2021). Artificial intelligence-based hiring: An exploratory study of hiring market reactions. *Japan Labor Issues*, 32(5), 41–55.
- Zeng Xiong, Liang Zheng, Zhang Hui. (2022). The EU's Regulatory Path for Artificial Intelligence and Its Implications for China: An Analysis Based on the Artificial Intelligence Act. *E-Government*, (9), 63–72.
- Zhang Linhan. (2024). Dilemmas and

Countermeasures of Legal Regulation of Employment Discrimination in the Algorithmic Era. *Journal of Beijing Vocational College of Labour and Social Security*, 18(01), 27–33.

Zhang Xin. (2021). The Construction Mechanism of Algorithmic Impact Assessment and the Chinese Approach. *Studies in Law and Business*, 38(2), 102–115.