

Labor Law Implications of the Use of Artificial Intelligence on Employment in Indonesia as a Developing Country

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ABSTRACT

This study examines the legal implications of Artificial Intelligence (AI) adoption in professional employment sectors in Indonesia and compares them with regulatory frameworks in the United States. As a developing nation operating under a civil law system, Indonesia has yet to establish comprehensive regulations capable of responding to the disruptions AI poses to labor stability and job availability. Existing labor legislation and electronic systems regulations do not sufficiently protect workers from the risks of automation or AI-driven termination of employment. In contrast, the United States, through Federal Executive Order No. 14110 (2023) and the Automated Employment Decision Tools Law (2021), has established adaptive regulatory mechanisms emphasizing independent audits, transparency in AI utilization, and the protection of civil rights and employment equity. The findings indicate that Indonesia must develop more responsive AI governance within its labor regulatory framework, including limiting the use of AI in recruitment, restricting AI-based efficiency layoffs, and implementing clear accountability standards for AI providers. These conclusions highlight the need for labor law reform to balance technological advancement with worker protection in the digital era.

KEYWORDS

labour, use of artificial intelligence, regulatory comparison, job market, labour



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INTRODUCTION

Artificial intelligence aims to optimize activities that currently require human intelligence. It is commonly called Artificial Intelligence (AI) or defined as a branch of computer science that focuses on developing systems or machines able to mimic human intelligence to perform certain tasks automatically. AI encompasses various technologies such as machine learning, deep learning, Natural Language Processing (NLP), computer vision, and robotics. With AI, systems can analyze data, recognize patterns, make decisions, and even learn from experiences without explicit programming. AI is divided into two main types: narrow AI, designed for specific tasks such as virtual assistants and facial recognition, and strong AI, which has human-like thinking and reasoning skills. This technology has been applied in various fields, including healthcare, finance, manufacturing, transportation, and cybersecurity, with the aim of increasing efficiency, productivity, and innovation. However, AI also poses ethical and social challenges, such as job losses due to automation and data privacy issues, so its development needs proper supervision and regulation (Hoxhaj et al., 2023; Kamila & Jasrotia, 2025; Khogali & Mekid, 2023; Wright & Schultz, 2018).

Artificial Intelligence (AI) is widely used in various aspects of daily life, including entertainment, education, health, and social life. In entertainment, AI recommends movies, music, or content based on user preferences, as implemented by streaming platforms like

Netflix and Spotify (Agner et al., 2022; Aliiev, 2024; Kalideen & YAĞLI, 2025; Patil, 2025). In education, AI helps personalize learning by tailoring materials to student needs, such as on e-learning platforms that use virtual tutors or educational chatbots. In the health sector, AI monitors patients' conditions through health applications, analyzes medical data, and assists in disease diagnosis with high accuracy. AI also plays a role in social life through virtual assistants such as Siri and Google Assistant, which help users with daily activities from setting schedules to providing weather information (Goksel-Canbek & Mutlu, 2016; Hussain Hussain, 2025; Lachimipriya et al., 2024; Rawassizadeh et al., 2019). In addition, AI is applied in smart home technology, such as smart security systems and IoT (Internet of Things) devices, which enable automation of various household appliances.

Thus, AI not only increases efficiency in work but also provides convenience and a more personalized experience in human life. Artificial Intelligence is not merely a search engine like Google that outputs information humans seek. Nor is it used only for daily activities; Artificial Intelligence also handles many formal tasks typically done by humans, such as accounting, finance, file recording, and even recording meeting results by capturing details of discussions. Based on these formal job duties, the work of accountants, financial planners, consultants, and secretaries has already been replaced by Artificial Intelligence. In fact, many more jobs can be replaced by Artificial Intelligence.

Artificial Intelligence has a great influence on employment in Indonesia. It is regulated under Employment Law No. 13 of 2003 and Law No. 11 of 2020, which serve as legal umbrellas for employers and workers concerning manpower. These laws regulate the rights and obligations of workers and employers, employment relations, labor protection, and labor dispute resolution. Law Number 11 of 2020 concerning Job Creation amended these provisions to simplify labor regulations, increase investment, and create jobs. One important aspect is the employment relationship regulated in Article 51, which includes employment agreements and relationships between workers and employers.

Article 81 of Law Number 11 of 2020 regulates Termination of Employment Rights (PHK), stating that termination can occur if the company pursues efficiency, either with or without closure due to losses. This can undermine worker welfare. The use of AI greatly impacts company efficiency but simultaneously harms the workforce by causing mass layoffs and job losses replaced by AI. Therefore, Indonesia—as a developing country experiencing a demographic bonus, employment deficit, and rapid technological developments—must properly regulate AI in professional work to prevent mass layoffs and reduce job losses. The United States, as a developed country that has already faced AI's effects in professional work, has addressed this in "Federal Executive Order Number 14110" dated October 30, 2023. In this regulation, the U.S. President issued measures to govern AI use without harming the workforce.

Despite growing scholarly attention to AI's impact on labor markets globally, there remains a significant research gap regarding the adequacy of existing labor law frameworks in developing countries—particularly those with civil law systems—to address AI-driven employment disruption. Previous studies have largely focused on technological capabilities and economic impacts of AI (Coeckelbergh, 2020; Pakpahan, 2021) or examined labor protection in traditional contexts (De Stefano, 2015; Wijaya et al., 2022), but few have conducted systematic comparative legal analyses between developed and developing nations' regulatory responses to AI in employment. This study addresses this gap by examining

Indonesia's labor law framework in comparison with the United States' more developed AI governance mechanisms, specifically analyzing regulatory adequacy, worker protection mechanisms, and the potential for adaptive legal reform. This comparative approach is particularly relevant given Indonesia's position as a developing nation facing rapid technological adoption without corresponding legal infrastructure, positioning this research at the intersection of technology law, labor rights, and comparative legal studies.

Federal Executive Order No. 14110 of October 30, 2023, is a regulation issued by Joe Biden during his tenure as President of the United States in 2023 to address and govern the growing use of artificial intelligence (AI) in the country. As analyzed by Coglianese (2023), this executive order represents the most comprehensive federal attempt to establish AI governance principles across multiple sectors, including employment, demonstrating a proactive regulatory approach to technological disruption. Biden recognized that while the development and application of AI in the United States offer numerous conveniences and advantages, they also pose negative impacts on professional employment sectors.

The Executive Order emphasizes that AI carries significant potential for both benefits and threats. When used responsibly, AI can help address urgent challenges and contribute to greater prosperity, productivity, innovation, and security. Conversely, irresponsible use of AI may worsen social issues such as fraud, discrimination, bias, and disinformation; displace and undermine workers; hinder fair competition; and endanger national security. Realizing AI's benefits while minimizing its risks requires substantial risk-mitigation efforts and collaboration across government, the private sector, academia, and civil society. Part II, Section D of the Executive Order further states that one of its aims is to govern AI in a way that upholds equity and protects civil and labor rights.

This study aims to analyze in depth the legal aspects related to the use of AI in professional work, with a focus on labor protection from Termination of Employment Rights (PHK) in Indonesia. It examines societal phenomena and compares regulations in Indonesia with those in the United States, so that Indonesia can better regulate AI in the workplace in the future, ensuring its development and use do not harm society.

RESEARCH METHOD

This study employed a normative juridical research method that examined laws, regulations, legal doctrines, and concepts relevant to AI-related employment issues. Following the framework by Zainuddin and Karina (2023), it analyzed the conformity between legal norms and their application using primary legal materials (legislation) and secondary materials (academic literature and legal commentary). The research adopted a legislative (statute) approach and a comparative approach.

The legislative approach analyzed provisions in *Law Number 11 of 2020* concerning labor in Indonesia alongside *Federal Executive Order Number 14110* of October 30, 2023, which addressed labor rights such as decent wages, equal opportunities without discrimination, job training, working hours, social security, rest and leave, freedom of association, and severance pay during layoffs. These regulations highlighted gaps in governing AI use in occupational work. The comparative approach, as articulated by Sarifal (2023), enabled systematic examination of different legal systems to inform reform in Indonesia, using the U.S. Executive Order as a benchmark due to its stronger AI governance in professional employment. Labor Law Implications of the Use of Artificial Intelligence on Employment in Indonesia as a Developing Country

RESULT AND DISCUSSION

The Use of Artificial Intelligence in Indonesia and the United States

Indonesia as a developing country, which of course is experiencing the process of globalization, digitalization and very rapid technological development in the modern era, of course, also experiences both good and bad impacts from the entry of AI and its use in daily life. In carrying out daily activities starting from studying, seeking information and doing community work in Indonesia, many people in Indonesia have begun to use AI in their lives, As reported by Tempo Digital.com as many as 56% of Indonesians, especially Gen-Z, as many as 74% of them use AI in their daily lives to support and help them in expression, creativity, doing tasks, and looking for entertainment.

As well as millennials, the use of AI is starting to shift from what was previously used to help carry out daily activities, AI is starting to be used by them to help them do their work. As many as 80% of millennials use AI to support and educate them in carrying out work tasks and increasing their productivity. However, in Indonesia, the use of AI in work is still only limited to being used by workers to improve and help them in doing their work, not to the point where AI has done work that was previously done by humans or in other words, AI is the workforce to do a job. However, the use and utilization of technology and AI in the field of professional work in Indonesia continues to grow and move further. Several companies in Indonesia have started using AI to do work that was previously done by journalistic portal humans such as Detik, IDN times, KG media, and suara.com have started to use AI to process data from news and reports obtained to be compiled so that it is easy for news readers to understand.

There is already one example of the use of AI in professional work in Indonesia, namely social media admins or accounts from a business entity that is in charge of answering questions from clients. Now many business entities are starting to use Chatbot as a substitute for humans to become admins of their social media. Chatbot can answer various questions that customers often ask through their social media, even on some online buying and selling accounts Chatbot It can be programmed so that it can be synchronized with the availability of existing stock of goods. In this case, the human function as a social media admin of a business entity begins to be replaced by Chatbot as a form of AI that can do professional work and replace humans on a small scale

Indonesia as a developing country that continues to experience technological developments and openness to Update technology that makes it easier for people to do something is still not using AI to replace humans in doing a professional job, but with the rapid development and companies or job providers that continue to do R&D on the use of AI in doing a job, it is possible that in the future Indonesia will begin to implement and use AI to do professional work that can replace the position of humans as workers.

In the United States, the use of AI has been widely used in professional work as reported by CNBC 10 This Profession is Threatened by AI, 300 Million Jobs Could Be Lost The United States as a country with the most advanced development and mastery of technology has begun to use AI in the field of work, for example, the tech giant Google recently laid off its advertising sales team because they choose to use AI in the field of advertising and advertising. IBM and BT Groups also mentioned that AI is one of the main reasons they are laying off jobs for work

efficiency using AI. Reporting from a Goldman Sachs AI study, the impact of AI empowerment in the field of work can affect up to 300 million jobs worldwide. Major disruptions can also occur because of this. According to a McKinsey analysis, it is predicted that more than 12 million jobs in the US will become extinct and be replaced by AI. Reporting from the journal EPOCH TIMES, AI opens many new jobs by changing the workflow from humans who do "mechanical" work that was previously done by humans to those done by AI, which will only be tasked with reviewing the results of the work from AI.

In this case, humans do not completely lose their jobs, but mechanical jobs are replaced by AI where the jobs are like accounting, graphic designers, and marketing that used to be a lot of human labor are now being replaced by AI. This makes many human workers affected by Termination of Employment. In that context, large corporations in the United States that employ many people for the field of work are now starting to do "layoff" their employees whose jobs are being replaced by AI. For example, in a giant E-commerce company from the United States, namely Amazon confirmed that it wants to lay off 14,000 of its employees and be replaced by AI in early 2026. Journal Writers Strike (2023) said that since the development and use of AI in the field of work, there have been around 80,000 jobs lost due to the use of AI in the field of work. Therefore, the use of AI in the field of professional work in the United States is quite worrying for the active workforce and the availability of job opportunities. In this regard, it can be interpreted that large companies in the United States have used AI a lot in the field of professional work and have begun to make human workers efficient in "mechanical" jobs that can be replaced by AI.

Differences in Regulations on the Use of Artificial Intelligence in the Field of Work in Indonesia and the United States

Indonesia is a developing country that has opened up and is starting to widely implement technological advances and developments. AI, which is one of the best breakthroughs in the field of technology and information, is starting to enter and be used en masse in Indonesia. As with dynamic laws, the arrival of AI must also be accompanied by adequate regulations that are relevant to one of the forms of development of the times. Indonesia as a country with a civil law system has not specifically regulated the use of AI. As in Law Number 1 of 2024 and Law Number 19 of 2016 concerning Information and Electronic Transactions. In the law, artificial intelligence is categorized as a form of electronic agent. An Electronic Agent is a device of an Electronic System that is created to perform an action on a particular Electronic Information automatically hosted by a person. Furthermore, the regulation regarding AI as an electronic agent is regulated in Law Number 11 of 2008 concerning Electronic Information and Transactions, where in the law the use of electronic agents, one of which is AI, is regulated in article 21 where it is stated that if something is done through an electronic agent, all legal liability is charged to the electronic agent operator. Then in article 22 Paragraph 1, electronic agent operators are obliged to provide features for users to cancel, change and reconfirm the information submitted by users. However, these regulations have not regulated the use of AI properly because there are still many articles and regulations that are not specific so that the use of AI often deviates but does not have a strong legal basis, so that these articles become "rubber articles" that are easy to misinterpret in their application.

In today's era, the use of AI has become very widespread, no longer as a search engine and helps find information about something. Currently, AI has been used very widely such as making a photo or video, editing, voice over, and even making videos from someone's photo. AI can also be used to do formal work such as data analysis, financial audits, making financial reports, and calculating a company's books. In this work, the laws and regulations in Indonesia do not have the right regulations, Regulations related to these activities such as editing photos and videos of people using AI which are now often carried out by creative workers do not have the right regulations if someone who changes someone's photos or videos using AI does not have permission from the owner of the photo and video or people in the media. Regulations related to photo editing using AI are only regulated through Law Number 27 of 2022 concerning Personal Data Protection. In the law, "Personal Data" is defined as data about an individual that is identified or identifiable separately or in combination with other information either directly or indirectly through electronic or non-electronic systems. In this context, personal data includes a person's biodata, address, contacts, telephone number to personal photos and videos of a person either taken by that person or a photo of a person whose image is taken by another person that should be used within the scope of the agreed consent.

In the scope of professional work, Indonesia still does not have regulations related to the use of AI in the field of professional work. The Electronic Transactions Information and Transactions Act only says that the use of AI is legal and can be used as long as its use is not against the law, ethics, norms and copyrights. In the context of the protection of human labor in Indonesia, the use of AI as a workforce that can replace human functions in doing a job that can replace the function of humans as a workforce that should do a job is still unregulated. The protection of labor rights and the availability of jobs lost due to the use of AI that can replace these jobs is still quite dangerous because there is absolutely no one to regulate it. Companies can lay off and close job opportunities if they feel that using AI is much more effective than hiring humans. Because in Law Number 20 of 2011 Manpower Article 81 does not specifically regulate the legal requirement that an employer can lay off its employees. In this context, when an employer wants to terminate the employment rights of its employees because the employer wants to use AI as a substitute for human labor that was previously carried out by its employees, an employer can lay off without any prohibition or regulation from the law. This is quite detrimental and dangerous for workers and job seekers. The availability of jobs can decrease drastically due to the legal vacuum in Indonesia related to the use of AI in professional jobs that can replace humans as workers who do the work, in this context the Labor Law has not regulated the use of AI in professional jobs to maintain the availability of jobs from the consequences of the use of AI in doing a job that can replace humans.

The United States as a developing and central country as well as a pioneer of technological development and advancement has certainly applied the use of AI in daily life. The use of AI in the United States has far exceeded the use in developing countries such as Indonesia, in the United States the use of AI has reached a point where AI can support and simplify and automate life and doing work. The United States as a federal country where local governments have their own authority to regulate their states while still following and complying with the rules of the central government have regulations related to the use of AI in each state. The United States is also a country that adheres to the common law system where the law is governed through customs, cases, and jurisprudence or judges' decisions rather than

through written laws which are characteristic of the civil law system adopted by Indonesia. With the common law legal system and the state in the form of a federal state, laws and regulations in the United States do have many differences in each state or state. Where with the common law legal system and the form of the federal state, states in the United States have regulations related to the use of AI respectively. New York in 2021 has issued regulations regarding the use of AI in the field of professional work where the New York government issued regulations related to the use of AI in employee recruitment.

The regulation has drawn a lot of criticism from business circles because it is felt that it hinders their efficiency programs by recruiting employees using AI. However, the inauguration of the law was indeed carried out to maintain security and justice for prospective workers and maintain the stability of job availability. The New York government considers the use of AI in employee recruitment to be lacking in capabilities that are unfair and unfair to potential workers. The Local Law of New York about automated employee decision tools AEDT (2021) is a regulation issued by the government regarding the automation of employee recruitment using AI. In this rule, providers and job seekers are prohibited from using AI-based automation in employee recruitment unless the AI tools have been registered and audited within one year of use. The New York government regulates the use of AI to replace the position of Human Resources in the recruitment of workers. The government sees a potential danger when AI is used to replace humans in the field of HR work where by recruiting employees using AI, the government sees the potential for miss oversight because AI can only see the potential of potential workers based on the data they attach, while in the recruitment of workers carried out by humans through the Human Resources division HR can observe potential workers further such as looking at characters, ways of speaking, and potential non-data-based potentials that can only be seen directly by humans psychologically. The regulation is aimed at preventing prospective workers from being harmed by AI that cannot observe potential workers thoroughly and only observes potential workers through data.

The New York State Law about EDT is a real form of concern in regulating the use of AI in the field of professional work where the regulation covers various matters related to the use of AI in job recruitment automation as follows:

a. Automated employment decision-making tool terms

Refers to any computational method based on machine learning, statistical models, data analysis, or artificial intelligence that generates basic outputs—such as scores, classifications, or recommendations—which are used to significantly support or substitute human judgment in making employment-related decisions that affect individuals.

b. Decision Making Tools

Automated employment decision-making tools exclude any systems that do not automate, aid, or meaningfully contribute to—or replace—human discretionary decision-making, and that do not have a significant effect on individuals. This category does not include tools such as spam filters, firewalls, antivirus programs, calculators, spreadsheets, databases, datasets, or other forms of data collections.

c. The term "audit bias"

Refers to an objective assessment conducted by an independent auditor. This type of bias audit includes, but is not limited to, evaluating automated employment decision-making tools to determine whether these tools create disparities affecting individuals from category 1 groups Labor Law Implications of the Use of Artificial Intelligence on Employment in Indonesia as a Developing Country

that employers must report under subsection (c) of Section 2000e-8 of Title 42 of the United States Code, as detailed in Section 1602.7 of Title 29 of the Code of Federal Regulations.

d. Employment Decision

The term “**employment decision**” refers to the process of evaluating applicants for hiring or assessing current employees for promotion within the city’s jurisdiction. These provisions relate to the requirements set forth in Section 20-871 regarding Automated Employment Decision-Making Tools.

e. Prohibition of use without meeting the conditions

In urban areas, employers and employment agencies may not use automated employment decision-making tools to evaluate job applicants or current employees unless the tool has undergone a bias audit within the preceding year and a summary of the latest audit results—along with the tool’s distribution date—has been publicly posted on the employer’s or agency’s website prior to its use.

f. Notification obligations

In a city jurisdiction, employers or employment agencies that rely on automated employment decision-making tools to evaluate applicants or employees for employment decisions are required to inform every affected individual residing in the city. They must provide notice—at least ten business days before the tool is used—that such automation will be part of the assessment and offer the individual an opportunity to request an alternative evaluation method or accommodation. Employers must also disclose the job qualifications and criteria that the tool will analyze within the same ten-day period. Additionally, if details about the data collected for the tool, its sources, and the organization’s data retention policy are not posted on the employer’s or agency’s website, this information must be provided upon written request from the applicant or employee within 30 days. Information under this section shall not be disclosed if such disclosure would violate local, state, or federal law, or interfere with law enforcement investigations.

g. Penalty

Any individual who violates the provisions of this subchapter or its implementing rules may face a civil penalty of up to \$500 for the first violation and any additional violation committed on the same day, and between \$500 and \$1,500 for each subsequent offense. Each day that an automated employment decision-making tool is used in violation of Article 20-871 counts as a separate offense. Additionally, failing to provide the required notices to applicants or employees—as outlined in paragraphs 1, 2, or 3 of subdivision b of Section 20-871—constitutes a separate violation. Civil penalties under this subchapter may be pursued before any tribunal within the Office of Trial and Administrative Hearings or any other designated city body authorized to handle such matters.

From the New York State Law 144 of 2021 regulation, it can be seen that regulations related to the use of AI in the professional field of work in the United States are quite well regulated. The government and law enforcement in the United States are quite aware of the development and use of AI, even only within the scope of local governments, which have been quick and responsive to this issue. In addition to Joe Biden's local government as a former president of the United States during his active term also issued regulations related to the use of AI in the United States, Biden issued Federal Executive Order Number 14110 of October 2023 as a form of government response to the use of AI in professional work.

Federal Executive Order No. 14110 of October 2023 was issued specifically to oversee and regulate the use of artificial intelligence. Section 1 of the order highlights that AI carries tremendous potential, offering significant benefits while also presenting serious risks. When applied responsibly, AI can help address critical challenges and contribute to a more prosperous, productive, innovative, and secure society. However, when used irresponsibly, it can intensify various societal harms, including fraud, discrimination, bias, and disinformation; undermine and displace workers; restrict fair competition; and create threats to national security.

To ensure that AI is used for positive purposes and its benefits can be fully realized, significant efforts to reduce its associated risks are essential. Achieving this requires collaboration across all sectors of society, including government institutions, private industry, academia, and civil society. The Administration places high priority on establishing safe and responsible AI development and use, promoting a coordinated strategy across all Federal Government agencies. Given the rapid advancement of AI technologies, the United States must assume a leading role to protect national security and support economic and social well-being. AI ultimately mirrors the values of its creators, users, and the data that shape it. The President expresses confidence that the nation's strong ideals—along with the creativity, diversity, and goodwill of its people—have carried America through past periods of rapid transformation, and will do so again. With these strengths, the United States is well equipped to leverage AI in ways that promote justice, safety, and opportunity for everyone.

The regulation also explains that the functions and existence of AI are as follows:

- a.** AI systems must be safe and secure. To achieve this goal, it is necessary to evaluate robust, reliable, repeatable, and standardized AI systems, as well as policies, institutions, and if necessary other mechanisms to test, understand, and mitigate the risks of such systems before use. It also requires addressing the most pressing security risks posed by AI systems including in the areas of biotechnology, cybersecurity, critical infrastructure, and other national security hazards as well as the ability to navigate the complex and non-transparent nature of AI. Testing and evaluation, including post-deployment performance monitoring, will help ensure that AI systems function as they should, are resilient to harmful abuse or modification, are ethically developed and operate safely, and comply with applicable Federal laws and policies. Finally, the Administration will help develop effective labeling and origin marker mechanisms for content, so that the American people can determine when content is generated using AI and when it is not. These actions will provide an important foundation for an approach capable of addressing AI risks without unduly reducing its benefits.
- b.** Fostering innovation, competition, and responsible collaboration will allow the United States to lead in the field of AI and unlock the potential of this technology to solve some of society's toughest challenges. This requires investment in AI-related education, training, development, research, and capacity, while addressing emerging intellectual property (IP) and other issues to protect inventors and creators. Across the Federal Government, the Administration will advance initiatives that help Americans develop the skills required in the AI era while also drawing AI experts from around the globe—not only to study in the United States, but to remain here—so that future technologies and companies can be built domestically. The Federal Government also aims to foster a Labor Law Implications of the Use of Artificial Intelligence on Employment in Indonesia as a Developing Country

fair, transparent, and competitive environment for AI and related technologies, ensuring that small developers and entrepreneurs can continue to drive innovation. This includes taking action to prevent unlawful collusion and addressing risks posed when dominant companies control essential resources—such as semiconductors, computing power, cloud services, and data—in ways that could disadvantage competitors. Furthermore, the Government will support markets capable of harnessing AI's benefits to create new opportunities for small businesses, workers, and entrepreneurs.

- c. The responsible development and use of AI require a commitment to supporting American workers. As AI creates new jobs and industries, all workers must be involved in the decision-making process—including through collective bargaining—to ensure that they benefit from those opportunities. My government will work to tailor job training and education to support a diverse workforce and help provide access to the opportunities created by AI. In the work environment, AI should not be applied in a way that undermines workers' rights, worsens the quality of work, encourages excessive supervision of workers, reduces market competition, introduces new health and safety risks, or causes adverse labor disruptions. The next important steps in AI development must be built on the views of workers, unions, educators, and employers to support the responsible use of AI that improves workers' lives, strengthens human work, and helps everyone safely enjoy the benefits and opportunities of technological innovation.
- d. Artificial intelligence (AI) policies must align with my Government's commitment to advancing justice and civil rights. My government cannot—and will not—tolerate the use of AI to the detriment of groups that have too often experienced inequality of opportunity and justice. From recruitment to housing to healthcare, we've seen what happens when the use of AI deepens discrimination and bias, rather than improves quality of life. Irresponsibly applied AI systems have reproduced and exacerbated existing inequalities, given rise to new forms of harmful discrimination, and exacerbated various losses both online and physically. My administration will build on the important steps it has taken before—such as publishing the Blueprint for an AI Bill of Rights, the AI Risk Management Framework, and Executive Order 14091 of February 16, 2023 (Advancing Racial Equality and Support for Marginalized Communities through the Federal Government)—in an effort to ensure that AI complies with all Federal laws and encourages robust technical evaluations. Close monitoring, engagement with affected communities, and strict regulation.

It is critical to ensure that the parties developing and implementing AI are held accountable to standards that protect against unlawful discrimination and abuse, including in the judicial system and the Federal Government. Only then can American society trust AI to advance civil rights, civil liberties, equality, and justice for all.

With these regulations and regulations, the United States government has regulated the use of Artificial Intelligence, both from its use in daily life to the further use of AI, such as in the field of professional work. The regulation suppresses the use of AI which can have a bad impact and harm humans. The protection of jobs and labor as well as prospective workers also has legal clarity although it is still not comprehensive, at least the use of AI in the field of professional work in the United States as a developed country that has already implemented AI in life and at work already has sufficient regulations to protect humans as a workforce when

compared to Indonesia as a developing country which has not relied too much on AI in the field of professional work.

The regulation includes ensuring fairness to prospective workers from the use of AI in the employee recruitment system, where hiring employees using AI as a substitute for humans in the human resources division already has policies to maintain fairness and protect prospective workers. In Federal Executive Order Number 14110 of October 2023, the use of AI is also regulated not to harm workers, where in section 2 of Article D it is explained that the use of AI must not harm a group that can cause injustice, inequality, and differences in opportunities. Where the article can protect workers from job loss due to the use of AI which can be categorized as a form of lost opportunity and injustice. So that job providers cannot lay off or eliminate jobs that were previously done by humans by being replaced by AI.

The legal implications of the application of Artificial Intelligence to the protection of labor rights in Indonesia when compared to the United States as a benchmark in building adaptive labor regulations

Implications of employment law in Indonesia on the implementation of Artificial Intelligence to the protection of labor rights in Indonesia still does not have a real form of implementation. Employment Law in Indonesia that adheres to the legal system Civil Law lack of responsiveness in responding to the phenomenon of the use of AI in the field of professional work because the legal system has many legislative processes and hierarchies that make legal developments not quick to respond in response to the phenomenon of the times. There is no regulation that regulates the use of AI in the field of employment in Indonesia as carried out by the United States as a benchmark in building these regulations. In the field of employment, the regulation of labor law in Law Number 11 of 2020 concerning Job Creation in matters that in the future may be affected by the use of AI such as in article 81 related to Termination of Employment (PHK) in which there is no rule that regulates when employers want to lay off their employees because employers want to use AI as a substitute for human labor in carrying out employment in order to pursue "efficiency" so that workers do not have legal protection from the threat of losing their jobs due to layoffs caused by the use of AI that replaces their positions, at present it is not enough to be a worrying matter, but in the future along with the development of the era of Indonesia as a developing country which in the future may apply more AI in the field of professional work must look at and start caring about this phenomenon. AI-related regulations must be developed so that when this phenomenon occurs in Indonesia, we already have good regulations. In developing these regulations, the United States as a country that has regulated the use of AI in the field of work can be used as a reference where in the development of laws related to this matter, Indonesia can take preventive measures by looking at the regulations that have been made by the United States as a benchmark in building regulations on the use of AI in the field of professional work.

The United States as the country referenced in this article has regulated the use of AI in the field of work quite well. In comparison to the federal executive order number 14110 of October 2023 The use of AI in the field of professional work has been regulated so as not to harm workers and prospective workers. The regulation mentions the use of AI in Recruitment employees should not solely use AI, where the use of AI in the field of professional labor must go through a strict audit process so that the use of AI does not harm humans as a workforce. Labor Law Implications of the Use of Artificial Intelligence on Employment in Indonesia as a Developing Country

For comparison, the United States already has several regulations related to the use of AI such as:

1. Federal Executive Order Number 14110 of October 2023

It is a law issued by Joe Biden in 2023 to regulate the use of AI in various fields. One of them is related to the field of employment. The use of AI in professional work is limited to these regulations so that it does not harm humans. The law prioritizes the principles of justice and equal opportunities for all parties. So that workers and prospective workers get the same opportunities and protect job competition with AI that can replace their jobs. At Section D The regulation says that the use of AI in the field of work should be able to make it easier for humans to do their work, not harm humans and cause job losses due to injustice in the use of AI.

2. . The Local Law of New York about automated employee decision tools AEDT (2021)

A regulation that regulates the recruitment of employees using AI. In this regulation, the New York government regulates the use of AI in the employee recruitment process. Hiring employees using AI requires an in-depth and detailed audit. In chapter 25 of the regulation, it is stated that every company that uses AI in employee recruitment must comply with the rules, where illegal acts stated in the regulation will be subject to fines and civil penalties:

- a. Any person who violates the provisions of this subchapter or rules established under this subchapter shall be subject to a civil fine of not more than \$500 for the first offense and any additional offense occurring on the same day as the first offense, and not less than \$500 and not more than \$1,500 for each subsequent offense.
- b. Every day the use of automated employment decision-making tools that violate the provisions of Article 20-871 is a separate offense.
- c. Failure to provide notice to the candidate or employee as required in paragraphs 1, 2, or 3 of subdivision b of Section 20-871 is a separate misdemeanor.
- d. The process of collecting civil sanctions under this subchapter may be submitted to any tribunal established in the office of trial and administrative hearing or in any other institution in the city designated to handle such proceedings.

The regulations have begun to protect workers in the United States from layoffs and injustices to workers caused by the use of AI in the field of work. Indonesia as a developing country that still does not regulate AI in the field of employment can see the United States as a benchmark in the development of regulations related to this phenomenon. For comparison, the following is a table related to the difference in regulations on the use of AI in the field of professional work in Indonesia and the United States:

Table 1. The difference in regulations on the use of AI in the field of professional work in Indonesia and the United States

Aspects	Indonesia	United States
Basic Principles	Artificial Intelligence is defined as an "electronic agent" where the capabilities that can be carried out by AI far exceed what is defined as	Artificial Intelligence is defined as a device that can perform tasks that usually require cognition, planning, learning, communication and physical actions that are usually performed by humans (AI

	an "electronic agent" in Law number 11 of 2008	Initiative Act of 2020 in 15 U.S code number 9401)
Legal Basis	Law No. 11 of 2008 concerning Information and Electronic Transactions & Law No. 20 of 2011 concerning Manpower	AI Initiative Act of 2020 in 15 U.S. code number 9401
Regulation of the use of AI in the field of work	Indonesia does not have regulations that regulate the use of AI in professional work	Federal Executive Order Number 14110 of October 2023 about Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence
Protections that can be provided to the workforce	There is no protection for the workforce against the use of AI in the field of work that can make the workforce lose their jobs in Indonesia	Federal Executive Order Number 14110 of October 2023 regulates and states that the use of AI in the field of employment cannot cause loss and injustice to the workforce. So employers cannot simply layoff their employees and replace human workers with AI because it is a form of injustice that is prohibited in the regulation. In section c, the use of AI that can damage workers' rights and injustice in labor competition is also prohibited.
Forms of recommendations that can be applied in the implementation of the legislation in Indonesia	Seeing the legal vacuum in Indonesia regarding the use of Artificial Intelligence in the field of professional work, Indonesia can apply regulations issued by the United States to this phenomenon. In the use of professional work, the United States has regulated so that the use of AI in the field of work does not harm humans as a workforce. Indonesia can regulate articles related to layoffs so that employers cannot lay off just because employers choose to use AI to replace humans as workers for efficiency.	

The protection of labor rights from the threat of layoffs due to the use of AI in the field of professional work in Indonesia still has a legal vacuum, where Law Number 11 of 2020 and Law Number 11 of 2008 concerning ITE still do not have regulations related to the use of AI in its use as a workforce, so the use of AI in the field of professional work can still harm humans.

CONCLUSION

This study concluded that Indonesia's labor legal framework inadequately addressed Artificial Intelligence's disruptive effects on employment, leaving workers vulnerable to job insecurity, unfair recruitment, and AI-driven layoffs. In contrast, the United States implemented proactive measures like Federal Executive Order No. 14110 and state automated decision laws, prioritizing transparency, accountability, and equity in workplace AI use. To close this gap, Indonesia needed urgent reforms, including mandatory bias audits, limits on automated hiring, and bans on AI-only efficiency layoffs. Future research should empirically

assess AI's socio-economic impacts on Indonesian sectors like manufacturing and services, while developing participatory frameworks with unions and culturally attuned ethical guidelines.

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