Algorithmic gender discrimination in intelligent communication

manifestations, causes, and governance path

ALGORITHMIC DISCRIMINATION

With the rise of big da purposes and with the As these algorithms a human bias common The problem of algori problem reflecting a s of our daily lives, whe And it definitely show with a societal impact

CONTRAL TOPICS OPA

RACISM

SEXISM

CISION-MAKING WORKFLOW

CODE ENGINER

MACHINELEARNING

Algorithmic gender discrimination in intelligent communication: manifestations, causes

PART 1

Individuals or groups could be the target of algorithmic discrimination, based on their characteristics – such as race, age, gender, sexual orientation or religion, among others. Simple features, such as names, are enough to allow algorithms make unfair decisions that could prevent individuals from getting a loan or being selected for a job.



" Through the use of algorithms, computers can process data, provide solutions to problems and even make decisions for us " IMPACT ASSESMENT

well as the learning process making algorithms follow, jected to audits, ninate human bias.

its should be promoted and atory. Governments should le, informing citizens on how being made and explaining ncy the whole algorithmic should also become the case sector.

t assessment should be ign process of every ng algorithm, especially hms are part of public

Mechanisms of algorithmic gender discrimination in the of labor and employment

Dataset Bias



· Algorithms rely on large datasets.

• These are often incomplete and biased towards gender.

 \cdot Women-related data may be lacking due to historical and societal reasons.

• This results in algorithms not fully considering the characteristics of women during training and learning.

Bias in shaping the "ideal worker"



- Algorithms may be influenced by past standards favoring men in shaping the ideal worker image.
- As a result, algorithms may unintentionally favor candidates with traditional male characteristics.
- This overlooks the potential and capabilities of female candidates.

Bias in candidate "profile" matching



- Algorithms create a "digital profile" of job seekers based their traits and behaviors.
- Gender stereotypes may influence these profiles, disadvantaging female candidates in the matching process.

• Algorithms may falsely link certain gender-neutral skills or traits to a specific gender.

Dilemmas in Legal Regulation of Gender Discrimination Under Algorithmic Decision-Making



Legal Basis and Limitations: Chinese law explicitly prohibits gender discrimination and safeguards the labor rights of women. The opacity, embeddedness, and lack of explainability of algorithmic decisions pose challenges for legal regulation.

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The opacity of algorithmic decisions: Data collection and analysis occur unintentionally, leading to unfair judgments against women. This covert discrimination is difficult to detect and prove.

The non-transparency of algorithmic decisions: The opacity of algorithms makes it challenging to hold discrimination accountable. Users struggle to understand the decision-making process, with platforms often citing commercial for non-disclosure. User agreements and consent mechanisms may be used to avoid platform liability.

The imbalance in interaction between algorithmic power and labor rights in the context of algorithmic gender discrimination

The presence of algorithms as power:

Algorithmic decision-making possesses power characteristics, disrupting the binary structure of individual rights and power.

The intervention of algorithms introduces power into the private domain, impacting the balance of labor employment and citizen labor rights. The interplay between rights and power:

The application of algorithmic power in the labor domain demonstrates the effectiveness of fundamental rights in private settings. The impact of algorithms on power dynamics:

Algorithmic automated decision-making alters the balance between public authority and individual rights.

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Balancing rights protection and power constraints is necessary to control the scope of power exercise. The dominance of algorithmic power in power struggles leads to power alienation, disrupting the balance between rights and power, and oppressing other forms of power. Weight of to online d

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PART 2

The governance path of algorithmic power alienation from a gender perspective.

governance in everyday life

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(-) Rebalancing Power and Rights: Governance Pathways for Algorithmic Gender Discrimination in the Labor and Employment Sector(External)

Establishing a Dialogue Space: Creating a dialogue platform for diverse stakeholders such as public authorities, internet companies, and workers. Empowerment and Awareness Raising for Citizens: Strengthening public understanding and participation in algorithms through education and training.

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Enhancing Algorithm Explainability: Improving the transparency of algorithms to reduce information asymmetry and misunderstandings. Implementing Hierarchical and Refined Management: Conducting detailed management and monitoring of algorithm applications based on different scenarios and needs.

BLACK MAN

(\equiv) (Internal)

Improving Relevant Regulatory Provisions: Implementing more specific and comprehensive behavioral regulations to address algorithmic issues in different service applications, reducing the difficulty of regulatory implementation and mitigating the excessive influence of public opinion on legislative and regulatory directions.



Enhancing the Precision of Algorithm Governance: Addressing the shortcomings in the existing algorithm governance system to establish more detailed and specific regulations, expanding the structural capacity to address algorithmic gender discrimination.

Advancing Graded Algorithmic Regulatory Mechanisms: Implementing a combination of strict control and flexible governance measures based on different scenarios and risk levels of algorithm applications to effectively control situations involving significant public interests and high trialand-error costs.

Creating a multi-stakeholder dialogue to collectively address algorithmic discrimination by involving public authorities, professionals, and industry associations in governance.

Drawing on International Experience: Referring to international practices in algorithm governance, such as the EU's "Artificial Intelligence Act," defining risk levels for algorithms, and clearly prohibiting and identifying high-risk categories to promote the reasonable application and development of algorithmic technology through legal clarity.

(\equiv) Enhancing Fair Governance of Algorithmic Technology.

Australian scholar Deborah Lupton once said: "Digital technologies are not neutral objects; they are imbued with meanings related to gender, social class, race/ethnicity, age." The acceleration of societal informatization and intelligence through algorithmic technology brings about negative effects of algorithmic discrimination, necessitating diverse perspectives and positions to collaboratively regulate and govern it within technological, legal, ethical, and other dimensions.



Avoiding erroneous or discriminatory data inputs to prevent unfair output results from algorithms.

Carefully Selecting Algorithm Application Areas: Avoiding the use of autonomous decision-making algorithms in areas that may directly lead to discrimination. **Identifying and Reducing Bias:** Making efforts to identify

and reduce explicit and implicit biases in algorithm design, especially biases coded against women. Disclose Algorithm Information: Algorithm should publicly disclose about the deployment, operation, and usage of the algorithm, to enable regulatory authorities or third parties to oversee it.
Comply with Relevant Regulations: Adhere to national regulations
on algorithm transparency and interpretability, such as the "Internet Information Service Algorithm Recommendation Management Regulations."

3.1Carefully Selecting Algorithm Application Areas



autonomous decision-making algorithms discrimination

One example is the use of AI-powered recruitment tools, which, if not carefully monitored, may discriminate against certain groups based on gender, race, or age due to biases in the data used to train the algorithm.

3.2Identifyi ng and Reducing Bias



Conscious Bias

Self-aware intentions and predeterminations of people based on explicit prejudice or stereotypes

Unconscious Bias Unconscious attitudes or

beliefs we hold about different groups of people, as a response of our neurological shortcuts



3.3 Disclose Algorithm Information

Define Disclosure Objectives Specify Disclosure Scope Choose the right disclosure platform Set access permissions

Write Documentation Develop Visualization Tools Peer Review Technical Testing

01 enable regulatory authorities or t⁰⁷rd parti⁰⁶ to over05e it

Release Disclosure Information Notification Official Launch Establish Feedback Mechanism Set up feedback channels Regular Evaluation Continuous Monitoring and Updating Monitor Algorithm Performance Regular Updates

3.4 Comply with Relevant Regulations

Legislative Progress: Algorithm Transparency Requirements

In January 2016, the French National Assembly voted on a bill that included provisions for algorithm transparency and obligations for algorithmic decision-making on online platforms.



Regulatory Developments and Corporate Initiatives Algorithm Transparency

In May 2018, the European Union enacted the General Data Protection Regulation (GDPR), which requires data minimization and algorithmic decision transparency. Additionally, companies such as Microsoft and Google also announced antidiscrimination and bias measures under the oversight of ethical committees.

From the inclusion of the principle of gender equality in the **Constitution in 1954** to the promulgation and implementation of the Law of the People's Republic of China on the **Protection of Women's Rights and** Interests in 1992

from the solemn commitment of the government to promote gender equality in 1995 to the revision of the Law of the People's Republic of China on the Protection of Women's Rights and Interests in 2005. In April 2023, China's **internet regulator proposed draft rules** for AI services, stressing the prevention of various forms of discrimination in AI development and use. The draft also calls for an accountability system to address algorithmic discrimination and ensure responsible AI ope13tion.

THANK YOU

Diversity and Al ethics are not separate issues. Anysystem that excludes voices of women, minorities, and is weaponized against marginalized communities isinherently unethical.~Mia Dand