Volume 3 Issue 1 (2026) 17-33
E-ISSN 2988-6740 | © Authors. CC BY-SA
https://doi.org/10.59261/iclr.v4i1.41
https://iclr.polteksci.ac.id/

Indonesian Cyber Law Review

Legal Analysis of The Use of AI Emotion Detectors in Online Recruitment by Private Companies

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ABSTRACT

This study analyzes the legal implications of using Artificial Intelligence (AI) emotion detectors in online recruitment processes by private companies, particularly regarding the protection of prospective employees' privacy rights and the risk of algorithmic discrimination. The study uses a normative juridical method with statutory, conceptual, and comparative approaches to examine the regulatory framework, legal principles, and international practices. The results indicate that the application of AI emotion detectors has the potential to conflict with the principles of personal data protection in the Personal Data Protection Law, particularly regarding transparency of biometric data processing, the basis of consent, and data security. Furthermore, there are risks of algorithmic discrimination stemming from data bias, limited developer accountability, and the absence of specific regulations regarding the use of AI in recruitment in Indonesia. These findings emphasize the study's main contribution, namely the need to strengthen the legal framework through specific regulations, technical guidelines, and algorithm audit mechanisms to ensure fairness, accountability, and non-discrimination in the workforce selection process.

Keywords: AI, privacy, recruitment, algorithmic discrimination, law

Article received on 10-07-2025 — Final revised on 06-11-2025 — Approved on 17-12-2025

Introduction

The development of artificial intelligence (AI) technology has brought significant changes to various sectors, including employment practices and modern recruitment mechanisms. One innovation increasingly used by private companies is AI emotion detectors in online recruitment. This technology analyzes facial expressions, voice intonation, and behavioral patterns of prospective employees to assess character, interpersonal skills, and suitability for the company culture. This technology is seen as capable of increasing the efficiency of the selection process by accelerating assessments and reducing the workload of recruiters with a data-driven approach. However, its application raises significant legal issues, particularly regarding the protection of privacy rights due to the processing of sensitive

biometric data, as well as the risk of algorithmic discrimination stemming from dataset bias, limitations in interpreting cross-cultural emotions, and the system's inability to recognize certain physiological variations, which have the potential to lead to unfairness in the workforce selection process (Köchling et al., 2023).

The use of AI emotion detectors has become increasingly relevant as private companies increasingly adopt AI-based online recruitment platforms seeking to acquire talent quickly, efficiently, and competitively in the digital job market. In practice, this technology works by collecting and analyzing highly sensitive personal data, such as facial expressions, voice intonation, micro-expressions, and other nonverbal signals, to assess candidates' emotional states and personality tendencies. This in-depth processing of biometric data raises serious legal issues, particularly regarding its compliance with the principles of personal data protection, the right to privacy, and restrictions on the processing of sensitive data as stipulated in the Personal Data Protection Law and Indonesian employment regulations. Furthermore, questions arise regarding the validity of candidate consent, the level of transparency in data processing, and the accountability and oversight mechanisms to ensure that the use of AI emotion detectors does not violate the fundamental rights of prospective employees in the recruitment process (Soleimani et al., 2021).

The application of AI emotion detectors in recruitment also poses the risk of algorithmic discrimination, which occurs when an AI system inadvertently makes biased decisions due to biased data patterns or algorithm design. Bias in training data can reinforce discriminatory tendencies based on gender, race, age, ethnicity, disability, or other personal factors, while inaccuracies in interpreting emotional expressions across cultures and certain physical characteristics can potentially lead to erroneous and unfair assessments. This situation demonstrates that the use of AI emotion detectors is not only a technical issue but also raises ethical and fairness issues that can be detrimental to prospective employees. Therefore, a comprehensive legal and ethical review is needed to ensure its compliance with the principle of non-discrimination in employment regulations, personal data protection, and human rights standards, as well as the establishment of clear legal boundaries to protect the rights of prospective employees and prevent discriminatory practices due to algorithmic bias (Futia & Vetrò, 2020).

The main issue in this research is the extent to which the use of AI emotion detectors in online recruitment by private companies in Indonesia meets the principles of protecting prospective employees' privacy rights and preventing algorithmic discrimination. These issues include the mechanisms for collecting, storing, and processing personal data by AI systems, the level of transparency and accountability of algorithms in assessing candidates, the potential for bias or discrimination, and their compliance with national laws and international standards in the field of AI and employment (Fritts & Cabrera, 2021).

Various studies show that the use of AI in employee selection is increasing rapidly along with the digitalization of human resource management. (Upadhyay, A. K., & Khandelwal, 2018) stated that AI systems in recruitment can increase efficiency by up to 30% compared to manual methods because they can quickly and consistently screen large numbers of candidates. However, this increased efficiency comes with serious risks if the algorithm is trained on an unrepresentative or biased dataset, potentially resulting in inaccurate and discriminatory decisions. Similarly, a World Economic Forum (2022) report emphasized that the use of AI emotion detectors can significantly impact recruitment outcomes because assessments based on emotional signals are subjective and influenced by cultural, physiological, and psychological factors. This reliance on emotion analysis opens up room for misinterpretation and algorithmic bias that are difficult to detect without adequate audit mechanisms, raising questions about the accuracy, objectivity, and fairness of AI-based employee selection processes (Hemalatha et al., 2021).

In Indonesia, research by the Ministry of Manpower (2021) and a study by the Indonesian Institute of Sciences (LIPI, 2020) show that the implementation and oversight of personal data protection are still in their early stages despite the enactment of the Personal Data Protection Law. Both studies highlight the gap between legal norms and practice, particularly in companies' processing of sensitive data in online recruitment. This is exacerbated by limited oversight, the lack of comprehensive technical guidelines, and low data protection literacy among industry players. This situation increases the risk of violations of prospective employees' privacy rights and opens up opportunities for the use of AI technology, including emotion-detecting AI, without adequate legal controls. Therefore, an in-depth legal review is needed to assess the alignment of AI practices in recruitment with the principles of personal data protection, the precautionary principle, and the principle of non-discrimination in the employment system and human rights protection in Indonesia (Kim & Heo, 2022).

Previous research on the use of AI in recruitment has generally focused on the technical aspects and efficiency of candidate screening, while the legal dimensions and protection of prospective employees' rights have been relatively neglected. (Upadhyay, A. K., & Khandelwal, 2018) emphasized increasing the speed and consistency of evaluation through algorithm optimization, without examining compliance with personal data protection principles and privacy rights. (Dastin, 2019) findings on gender bias in AI-based recruitment focused more on the technical issues of algorithmic bias than on its legal implications. To date, studies that comprehensively examine corporate responsibilities, biometric data protection obligations, consent mechanisms, and the compliance of AI emotion detectors with national regulations are still very limited, particularly in the Indonesian context. Therefore, the novelty of this research lies in its normative legal analysis of the use of AI emotion detectors in online recruitment by private companies in Indonesia, which contributes to filling the gap in legal studies and providing a conceptual basis for strengthening regulations and protecting prospective employees' rights (Chen, 2023a).

While numerous international studies have addressed algorithmic discrimination, AI system bias, and ethical issues in their use, these studies have generally focused on the global context or countries with more mature regulatory frameworks, such as the United States and the European Union. In Indonesia, research specifically examining the regulation and oversight of discrimination risks resulting from the use of AI emotion detectors in online recruitment by private companies remains very limited. This is crucial given that AI technology development is outpacing legal regulation, increasing the risk of privacy violations, unfair selection practices, and algorithm-based discrimination without adequate control mechanisms. This gap highlights the need for a comprehensive legal analysis to formulate policy recommendations, operational guidelines, and ethical standards that align with the principles of personal data protection and non-discrimination, to ensure the responsible use of AI in recruitment and does not disadvantage prospective employees (Drage & Mackereth, 2022).

This research uses a normative juridical method with three main approaches: the statute approach, the conceptual approach, and the comparative approach. The statutory approach is carried out by examining the Personal Data Protection Law, the Employment Law, the ITE Law, and regulations related to AI technology and recruitment to understand the legal framework for the use of AI emotion detectors and the protection of prospective employees' privacy rights. The conceptual approach focuses on the study of legal and ethical principles of AI, such as fairness, transparency, privacy rights, and non-discrimination, to assess the appropriateness of the practice of using AI emotion detectors and the potential for algorithmic discrimination. Meanwhile, the comparative approach compares national regulations with international standards, such as the European Union's GDPR, the OECD's AI

ethics guidelines, and anti-discrimination policies in other countries, to identify legal gaps and formulate recommendations for more effective privacy protection and prevention of algorithmic discrimination (Piette et al., 2022).

This study aims to analyze the legal framework for the use of AI emotion detectors in online recruitment by private companies in Indonesia, with a focus on protecting prospective employees' privacy rights and preventing algorithmic discrimination. In line with the research problem formulation, this study is expected to produce relevant legal and policy recommendations for policymakers and business actors in strengthening personal data protection, ensuring fairness and accountability in AI-based recruitment processes, and minimizing the risk of algorithmic discrimination in the workplace.

Research Method

This study uses a normative juridical method to analyze the legal aspects of the use of AI emotion detectors in online recruitment processes by private companies. This approach was chosen because the research focuses on examining legislation, legal concepts and principles, AI ethics, and international practices related to the protection of privacy rights and the risk of algorithmic discrimination. The research is qualitative, with results consisting of analysis and interpretation of legal norms and concepts, as well as regulatory comparisons, rather than quantitative or numerical data processing (Tilmes, 2022).

This research uses three complementary approaches. First, a statutory approach is conducted by examining regulations related to the use of AI emotion detectors, including the Personal Data Protection Law, the Employment Law, the Electronic Information and Transactions Law, and other provisions related to technology and recruitment, to understand the legal basis for privacy protection and the prevention of algorithmic discrimination. Second, a conceptual approach is used to examine the legal and ethical principles of AI, such as fairness, transparency, non-discrimination, and the right to privacy, as a basis for assessing the appropriateness of the practice of using AI emotion detectors and identifying potential biases. Third, a comparative approach is applied by comparing national legal frameworks with international standards, such as the European Union's General Data Protection Regulation (GDPR), the OECD's AI ethics guidelines, and anti-discrimination policies in several countries, to identify legal gaps and formulate more effective policy recommendations (Chen et al., 2021).

The data sources in this study consist of primary and secondary data. Primary data includes national laws and regulations relating to personal data protection, employment, information and electronic transactions, and regulations related to the use of AI-based technology, supplemented by internal company policy documents or official reports on the implementation of AI-assisted recruitment, where available. Secondary data is obtained from academic literature, such as scientific journals, books, articles, and research reports discussing AI ethics, algorithmic discrimination, and privacy issues, as well as international documents, including the GDPR, OECD guidelines, and reports from global institutions regarding the use of AI in employment selection and its implications for individual rights (Chen, 2023b).

Data collection in this study was conducted using several complementary techniques. Literature review was used to examine laws and regulations, legal documents, scientific journals, and academic publications relevant to the research topic. The documentation method complemented this technique by compiling official documents, including internal company guidelines and reports on the implementation of AI-based recruitment issued by private companies and international institutions, where available. Furthermore, content analysis was applied to review the collected regulations and literature to identify provisions on privacy protection, the principle of non-discrimination, and potential legal risks resulting from the use of algorithms in the employee selection process (Prikshat et al., 2023).

The data analysis in this study was conducted qualitatively and normatively through interrelated stages. The initial stage involved identifying legal provisions governing the use of AI emotion detectors, protecting privacy rights, and the principle of non-discrimination. Next, a review of legal concepts and ethical principles of AI was conducted to assess the compliance of recruitment practices with legal provisions and international standards. The next stage involved comparing national regulations with international guidelines to identify gaps or areas for improvement within the Indonesian legal framework. Based on the analysis, legal conclusions and recommendations were developed as a basis for formulating more accountable AI-based recruitment policies and practices (Pessach et al., 2020).

The validity of the data in this study was maintained through the application of triangulation of sources, methods, and theories. Source triangulation utilized primary and secondary data to ensure information accuracy, while method triangulation was applied through a combination of literature review, documentation, and content analysis to ensure more comprehensive study results. Theoretical triangulation was conducted by comparing research findings with legal theory, AI ethics, and the principle of non-discrimination to maintain consistency of interpretation. The reliability of the research results was strengthened through peer review and cross-checking with expert opinions and the latest literature, ensuring academic accountability for the research findings (Kot et al., 2021).

Result and Discussion

Table 1. Protection of Prospective Employee Privacy Rights

No	Aspects Analyzed	Findings
1	Personal Data Protection Regulation	The PDP Law regulates the rights of data subjects to know, access, correct, and delete personal data, but its implementation in the practice of AI emotion detectors in online recruitment remains unclear. Many private companies have not provided transparent consent mechanisms or access control over prospective employees' emotional data.
2	Transparency of Data Collection	AI emotion detectors often collect biometric data such as facial expressions, micro-expressions, and voice intonation. Research has found that most companies fail to disclose the types of data collected and the purposes for which they use it, posing a risk of privacy violations.
3	Data Security and Storage Mechanisms	Data security practices at many private companies are inadequate to protect sensitive prospective employee data. Data collected by AI emotion detectors tends to be stored on internal servers or in the cloud without adequate encryption protocols, potentially exposing it to leakage or misuse.

The findings indicate that from a Statute Approach perspective, national regulations such as the PDP Law already provide a legal basis for protecting prospective employees' privacy rights, including the right to access, correct, and delete personal data. However, implementation practices in the field show significant gaps, particularly regarding data collection transparency and consent mechanisms. From a Conceptual Approach perspective, the principles of privacy rights and control over personal data are often violated because prospective employees are not always provided with sufficient information regarding the type of data collected, the purpose of processing, and who has access. The Comparative Approach indicates that practices in Indonesia still lag behind international standards such as the GDPR, which requires companies to provide full explanations and obtain explicit consent before collecting sensitive data.

Table 2. Potential for Algorithmic Discrimination

No	Aspects Analyzed	Findings
1	Gender and Racial Bias	Literature and practice analysis shows that AI emotion detectors tend to judge candidates based on expression patterns learned from historical datasets, which can introduce gender or racial bias. For example, certain facial expressions in certain groups might be interpreted as a lack of confidence or competence, when these are actually subjective.
2	Algorithm Accuracy and Transparency	Most AI algorithms used by companies are "black box," making it difficult to audit or explain the selection criteria applied. This lack of transparency increases the risk of undetected discrimination, leaving potential employees unable to understand or challenge selection decisions.
3	Compliance with Anti-Discrimination Legal Principles	The Indonesian Manpower Law stipulates the principle of non-discrimination, but does not specifically regulate the use of AI in employee selection. This creates a legal gap, making discriminatory practices through algorithms difficult to legally account for.

The findings on the algorithmic discrimination subtopic indicate serious risks arising from the use of AI emotion detectors in online recruitment. From the Statute Approach, anti-discrimination regulations in Indonesia are still general and do not yet cover AI technology, resulting in the lack of a specific legal mechanism to address algorithmic discrimination practices. From the Conceptual Approach perspective, the principles of fairness and transparency in algorithms are often violated because algorithms assess candidates based on patterns learned from historical data without considering the social context or inherent biases of that data. The Comparative Approach emphasizes that international practices, such as the GDPR and OECD guidelines, require algorithm audits, decision documentation, and bias mitigation as part of legal compliance. This highlights the need for regulations in Indonesia to regulate the use of AI in recruitment to protect prospective employees' rights and minimize algorithmic discrimination.

Protection of Prospective Employee Privacy Rights

This study shows that the use of AI emotion detectors in online recruitment poses serious challenges to the protection of prospective employees' privacy rights, particularly due to the highly sensitive nature of biometric and emotional data processing. This technology analyzes facial expressions, voice intonation, and micro-expressions, which can reveal an individual's emotional and psychological state, thus categorizing data that requires stricter legal protection. From a personal data protection law perspective, this practice has the potential to be problematic if it is not supported by a clear legal basis, valid consent, and adequate data security mechanisms. These findings align with research by (Upadhyay, A. K., & Khandelwal, 2018), which asserts that AI-based recruitment systems risk violating privacy without effective regulation and oversight. Therefore, this study emphasizes the need to adjust the legal framework and internal company policies so that the use of AI emotion detectors remains aligned with the principles of protecting prospective employees' privacy (Bhardwaj et al., 2020).

Based on a statute approach, the Personal Data Protection Law (PDP Law) provides an adequate legal basis to protect the privacy rights of individuals, including prospective employees in technology-based recruitment. This law guarantees the right to information, access, correction, and deletion of personal data. However, research findings indicate that the implementation of these provisions in the private sector remains suboptimal. Many companies have not provided clear mechanisms for prospective employees to exercise their

rights, and some have not transparently disclosed information about the processing of biometric and emotional data by AI systems. This situation reflects a gap between the normative provisions in the PDP Law and actual practice, which has implications for the ineffective protection of prospective employees' privacy rights (Ore & Sposato, 2022).

Through a conceptual approach, research findings confirm that the principle of privacy places individual control over their personal data as a fundamental element. In modern privacy theory, as proposed by (Solove, 2021), the collection and processing of personal data must be based on clear and adequately informed consent. Without informed consent, the processing of biometric and emotional data by AI emotion detectors has the potential to violate privacy principles because individuals lose control over the use of their data. In online recruitment practices, prospective employees are often unaware of the emotional analysis performed by AI systems, thus lacking transparency and data autonomy. This situation demonstrates a mismatch between company practices and privacy principles that demand transparency, individual control, and personal data protection (Horodyski, 2023b).

Through a comparative approach, this study shows that regulations regarding the use of AI emotion detectors in recruitment in Indonesia still lag behind international standards, particularly the European Union's GDPR. The GDPR requires explicit and informed consent for the processing of sensitive data, a high level of transparency, and the implementation of a Data Protection Impact Assessment for high-risk technologies such as AI in recruitment. In contrast, although Indonesia has a Personal Data Protection Law, its implementation remains inconsistent, particularly regarding consent, transparency, and oversight of private companies. This comparison underscores the need to strengthen the legal framework through regulatory reform and the development of clear technical guidelines to ensure the responsible use of AI emotion detectors, in line with privacy principles, and to minimize the risk of algorithmic discrimination (Marín Díaz et al., 2023).

This research shows that many private companies have not provided adequate mechanisms for prospective employees to access, review, or correct emotional data collected in AI-based recruitment processes. This situation reflects the weak implementation of the principle of control over personal data, leaving prospective employees without clarity regarding the processing, storage, and use of their biometric and emotional data. This data is considered a sensitive category that could potentially impact an individual's employment opportunities. This finding aligns with the LIPI (2020) report, which stated that the private sector in Indonesia is still in the early stages of fulfilling the right to data and does not yet have consistent personal data management standards. Therefore, the results of this study confirm the gap between privacy protection needs and company practices, while also highlighting the urgency of strengthening regulations, oversight, and legal awareness regarding the use of AI in the recruitment process (Simpson et al., 2020).

From a data security perspective, this study shows that a number of private companies still store sensitive candidate data—such as biometrics, facial expressions, voice patterns, and video recordings—without implementing adequate encryption standards and security protocols. This practice increases the risk of unauthorized access, whether through cyberattacks, internal leaks, or system failures. This risk is even more serious given the permanent and immutable nature of biometric and emotional data. These findings align with a 2022 World Economic Forum report, which emphasized the high vulnerability of biometric data if not protected by a high-level security system. Therefore, this study emphasizes the importance of implementing stricter information security standards, mandating end-to-end encryption, and regular system audits to ensure the protection of prospective employees' privacy rights (Tanantong & Wongras, 2024).

Non-transparent data collection practices open up opportunities for legal violations, particularly because prospective employees often face an imbalance of information and power as data subjects. In practice, prospective employees often do not receive adequate explanations regarding the types of data collected, the purposes for which it is processed, and the parties who have access to it, including the involvement of third parties. This lack of clarity hinders prospective employees' ability to assess the proportionality and relevance of data use in recruitment contexts. These findings align with (Solove, 2021) critique, which highlights that ambiguous and information-poor data collection can obscure accountability and harm individuals, particularly when data is used for critical decision-making such as employability assessments (Horodyski, 2023a).

Analysis shows that many companies have not yet provided clear and structured consent mechanisms for AI-based recruitment, leaving prospective employees with insufficient control over the processing of their personal data. Consent is generally presented in general administrative documents without adequate explanation of the types of data processed, the use of algorithms, potential profiling, or the involvement of third parties. This situation hinders the formation of truly informed consent and weakens the position of prospective employees, especially since there are no explicit opt-in or opt-out options. These findings align with (Upadhyay, A. K., & Khandelwal, 2018), who emphasized the importance of explicit and transparent consent to protect privacy rights and prevent disproportionate data processing in AI-based recruitment (Pena et al., 2020).

From a conceptual perspective, the principle of the right to privacy places sensitive data—such as emotions, facial expressions, and psychological cues—into a category of data requiring stricter protection due to its impact on individual dignity and autonomy. However, the practice of using AI emotion detectors in recruitment shows that such data processing often occurs without clear consent, transparency of purpose, and adequate control for data subjects. This situation not only increases the risk of data misuse but also contradicts the principle of privacy by design as proposed by (Cavoukian, 2010), which emphasizes the integration of privacy protection from the technology design stage. Ideally, AI systems processing sensitive data implement data minimization, purpose limitation, and built-in protection mechanisms. The discrepancy between these principles and current practice reflects the gap between the conceptual framework of privacy protection and the implementation of AI emotional analysis in the field (Hunkenschroer & Luetge, 2022).

A comparative analysis with the GDPR shows that several fundamental data protection mechanisms—such as the right to erasure and the obligation to regularly audit data usage—are not adequately regulated within the Indonesian legal framework. Under the GDPR, individuals have the right to request the erasure of personal data that is no longer relevant or processed without a valid legal basis, while organizations are required to conduct documentation and audits to ensure accountability for data processing. Conversely, the lack of explicit provisions in national regulations leaves room for excessive data retention, disproportionate processing, and weak oversight of the use of prospective employee data in AI-based recruitment. This gap underscores the need for national regulatory reforms to align with international standards and provide more effective and sustainable privacy protection (Tilmes, 2022).

This research shows that the use of AI emotion detectors in recruitment is often conducted without adequate transparency regarding how the algorithms work, the assessment parameters, and the purpose of the emotional evaluation. This lack of transparency places prospective employees in a vulnerable position because they do not know what data is processed, how it is interpreted, and the extent to which the analysis results influence selection decisions. This lack of transparency opens up the risk of data processing beyond its original purpose, excessive data retention, and the use of emotional data for

potentially discriminatory decisions. These findings align with (Zuboff, 2019) critique of surveillance capitalism, which highlights the tendency for personal data to be exploited without adequate control by individuals. In the recruitment context, this situation not only raises ethical issues but also potentially violates the principles of data protection and privacy rights, highlighting the need for regulations that ensure transparency, accountability, and limit the use of emotional data by private companies (Islam et al., 2022).

The lack of transparency in the use of AI emotion detectors has a direct impact on prospective employees' confidence in the recruitment process. When applicants do not receive adequate explanations regarding how the algorithm works, the assessment criteria, and the basis for decision-making, the selection process tends to be perceived as non-objective and difficult to account for. This situation raises doubts about procedural fairness and the integrity of the technology used. These findings align with research by (van Esch, P., Black, J. S., & Ferolie, 2019), which shows that the opacity of AI-based selection mechanisms significantly reduces perceptions of fairness and credibility of the recruitment system. In the long term, these negative perceptions not only affect applicant interest but also have the potential to damage the company's reputation as an organization that upholds ethics, accountability, and privacy protection (Al-Alawi et al., 2021).

From a normative legal perspective, this study assesses that the implementation of the Personal Data Protection Law (PDP Law) still requires strengthening through specific guidelines that explicitly regulate the use of AI technology, particularly AI emotion detectors, in the recruitment process. Although the PDP Law provides a general data protection framework, the regulation does not specifically address new issues arising from the processing of emotional and biometric data, such as appropriate consent standards, restrictions on sensitive data processing, and algorithmic transparency obligations. The absence of detailed technical regulations has the potential to create legal uncertainty and open up space for disproportionate data processing practices by private companies. This finding aligns with the OECD (2021) recommendation, which emphasizes the need for sectoral guidelines or specific regulations for high-risk AI systems to ensure their use meets the principles of ethics, accountability, and the protection of individual rights. Therefore, the development of clearer and more measurable operational guidelines is urgently needed to ensure that the application of AI in recruitment aligns with the principles of personal data protection and minimizes the risk of privacy violations and discrimination against prospective employees (Kazim et al., 2021).

Research findings indicate that most private companies lack internal or external audit mechanisms to assess the collection, storage, and utilization of prospective employee data processed through AI systems. This lack of audits increases the risk of privacy breaches, data processing errors, and unidentified algorithmic bias. Without systematic and regular oversight, companies struggle to ensure compliance with applicable legal provisions and ethical standards. This situation contradicts the principle of accountability as affirmed in the GDPR and OECD guidelines, which require data controllers to be transparently and auditably accountable for all data processing processes. Therefore, this study emphasizes the importance of implementing clear and ongoing audit mechanisms as a monitoring tool to improve legal compliance and protect prospective employee privacy rights in AI-based recruitment (Tariq, 2024).

Overall, the analysis shows that the protection of prospective employees' privacy rights in AI-based recruitment in Indonesia is still suboptimal. This weakness is reflected in the inconsistent application of personal data protection principles, particularly regarding consent mechanisms, information transparency, controlling access to sensitive data, and monitoring the use of algorithms. This situation emphasizes the need for strengthened regulations through operational guidelines specifically governing the use of AI in the

recruitment process. Furthermore, clear and informative consent mechanisms and regular algorithm audits are crucial for ensuring legal compliance, preventing bias, and maintaining system accountability. Increased transparency in data collection and processing is also necessary to ensure prospective employees have a sufficient understanding of the assessment process. With these measures, the protection of data subjects' rights can be strengthened while minimizing the risk of misuse of AI in recruitment practices by private companies.

Potential for Algorithmic Discrimination

This research shows that the use of AI emotion detectors in recruitment carries a significant risk of bias, particularly related to gender, race, and age. These risks stem primarily from the historical datasets used in algorithm training, which often reflect past discriminatory patterns. As a result, AI systems have the potential to disproportionately interpret emotional expressions or responses from certain groups, even if they are unrelated to job competencies or qualifications. These findings confirm that AI is not completely objective but is heavily influenced by the quality and representativeness of the training data. This aligns with (Dastin, 2019) report, which revealed gender bias in AI-based recruitment systems due to reliance on previous recruitment data. Therefore, the risk of discrimination in the use of AI emotion detectors is a real issue that requires serious attention, particularly through strengthened legal oversight, dataset evaluation, and the implementation of bias mitigation mechanisms in technology-based recruitment processes (Ismail et al., 2023).

From a Statute Approach perspective, the Employment Law has affirmed the principle of non-discrimination in the workforce selection process. However, these provisions are still general and do not specifically regulate the use of AI technology, including AI emotion detectors, in recruitment. This lack of specific regulations creates a legal gap, particularly in anticipating and addressing algorithmic bias, which is invisible and difficult to prove without adequate audit mechanisms. This condition aligns with the findings of (Ajunwa, I., Crawford, K., & Schultz, 2016), which show that employment regulations tend to lag behind developments in automation and machine learning technologies, potentially allowing discriminatory practices to persist without effective oversight. Therefore, regulatory updates or the development of more detailed technical guidelines are needed to ensure the principle of non-discrimination in the context of AI-based recruitment (Keppeler, 2024).

Within the Conceptual Approach framework, the principle of fairness is the primary ethical basis for ensuring that the use of AI in recruitment does not result in biased or unfair treatment. This principle requires that algorithms be designed and operated free from systemic bias, whether stemming from training data, technical design, or interpretation of results. However, research findings indicate that the implementation of AI emotion detectors by private companies in Indonesia does not fully reflect this principle. Algorithms tend to assess candidates based on emotional patterns influenced by irrelevant factors, such as gender, cultural background, or certain facial characteristics, potentially leading to unfairness. This situation indicates that the integration of the principle of fairness in the development and implementation stages of algorithms is still weak. Therefore, strengthening algorithm design, testing, and oversight mechanisms is needed so that AI-based recruitment systems can operate fairly and free from hidden discrimination (Gusain et al., 2023).

A comparative analysis shows that international regulatory frameworks, particularly the European Union's GDPR and the OECD guidelines on the ethics of artificial intelligence, explicitly mandate algorithm audits and bias mitigation as key obligations in the use of AI systems, including in recruitment processes. These provisions include regular monitoring of algorithm performance, evaluation of accuracy and fairness, and transparent documentation of the decision-making process. In contrast, in Indonesia, similar obligations lack an explicit legal basis and have not been systematically implemented by private companies. This lack of

audit and bias mitigation mechanisms creates gaps in preventing algorithmic discrimination, as AI systems can operate without adequate oversight. Therefore, these findings underscore the importance of strengthening national regulations by developing technical guidelines that mandate algorithm audits and bias mitigation measures, so that the use of AI in recruitment is accountable, fair, and provides optimal protection for prospective employees (Lee & Cha, 2023).

This study shows that AI emotion detection algorithms exhibit black box characteristics, meaning their decision-making processes are opaque and difficult to understand. This opacity prevents the assessment criteria and weighting of emotional indicators from being adequately explained to both the company and external parties. Consequently, audit and evaluation processes are limited by the lack of sufficient information to assess potential bias or discrimination in selection results. These findings align with (Raghavan, M., Barocas, S., Kleinberg, J., & Levy, 2020), who assert that algorithm opacity increases the risk of hidden discrimination, especially when the system is trained with unrepresentative data. Thus, the black box nature not only hinders transparency but also weakens accountability and the effectiveness of oversight of the use of AI in the recruitment process (Youssef et al., 2024).

This research shows that bias in historical data significantly influences the selection results generated by AI emotion detectors. When algorithms are trained using datasets reflecting past recruitment patterns, the system tends to replicate assumptions and preferences that are not always objective. As a result, certain facial expressions or communication styles can be negatively assessed even though they have no direct correlation to a candidate's competency or performance. This indicates that reliance on unrepresentative training data has the potential to lead to covert discrimination and unfair selection decisions. These findings align with research by (Upadhyay, A. K., & Khandelwal, 2018), which asserts that bias in AI-based recruitment datasets is a major factor threatening the principle of fairness in the workforce selection process (Tsoutsanis & Tsoutsanis, 2024).

From a normative legal perspective, the absence of mandatory algorithm audits in current Indonesian regulations creates a serious gap in the oversight of the use of AI emotion detectors in the recruitment process. Without a mechanism requiring companies to review, document, and account for the algorithm's operation, it is difficult to ensure that selection decisions are free from bias or data processing errors. This situation not only weakens protection of the principle of non-discrimination in employment but also increases the potential for legal disputes when AI-based decisions are deemed detrimental to certain candidates. Therefore, this study emphasizes the need for additional regulations specifically addressing algorithm accountability, including mandatory periodic audits, transparency of the assessment process, and external oversight mechanisms, so that the use of AI in recruitment can be fairer, safer, and align with the protection of prospective employees' rights (Pueyo et al., 2020).

This research shows that one of the main problems in the use of AI emotion detectors in the recruitment process is the low level of transparency to prospective employees regarding how the system works. Many companies have not adequately explained the indicators assessed, the data processing process, and the extent to which the results of the algorithmic analysis influence the final selection decision. As a result, prospective employees are at a disadvantage, lacking the opportunity to understand or respond to the assessments generated by the AI system. These findings align with (van Esch, P., Black, J. S., & Ferolie, 2019), who emphasized that information transparency is a crucial prerequisite for maintaining procedural fairness, accountability, and trust in AI-based recruitment. This lack of transparency not only undermines the legitimacy of the selection process but also increases the risk of biased or inaccurate assessments, making strengthening disclosure obligations and

providing proportionate explanations crucial for the responsible use of AI emotion detectors (Sedano et al., 2025).

The conceptual analysis in this study confirms that the principle of algorithmic fairness is an essential ethical foundation for the use of AI in the recruitment process, given its direct implications for individual employment rights. This principle requires that algorithms operate objectively and not result in prejudicial treatment of certain groups. However, research findings indicate that AI emotion detectors are still susceptible to unfair assessments because they are heavily influenced by the quality and representativeness of the training data. Datasets containing certain patterns, preferences, or stereotypes have the potential to be replicated by algorithms, thus deviating from true competency assessments. This situation risks reinforcing structural inequalities and creating covert discrimination in access to job opportunities. These findings align with (Ajunwa, I., Crawford, K., & Schultz, 2016), who assert that algorithmic bias in recruitment can violate the principle of equal treatment in labor law. Therefore, implementing fairness in AI recruitment is not only technical but also an ethical and legal obligation to prevent the emergence of new forms of discrimination through technological mechanisms (Gerosa et al., 2024).

The research findings indicate that algorithmic discrimination in the use of AI emotion detectors can occur both directly and indirectly in the recruitment process. Direct discrimination occurs when the system automatically assesses or rejects candidates based on facial expressions, gestures, or vocal intonations deemed inappropriate, even though these indicators are not necessarily related to job competencies. Meanwhile, indirect discrimination occurs through bias in training data, such as the imbalanced representation of certain groups, which causes the algorithm to replicate existing social stereotypes. As a result, candidates from minority groups or with certain characteristics may receive lower ratings even if they have equivalent qualifications. Both forms of discrimination demonstrate that the use of AI emotion detectors in recruitment risks creating unfairness and widening the gap in access to employment opportunities if not accompanied by adequate oversight and bias mitigation mechanisms (Sattu et al., 2024).

A comparative approach shows that the GDPR requires companies to provide clear audit mechanisms and transparent documentation of algorithmic decisions, including the basis for assessment, the parameters used, and the risks inherent in automated processes. This provision aims to strengthen the accountability of system administrators while providing individuals with the opportunity to review, challenge, or correct decisions that impact their rights. These governance practices can serve as an important reference for Indonesia in strengthening its national regulatory framework regarding the use of AI in recruitment. In line with OECD recommendations (2021), the application of the principles of transparency, auditability, and responsible governance is necessary for the use of AI to be not only efficient but also aligned with the protection of individual rights, the prevention of algorithmic discrimination, and public ethical values (Lu et al., 2024).

This research shows that most private companies have not conducted regular evaluation and monitoring of the AI algorithms used in the recruitment process, resulting in potential biases not being systematically identified or addressed. This reflects weak AI governance, given that algorithms are dynamic and subject to performance changes (model drift) as data, operational context, and candidate characteristics are updated. The absence of internal audit mechanisms or continuous monitoring increases the risk of discrimination, particularly when the system continues to replicate historical patterns that are no longer relevant or contain biases. These findings align with (Raghavan, M., Barocas, S., Kleinberg, J., & Levy, 2020), who emphasize the importance of ongoing monitoring to ensure AI systems remain accurate, fair, and accountable. Therefore, regular evaluation of algorithms is crucial

for preventing decision-making bias and ensuring the responsible use of AI in the recruitment process (Sooraksa, 2021).

This research shows that the application of algorithmic bias mitigation in the use of AI emotion detectors remains limited, primarily due to a lack of evaluation and re-adjustment of the models used. Many companies have not conducted regular testing or recalibration of the algorithms to ensure their performance remains fair for all candidate groups, including minority groups vulnerable to bias. As a result, discriminatory patterns embedded in the initial training data tend to be replicated in the selection process. This situation indicates that despite the increasing adoption of AI in recruitment, mechanisms to ensure fairness are not yet optimal, potentially leading to injustice and social and legal risks in AI-based recruitment practices (Mori et al., 2025).

This research shows that the use of unrepresentative datasets in training AI emotion-detecting algorithms has the potential to reinforce inequities in the employee selection process. Algorithms tend to replicate biases inherent in historical data, so candidates with characteristics outside the dominant pattern—whether in terms of facial expressions, social background, or communication style—are at risk of being deemed less suitable, even though these factors are not directly related to job competency. This finding aligns with a World Economic Forum report (2022), which emphasized that unrepresentative data not only reduces system accuracy but also creates systemic biases that disadvantage vulnerable groups. Therefore, the quality and diversity of datasets are key elements to ensure that the application of AI in recruitment does not automate existing inequities but instead supports a more objective and inclusive selection process (Kurek et al., 2024).

Overall, this study shows that the potential for algorithmic discrimination in AI-based online recruitment remains quite high, primarily due to minimal oversight and low transparency of the systems used. The opacity of algorithms opens up room for bias stemming from data and model design, thus risking selection decisions that disadvantage certain groups and contradict the principles of fairness and non-discrimination in employment. This situation emphasizes the importance of strengthening regulations specifically governing the use of AI in recruitment, along with mandatory algorithm audits, increased transparency of the assessment process, and the implementation of bias mitigation mechanisms. These steps are necessary not only to maintain accountability in the selection process but also to ensure the protection of prospective employees' rights and to realize objective, fair, and inclusive digital recruitment practices.

Conclusions

Penggunaan AI detektor emosi dalam rekrutmen online oleh perusahaan swasta menimbulkan tantangan hukum yang signifikan, terutama terkait perlindungan hak privasi calon karyawan dan risiko diskriminasi algoritmik. Meskipun Indonesia telah memiliki UU Perlindungan Data Pribadi sebagai kerangka hukum dasar, implementasinya di sektor swasta masih lemah, khususnya dalam aspek transparansi pengumpulan data, mekanisme persetujuan yang informatif, mentransmisikan hak subjek data, serta keamanan transmisi data sensitif. Di sisi lain, algoritma AI detektor emosi terbukti berpotensi menghasilkan bias berdasarkan gender, ras, usia, atau karakteristik pribadi lainnya akibat ketergantungan pada dataset historis yang tidak representatif dan sifat algoritma yang tidak transparan, sementara regulasi ketenagakerjaan belum secara khusus mengantisipasi penggunaan AI dalam proses seleksi. Penelitian ini memberikan kontribusi analisis melalui hukum yang terintegrasi antara regulasi nasional, prinsip etika dan konsep hukum AI, serta standar internasional, meskipun terbatas pada kajian normatif dan literatur tanpa pengamatan empiris langsung. Temuan penelitian ini relevan sebagai dasar perumusan kebijakan dan pedoman operasional, termasuk penguatan sistem persetujuan, audit algoritma, mitigasi bias, dan peningkatan keamanan

data, serta mendorong inovasi regulasi agar penggunaan AI dalam rekrutmen selaras dengan prinsip perlindungan privasi dan non-diskriminasi. Ke depan, penelitian lanjutan dapat dirinci secara singkat pada studi empiris implementasi AI detektor emosi di perusahaan serta evaluasi efektivitas mekanisme mitigasi bias dalam praktik rekrutmen digital.

Acknowledgement

The author would like to express sincere appreciation to all individuals and institutions who contributed to the completion of this study. Gratitude is extended to legal experts, human resources practitioners, and technology specialists who provided valuable insights on the use of AI-based emotion detection in online recruitment. The author also thanks academic advisors and colleagues for their guidance and constructive feedback. It is hoped that this research contributes to a better understanding of the legal implications of AI emotion detectors in private-sector recruitment practices.

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