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Exploring ethical considerations in the potential implementation of ai-driven recruitment systems in the public sector

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Abstract

AI-driven recruitment systems offer improved hiring outcomes and enhanced efficiency, which transform traditional recruitment methods. Public sector implementation of AI systems raises ethical concerns around transparency, fairness, accountability, and data privacy, crucial in the maintenance of public trust. Bias in AI presents risks to equitable hiring, highlighting the need for regular audits and bias-detection tools. The study proposes a framework for ethical considerations to guide just and fair AI-driven recruitment in the Philippine public sector, emphasizing diversity, social equity, and trust in public service. Ethical considerations ensure adherence to societal values and operational efficiency in public sector hiring.

The study adopts Descriptive Research Design to describe the sample characteristics and area of interest. Quantitative research techniques analyzed the survey data to identify correlations between ethical considerations and effective implementation of AI-driven recruitment systems in the public sector. A survey questionnaire was used as the primary data-gathering instrument, which was tested for validity and reliability. Respondents of the study are government agency employees and HR professionals, selected by Purposive Sampling Design. Statistical tools used are percentage, frequency, mean, and standard deviation. Pearson Correlation Analysis was used to measure the significant impact of key ethical considerations on the effectiveness of the potential implementation of AI-Driven recruitment systems in the public sector. Multiple Regression Analysis measured which of the key ethical considerations significantly achieve effectiveness in the potential implementation of AI-Driven recruitment systems in the public sector.

Bias, transparency, accountability, fairness, and diversity are key ethical considerations in AI-driven recruitment systems in the public sector. Bias, transparency, and diversity were found significant in the effective achievement of AI-driven recruitment systems. Accountability and fairness were not significant in AI recruitment implementation.

As diversity in the Philippines is highly pronounced, considerations on bias become essential to ensure support of AI systems for equitable public service delivery. Through bias mitigation, the Philippine government can effectively promote a fair, diverse, and trusted hiring process, vital in the creation of representative and capable workforce serving the best interests of the public. Transparency is crucial for achieving success in AI-driven recruitment implementation in the Philippine public sector, specifically in the promotion of accountability, public trust, and in providing support for legal compliance, fairness, and adaptability, thus creating a robust framework for effective and ethical AI recruitment practices. The significance of transparency in the Philippine public sector lies in ensuring fairness, fostering of trust, and alignment with regulatory and ethical standards, crucial for legitimacy and accountability of the public sector. In the effective implementation of AI-driven recruitment in the public sector, diversity was found as critical factor, contributing to the promotion of social equity, inclusivity, and fairness in hiring practices. Embracing diversity ensures the alignment of diversity with the government's mandate for the provision of equal employment opportunities and reflection of the country's diverse linguistic, cultural, and socioeconomic backgrounds. The Philippine public sector has lower perceptions of the direct impact of accountability on effective AI-driven recruitment systems, as they put priority

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to efficiency, reliance on legal standards, distributed nature of responsibility, and cultural trust, lessening the immediate need for stringent measures of accountability. Accountability is believed to play a supportive rather than a central role in determining the effectiveness of AI-driven recruitment. The perspective was found not to entirely negate accountability, but rather to contextualize the relative impact on practical outcomes of implementation. AI-driven recruitment systems' technical complexity, involving the opaque nature of machine learning models, limits traditional accountability measures, making it challenging to assign individual accountability for specific recruitment outcomes. Fairness is seen as non-significant to the effective AI-driven recruitment systems in the Philippine public sector, as efficiency, objective data, resource constraints, transparency, accountability, short-term recruitment outcomes, and merit-based selection, can take precedence over considerations of fairness. The perspective is assumed to balance societal and ethical goals for ensuring a holistic approach in public sector hiring. As the public sector considers operational efficiency as the primary measure of success, fairness becomes secondary in the achievement of recruitment objectives.

Keywords: Ethical Consideration; Bias; Transparency; Accountability; Fairness; Diversity; AI-Driven Recruitment

1. Introduction

Artificial intelligence technologies are leveraged in AI-driven systems, using machine learning, natural language processing, and data analytics for automating and enhancing various hiring aspects, which make the process more effective and efficient (Alampay, 2020; Basri, 2023). The systems offer benefits such as increased efficiency and improved hiring outcomes, which transform traditional methods of recruitment. Organizations need to address ethical considerations for ensuring fair implementation, which can ultimately support a more diverse and capable workforce. Implementation of AI-driven recruitment systems in the public sector has significantly changed the identification, evaluation, and selection of candidates.

With government agencies using AI for improving decision-making and efficiency, ethical considerations have become essential, such as fairness, transparency, data privacy, and accountability (Mergel et al., 2023). These factors are critical to building trust with candidates and stakeholders in public sector hiring. Due to the impact on the quality of public service, workforce diversity, and community representation, ethical considerations in AI-driven recruitment are crucial in the public sector. Ensuring transparency, fairness, and accountability in AI algorithms is crucial in maintaining public trust. Bias-detection tools and regular audits are needed for prevention of historical biases in training data from affecting outcomes in recruitment. A strong ethical framework is vital for organizations in aligning AI recruitment with the principles of integrity, equity, and justice, for the promotion of effective and fair hiring practices that serve the values of community.

Concerns have developed over biases, as AI-driven recruitment systems became more widely adopted, which can stem from organizational practices or model developers (Black & Esch, 2020; Woods et al., 2020). Instances of gender bias, involving assigning of lower scores to resumes of women and showing high-income job postings more often to men, have been found due to underrepresentation of female applicants in training data. The biases highlight ongoing discrimination risks in hiring, suggesting that issues can worsen if left unaddressed (Li et al., 2023).

The growing AI in HR effectiveness has led to increased reliance on systems for AI-driven recruitment for streamlining screening and reducing human bias. In the public sector, balancing ethical responsibility with innovation is vital, attributed to the significant impact on public trust and social equity (Mujtaba & Mahapatra, 2024). AI systems for recruitment are transforming hiring practices through improvement of efficiency and decision-making using automation in the public sector. Essential in maintaining trust, ensuring fair outcomes, and prevention of bias are the ethical considerations of fairness, transparency, data privacy, and accountability. Implementation of AI recruitment systems requires special attention to these values as recruitment affects social equity, community representation, and workforce diversity. Addressing bias is crucial in AI models, with bias-detection techniques and audits required in promoting equal opportunities. Balancing ethical responsibility and innovation is vital for aligning AI-driven recruitment with social justice and public service.

The study provides an ethical framework for AI-driven recruitment, offering guidance for ensuring that AI benefits public institutions and communities. The research study highlights societal implications of AI in public recruitment, which influence service delivery, workforce diversity, and the broader issues of trust, social justice, and democracy. As employee recruitment has increasingly become dependent on AI-based systems, there is limited research on the ethical considerations arising from such technology. The study aimed to explore key ethical concerns in AI-driven recruitment within the Philippine public sector, focusing on bias, transparency, and fairness.

Implementation of AI-driven recruitment in the Philippine public sector raises ethical issues, specifically around fairness, transparency, and inclusivity. AI may reinforce biases from socioeconomic disparities and historical data, which require measures for bias-mitigation and diverse datasets (Arcilla et al., 2023; Moreno, 2023). Inclusion and diversity are key concerns, with systems requiring reflection of the Philippines' varied cultural, linguistic, and socioeconomic backgrounds. Essential to ensure public trust, fairness, and clear oversight of AI-based hiring decisions are transparency, regular audits, and accountability protocols.

In the Philippines, AI-driven recruitment needs to consider ethical implications for marginalized communities, as limited technology access in rural areas can disadvantage some candidates (Arcilla et al., 2023). Ensuring fair access needs alternative methods for application, as well as account for linguistic diversity to accommodate multilingual Filipino applicants, for promoting accessibility and inclusivity for all. Systems for AI-driven recruitment in the Philippines must comply with laws for strict data privacy to ensure proper handling of personal data for the prevention of breaches and misuse (Amil, 2024; Respicio, 2024; Peramo et al., 2024). Ethical and legal considerations are crucial in AI use in the public sector, with data collection limited to the requirements of hiring for minimizing privacy risks.

To avoid negative socioeconomic impacts in the public sector, AI-driven recruitment needs to give priority to fairness, accuracy, and adaptability (Peramo et al., 2024). The systems should emphasize emerging skills that encourage partnerships with educational institutions for the development of training programs, aligned with workforce preparation and the needs of public service. Ethical approach is required in the AI-driven recruitment implementation in the Philippine public sector, focusing on inclusivity, transparency, fairness, and privacy protection (Amil, 2024). The approach ensures improvement in efficiency while maintaining alignment with societal values, which helps government agencies in the creation of recruitment processes for meeting technical capabilities and high ethical standards of AI public service delivery.

1.1. The Research Problem

The study explored the ethical considerations in the potential implementation of AI-driven recruitment systems in the public sector. Perceptions of stakeholders were sought on key ethical considerations associated with the potential implementation of AI-driven recruitment systems in government agencies, in the dimensions of bias, transparency, and accountability, considered as independent variables of the study. Perceptions of stakeholders on AI-driven recruitment systems for fairness and diversity in the public sector were determined, chosen as another set of independent variables of the study. The effectiveness of the potential implementation of AI-driven recruitment systems in the public sector, selected as the dependent variable of the study, was evaluated. The study analyzed the significant impact of key ethical considerations on the effectiveness of the potential implementation of AI-driven recruitment systems in the public sector and the key ethical considerations that significantly achieve effectiveness in the potential implementation of AI-driven recruitment systems in the public sector. Challenges in ethical considerations encountered by stakeholders in the implementation of AI-driven recruitment systems in the public sector were identified.

1.2. Null Hypotheses

The study analyzed the significant impact of key ethical considerations on the effectiveness of the potential implementation of AI-driven recruitment systems in the public sector and the key ethical considerations on bias, transparency, accountability, fairness, and diversity significantly achieve the effectiveness of the potential implementation of AI-driven recruitment systems in the public sector.

1.3. Objectives of the Study

The study explored the ethical considerations in the potential implementation of AI-driven recruitment systems in the public sector. It identified key ethical concerns associated with the proposed use of AI-driven recruitment systems in government agencies, focusing on issues of bias, transparency, and accountability. Stakeholders' perceptions of AI recruitment systems in terms of fairness and diversity. The study assessed stakeholder perceptions of AI recruitment systems in terms of fairness and diversity and perceptions of stakeholders on the effectiveness of the potential implementation of AI-driven recruitment systems in the public sector. The significant impact of key ethical considerations on the effectiveness of the potential implementation of AI-driven recruitment systems in the public sector was determined, and the key ethical considerations significantly achieve the effectiveness in the potential implementation of AI-driven recruitment systems in the public sector. Potential challenges in ethical considerations that can be encountered by stakeholders in the potential implementation of AI-driven recruitment systems in the public sector were identified.

1.4. Relevance and Significance of the Study

The study is highly relevant as it addresses critical ethical issues related to transparency, fairness, and inclusivity in public sector hiring practices. With strong emphasis put on accountability and social equity in the Philippine public sector, understanding of the impact of AI on recruitment processes is crucial. The research study contributes to the identification on ways for mitigating biases in AI systems, alignment of recruitment practices with data privacy laws, and the promotion of equal access for all applicants. Through the exploration of ethical dimensions, the study supports government agencies in the responsible adoption of AI technologies, ensuring that AI-driven recruitment positively develops public trust, creates workforce diversity, and leads to effective public services' delivery.

The study on exploration of ethical considerations for the potential implementation of AI-driven recruitment systems in the public sector is significant, as it addresses key issues of fairness, transparency, accountability, bias, and diversity, and ensuring that the AI systems are aligned with public service values, the promotion of equal opportunities, and prevention of biases. Findings of the study can serve as guide for the responsible and effective use of AI technologies in government hiring processes, for the enhancement of public trust, and fostering of capable and diverse workforce.

2. Review of Related Literature and Studies

2.1. Artificial Intelligence in Recruitment Systems

Recruitment has been transformed with the rise of digital platforms, which allow organization to connect with a more diverse and broader talent pool, ultimately enhancing the recruitment process (Vivek, 2023). AI is a key force in today's recruitment landscape, going beyond simple automation task through identification of patterns, analyzing large data sets, and the development of accurate predictions. Through automation processes, the recruitment industry has been transformed, enhancing analysis of data and streamlining the matching of candidates (Meshram, 2023; Mujtaba & Mahapatra, 2024). AI facilitates profile analysis, efficient applicant screening, and interview scheduling that enable recruitment teams in handling effectively high volumes of applications. In the public sector, AI adoption offers potential benefits and public value through enhancement of service delivery and internal operations, although it presents certain challenges and risks (Murko et al., 2023; Mergel et al., 2023). Driven by machine learning and computational power advances, AI has gained renewed interest in public administration. Efficient data processing and automation of repetitive tasks are enabled by AI in recruitment and selection, which help organizations in streamlining of HRM processes (Mori et al., 2024). Impactful in recruitment and selection is the aid provided by AI in the identification and attraction of candidates, and the selection of the most suitable one.

The studies reviewed provided insights on the advantages of AI in recruitment systems, helping in streamlining and automation of hiring process, which make the system more objective and efficient. AI tools were found to be capable of screening resumes, assessing personality traits utilizing natural language processing, and in matching job descriptions. Bias is reduced through the focus on qualifications and skills, rather than on human judgment alone, which can speed up significantly, candidate selection. Concerns are on potential bias as algorithms can be trained on historical data reflecting previous bias. AI recruitment systems help organizations in finding suitable candidates faster while improving fairness in the process of hiring.

2.1.1. Ethical Considerations in AI-driven Recruitment Systems

In AI-driven recruitment systems, ethical considerations focus on fairness, transparency, respect, and accountability for promoting bias reduction, protecting candidate privacy, and enhancement of efficiency (Sykorov et al., 2024). Through increased accuracy, efficiency, and cost-effectiveness, AI benefits recruitment while reducing human bias. The use of AI promises greater data-driven decision-making, objectivity, and impartiality; however, it raises ethical concerns that call for strategies involving diverse data sets, fair algorithms, and transparent methods for ensuring that ethical AI in use reduces potential conflicts and supports human rights (Tabassam et al., 2023). It introduces risks of algorithmic bias that can lead to discrimination, showing the need for continuous monitoring, regular audits, and multi-party involvement in data collection (Chen, 2023). Advantages offered by AI include reduction of human bias and the provision of timely feedback to applicants, which can be leveraged to achieve competitive advantage and financial benefits (Hunkenschroer & Luetge, 2022). Facilitating faster processes in selection and more efficient identification of suitable candidates are due to the rapid AI technologies advancement, improving resume screening and tools for hiring, however, AI's widespread implementation can bring to the forefront, ethical considerations (Burrel & McAndrew, 2023). Efficiency of talent acquisition is ultimately enhanced with AI-driven recruitment systems, utilizing natural language processing and machine learning.

The studies reviewed present ethical considerations in AI systems focusing on transparency, fairness, accountability, and privacy, with the potential risk of bias as algorithms are trained on historical data for hiring, potentially reinforcing discrimination based on age, gender, and race. As candidates may not be aware of decisions made by AI, transparency becomes crucial, raising concerns over explainability and accountability. Privacy is vital with AI systems processing sensitive personal data that require robust protection. Crucial for AI-driven recruitment systems is the addressing of ethical concerns for the promotion of inclusive, fair, and trustworthy hiring practices.

2.1.2. Bias in AI-driven Recruitment Systems

The complex issue of bias significantly impacts behavior and decision-making, which is vital for organizations having goals on the promotion of fairness (Lacroux & Martin-Lacroux, 2022). Perceptions can be skewed by bias, which can lead to unfair treatment, making it essential for AI recruitment systems that are offering efficiency and consistency to be managed rigorously for upholding fairness and inclusivity. Data-driven decision-making derived from AI recruitment can reduce bias by enabling the identification of patterns and trends which might be overlooked (Oman et al., 2024). Automation and streamlining of processes, efficiency and fairness of hiring systems, are enhanced, which allows organizations to evaluate objectively large volumes of applications.

AI-driven recruitment systems ensure transparency involving the development of understandable decision-making process providing clarity to both candidates and recruiters. The systems focus on disclosure of how algorithms evaluate applicants, the data to be sued, and determination of outcomes. Transparent recruitment systems ensure the building of trust, as candidates are aware of the acceptance and rejection of candidates, allowing recruiters to make fair and justifiable decisions. Improvement of transparency aids in the detection of biases and understanding of potential AI limitations, which ultimately promotes ethical hiring practices and accountability.

2.1.3. Transparency in AI-driven Recruitment Systems

In AI-driven recruitment, transparency requires the provision of timely feedback and clear information to candidates about the hiring process, aimed at fostering fair treatment (Burrel & McAndrew, 2023). While AI results in the improvement of quality feedback with data-driven insights, organizations fall short in the delivery of essential information, which can lead to candidate frustration. In building trust, companies need transparency around algorithmic criteria, selection impacts, and training data, which can allow the forming of informed choices among candidates and the promotion of fairness through clear accountability. Transparency in AI-based recruitment is crucial for accountability and faces challenges from conflicting interests and complex algorithms between concern for competitiveness of companies and regulatory oversight (Larrson et al., 2024). Providing full transparency can be difficult due to AI's opaque nature, hindering responsibility and issues for risk compliance. In building trust and upholding fairness, AI algorithms must be explainable; thus, organizations can utilize interpretable models, conducting of regular audit, and maintaining clear communication. The measures help in the responsible integration of AI into recruitment, making a balance between ethical and legal obligations with the accountability of organizations.

Transparency in AI recruitment systems revolves around open communication of AI algorithms on the development of hiring decisions. Candidates can better understand the hiring process through transparency, resulting in accountability and the fostering of trust. It allows the identification and addressing of biases within the system. Ensuring transparency in AI recruitment systems promotes fairer practices in hiring, creates ethical and trustworthy processes, and enables candidates to make informed decisions.

2.1.4. Accountability in AI-driven Recruitment Systems

AI-driven hiring decision-making values accountability, which is essential in ensuring adherence to ethical standards and labor laws, which place responsibility on hiring managers and organizations (Burrel & McAndrew, 2023). Maintaining accountability requires organizations to establish protocols on governance and AI decisions' documentation, outlining responsibilities that address issues and provide oversight. Accountability in AI recruitment entails audits and evaluations for assessing the effectiveness and fairness of the algorithms and the prompt address of identified biases (Cheung, 2024). The establishment of clear structures for governance is vital to oversee AI decisions, since human oversight is important in high-stake scenarios. Accountability is AI systems entails adherence to standards and legislation for ensuring the proper functioning of AI systems throughout the lifecycle (Novelli et al., 2024. Complicating the identification of causes of unintended results is the unpredictable nature of AI outcomes, stemming from factors of system bugs, biased training data, or social discrimination replication. In AI systems, accountability serves as critical asset and legal requirement for the enhancement of effectiveness and efficiency in law enforcement, internal security, and justice sector (OECD, 2022). The principle guides the deployment of AI for prevention of abuses of power and ensuring responsible actions towards stakeholders.

The reviewed studies and literature provided insights on AI-driven recruitment systems, that accountability ensures taking responsibility in organizations for outcomes generated by AI tools. It involves clear definitions of the responsible individual for AI decisions, addressing of errors and biases that arise, and auditing and monitoring of the performance of AI systems. Accountability ensures the adoption of mechanisms for reviewing and correcting biases and unfair impacts on candidates, emphasizing that humans are responsible ultimately for ethical hiring practices, which can reinforce fairness and trust in the recruitment process.

2.1.5. Fairness in AI-driven Recruitment Systems

AI technologies' adoption in the hiring process is aimed at enhancing efficiency in human resources, however, it raises significant ethical considerations, specifically, social discrimination risk and algorithmic decision-making (Rigotti & Fosch-Villaronga, 2024). Essential in AI recruitment are the key principles of accountability, fairness, and transparency, for the mitigation of biases that can impact proportionately, vulnerable candidates. Vital for organizations seeking to identify qualified and well-fitting candidates are the leverage of big data and machine learning and the effective utilization of AI-based recruitment (Mujtaba & Mahapatra, 2024). However, human biases can be transferred to AI systems which can exacerbate potentially systematic biases in hiring decisions. Fairness approach can be sued as essential guides for organizational behavior, for its emphasis on ethical principles and justice, which advocates for equitable treatment of stakeholders (Walters, 2021). The approach encourages firms for integrating ethical considerations in the leverage for the potential of AI in talent acquisition.

The studies show that the use of fairness in AI-driven systems ensures equitable evaluation of candidates, without discrimination based on gender, race, age, and any other irrelevant factors. The design for fair AI systems minimizes bias and develop decisions based on relevant skills and careful selection. The achievement of fairness involves regular bias audits, careful training data selection, and implementation of safeguards for preventing the perpetuating of inequalities into the system, making opportunities accessible to diverse candidates on an equal basis.

2.1.6. Diversity in AI-driven Recruitment Systems

The emphasis on diversity in the workplace has transformed recruitment strategies, that pushes organizations to meet regulatory standards and build inclusive teams. The shift demands accountable and transparent hiring based on merit rather than biases. The achievement of true diversity is challenging, with the inherent biases from historical data, and will need balanced training data for ensuring fair representation. Diversity can be limited due to entrenched patterns and systemic barriers. Mechanisms on accountability, training, and ongoing awareness are needed for supporting inclusive and fair recruitment. Artificial intelligence (AI) transforms diversity and inclusion in human resources (HR) through analysis of large sets of data for providing insights beyond human capability, helping organizations in the development of evidence-based strategies (Eapen et al., 2024). It is used by HR managers in the identification and addressing recruitment biases, evaluations, and promotions, which can promote fairer and skill-based assessments. Nuanced insights are offered by AI-driven analytics on cultural dynamics and employee experiences and the use of sentiment analysis. AI capabilities enable HR professionals in the implementation of targeted interventions that foster workplace culture for valuing diversity and inclusivity.

Studies show the focus of AI-driven recruitment on diversity for the promotion of workforce that includes people from various experiences, perspectives, and backgrounds. When successful design is adopted, AI systems help in the reduction of unconscious human biases through a focus on qualifications and skills, which can broaden the candidate pool. Ensuring diversity requires promotion of fair hiring practices and avoiding reinforcement of historical biases. AI systems can be used in aiding diversity goals through identification of underrepresented groups, the highlight of diverse talent, and to foster more inclusive practices on hiring.

2.1.7. Effectiveness of AI-driven Recruitment Systems

Playing a crucial role in the process of recruitment and selection is artificial intelligence, which benefit both employers and applicants during hiring's early stages (Talwar & Agarwal, 2023). Various AI applications and technologies are utilized by organizations for providing assistance to HR professionals, to identify talent and allow recruiters to focus on tasks that are more strategic. Through the provision of real-time engagement and feedback, and the scoring of candidates based on qualifications, skills, and experience, AI accelerates the timeline of recruitment. By enabling precise evaluation of the abilities of candidates, streamlining of HR tasks, and reduction of effort and paperwork, artificial intelligence enhances the recruitment system (Rathore, 2023). Organizational value is added through the alignment of hiring practices with market trends and efficiency, assisting HR managers in finding top talent. AI's cognitive capabilities and tailored algorithms, issues are anticipated and decision-making is improved, making AI a transformative tool for

the management of HR. Its adoption is designed to make human resources functions faster and more effective and accurate, boosting efficiency and precision ultimately in HR management processes.

The effectiveness of AI-driven recruitment systems' implementation lies in their capability for streamlining the hiring process, improvement of candidate matching, and reduction of time-to-hire. The deployed systems can provide quick screening of large volumes of resumes, identifying candidates having relevant skills, automating tasks that are repetitive, and freeing up recruiters aimed at focusing on strategic decision-making. Effectiveness of the systems is based on ongoing monitoring, careful setup, and addressing of potential inaccuracies and biases on AI models.

2.2. Frameworks of the Study

This section presents the frameworks of the study. The study utilized relevant theories to guide the research, allowing the researcher to develop connections to existing knowledge, providing the assumptions and foundation by which the study is developed. The application of the theories used, allows understanding of the phenomenon under investigation. The conceptual framework was used to represent the relationships of the variables of the study, based on the review of literature of related existing studies. It serves as the standard for defining the research problem, connecting the theories, beliefs, assumptions, and concepts behind the research, while presenting them in graphical and narrative format.

2.2.1. Theoretical Framework of the Study

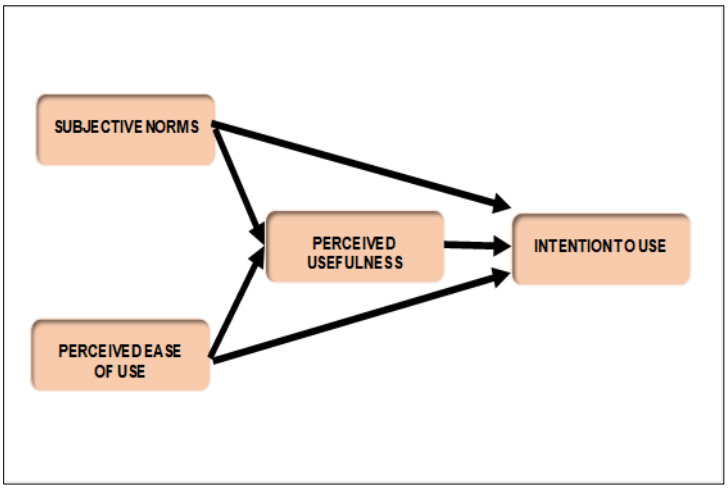

Figure 1 Technology Acceptance Model in E-recruitment

The study adopts the "Technology Acceptance Model (TAM), for understanding the adoption and use of new technologies in recruitment systems in the public sector, especially in environments requiring public accountability and organizational trust. The theory was developed by Fred Davis in 1989, explaining how users are accepting and using a technology, and adopted in the study of Azzatillah et al. (2024), as the model for technology acceptance on intention to use e-recruitment. Technology Acceptance Model was used in analyzing and understanding the factors influencing the acceptance of E-recruitment utilizing the TAM theory.

The "Technology Acceptance Model" is a theoretical framework used in understanding user behavior in various scenarios for technology adoption. It has the key components of subjective norms, perceived usefulness, perceived ease of use, and behavioral intention to use. As depicted in the framework, TAM incorporates the constructs of subjective norms, perceived ease of use, and perceived usefulness, as influencing the intention to use the technology.

Subjective norms inform the accepted behavior of preference groups, allowing the behavior to be supported and accepted more by the social community, until the support can lead to behavioral intentions. They refer to the behavior of the person that depends on social pressure, in which perception that other people expect and approve can influence significantly the intention of the individual to utilize digital recruitment tools. A person's belief in a particular behavior is affected by subjective norms, considered as key in shaping the attitudes and intentions of individuals toward using recruitment platforms.

Perceived usefulness is the degree to which the user believes that the use of the technology will improve the performance of the job or achieve their goals. It is a critical factor in analyzing technology acceptance, as users are more

inclined to adopt a technology, with the belief that it will enhance their outcomes or performance. In recruitment, it is a measure of job seekers benefit from finding information which are job-related, on the website of the company. Technology systems are designed for obtaining more benefits, which increases users' intention to use the system. Job seekers intend to use e-recruitment as they feel that the system is beneficial in collecting relevant work-related data and information, positively affecting the intention to use the technology in recruitment.

Perceived ease of use is the degree of belief of the user that the use of technology will be free from effort, and users will adopt the technology if they understand and find it easy to use. The overall attitude of the user toward the use of technology is the attitude toward using, which is influenced by perceived usefulness and perceived ease of use. Behavioral intention is the intention of the user to use the technology in the future, which is a strong predictor of actual use of technology. As users consider technology as easy to use, the intention to use increases, influencing positively, the intention of job seekers to use e-recruitment.

Intention to use is the extent to which an individual has planned consciously in engaging or refraining from a specific behavior, which is a critical predictor of the usage of the actual system. The model shows the direct influence of subjective norms, perceived ease of use, perceived usefulness on the intention to use e-recruitment system, and all factors significantly influencing each other.

In assuming the different factors together, the framework shows the interaction of the user with the new technology which is useful, simple in usage, and valuable, resulting in positive attitude of the user, which can increase the intention to use the technology. People having better self-efficacy are more optimistic in the utilization of the new information technology, have higher satisfaction, and easier acceptance time. Perceptions and expectations in the selection of technology positively impact on the perceived usefulness of technology. Social norm is the impact of other people on engagement decision in the use of technology, serving as justification for engagement in the behavior.

In the implementation of AI-driven recruitment systems, the Technology Acceptance Model (TAM), provides a structured approach through the focus on perceived ease of use and usefulness, essential in making informed decisions by designing, implementation, and monitoring of AI recruitment systems for ensuring the alignment with public values and enhancing successful adoption. Public sector employees, job applicants, and hiring managers can have varying levels of understanding and trust in an AI-driven recruitment system. Figure 1, presents the theoretical framework of the study.

2.2.2. Conceptual Framework of the Study

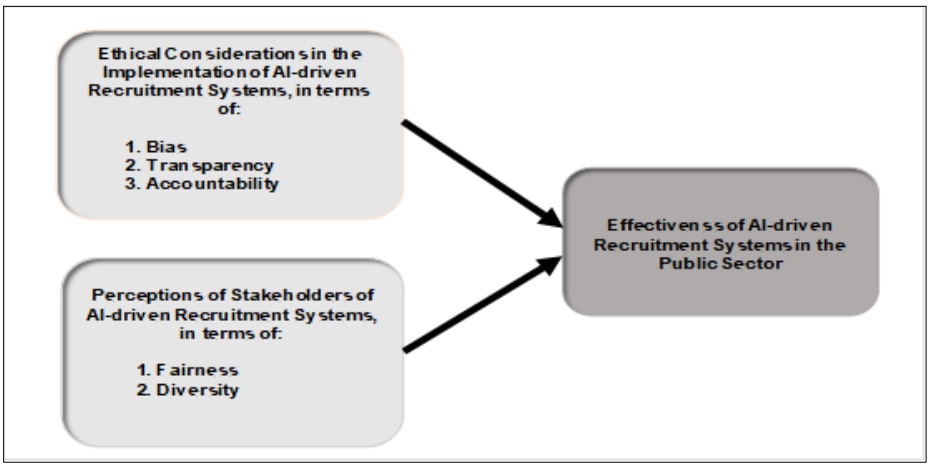

Figure 2 Conceptual Framework of the Study

Impact Model of Ethical Considerations on the Potential Implementation of AI-driven Recruitment Systems in the Public Sector"

The study adopts the "Impact Model of Ethical Considerations on the Potential Implementation of AI-driven Recruitment Systems in the Public Sector, as conceptual framework of the study. It proposes an impact model, to describe a simplified framework of the concepts and variables used in the study, their relationships, and direction of influence. The study is guided by the "Technology Acceptance Model", used as Theoretical Framework of the Study, for understanding and

analyzing how users accept and use technology, first introduced by Fred Davis (1989), and proposed in the study of Azzatillah et al. (2024).

The "Technology Acceptance Model" is a theoretical framework used in understanding user behavior in various scenarios for technology adoption. It has the key components of subjective norms, perceived usefulness, perceived ease of use, and behavioral intention to use. As depicted in the framework, TAM incorporates the constructs of subjective norms, perceived ease of use, and perceived usefulness, as influencing the intention to use the technology.

In the present study, the Technology Acceptance Model (TAM), is used to uncover perceptions of stakeholders of the AI-driven recruitment systems in the Philippine public sector, on the ease of use, usefulness, and ethical applicability of the AI systems, which can bring questions of transparency, fairness, accountability, and diversity. The model also helps in identifying areas where technology design, monitoring, and training can be enhanced for ensuring that AI-driven recruitment systems' adoption is aligned with ethical standards expected in recruitment in the public sector, which can ultimately foster public confidence and trust in AI-driven processes.

As shown in the model, the study explores ethical considerations in the potential implementation of AI-driven recruitment systems in the public sector. Stakeholders' perceptions of key ethical considerations associated with AI-driven recruitment systems' implementation, is assessed in the aspects of bias, transparency, and accountability, considered as independent variables of the study. Perceptions of the AI-driven systems were determined in the dimensions of fairness and diversity, chosen as another set of independent variables of the study. AI-driven recruitment systems' effectiveness of implementation in the public sector was evaluated, considered as the dependent variable of the study.

The focus on ethical considerations allows organizations the responsible implementation of AI-driven systems that support transparent, fair, and inclusive hiring process, respecting the rights of candidates and promoting organizational integrity (Li, 2023). In the public sector, ethical AI requires continuous oversight commitment and accountability, which makes it possible for the leverage of the benefits of AI without compromising equity and fairness. Ethical decision-making is crucial, which involves the systematic assessment of the potential impact of actions, making a balance between benefits and harm, and consultation of relevant ethical guidelines and frameworks.

Bias is the unequal treatment of candidates based on factors which may not be relevant to job performance, which can result in exclusion of qualified candidates and discriminatory hiring practices (Bansal et al., 2023). As government agencies are held to high standards of transparency, fairness, and equal opportunity, bias in the recruitment system of the public sector can pose unique consequences and challenges. Addressing bias in AI-driven recruitment through strict adherence to ethical mandate is vital for creating fair and inclusive hiring process, requiring a proactive approach that can make the system equitable and responsible for all candidates.

In AI-driven recruitment systems, transparency provides accessible and clear information about algorithms, processes, and data underpinning recruitment decisions, to make the recruitment process available and understandable to relevant stakeholders (Cheong, 2024). It is vital in the public sector for ensuring fairness, fostering trust, and the promotion of accountability, through the provision of clear communication about recruitment outcomes and job criteria, in order to create a more equitable hiring environment. Transparency in the public sector enhances the integrity of the process of recruitment and aligns with the values of equity and fairness, crucial in the effective delivery of services to diverse communities.

Accountability is a principle in governance and ethical behavior, which ensures that decisions and actions are aligned with established values and standards (OECD, 2023). It involves the answerability for one's decisions and actions, encompassing the idea that agencies and individuals are responsible for their conduct and can justify their choices to stakeholders. The public sector ensures that AI-recruitment systems provide hiring practices are transparent, fair, and aligned with legal and ethical standards.

Fairness is a critical aspect of AI-driven recruitment systems, ensuring that hiring practices are unbiased, equitable, and just for all candidates, which involves the design and implementation of systems that do not discriminate individuals based on irrelevant characteristics (Mujtaba &. Mahapatra, 2024). It is a fundamental principle in ethics that guide decision-making and behavior for ensuring that individuals are treated without bias. In the public sector, it ensures that hiring practices are transparent, equitable, and representative of the diverse populations, aimed for equitable outcomes and equal opportunity in hiring processes.

Diversity in AI-driven recruitment systems is the intentional effort for creating a workforce reflecting varies experiences, backgrounds, and perspectives, supported through the reduction of human biases in hiring (Vivek, 2023). AI algorithms can help in reducing subjective biases by objectively screening resumes based on experience, skills, and relevant qualifications. In the public sector, diversity ensures that government workforce is reflecting diverse communities and upholding the values of fairness, equity, and inclusion.

Effectiveness in the implementation of AI-driven recruitment systems in Philippine public sector relates to the attainment of the goals and effective management of ethical considerations for ensuring equitable and fair hiring practices and aligned to the values of the public sector and the upholding of public trust. Through careful implementation of the AI-driven recruitment system, emphasizing fairness, transparency, diversity, fairness, the AI recruitment system can achieve effectiveness in the public sector.

The implementation of AI-driven recruitment systems in the public sector emphasizes ethical considerations, requiring planning to maintain transparency, fairness, accountability, diversity, and fairness. Through the adherence to ethical principles, government agencies can improve efficiency and effectiveness in the recruitment processes, while maintaining the public's commitment to equality and trust. Figure 2, presents the conceptual framework of the study.

3. Methods

This section presents the scientific techniques that were used in the conduct of the research study employing procedures and methods in finding solutions to the research problems. It shows how the research study is scientifically done and the various steps generally adopted to study the research problem together with the logic behind them.

3.1. Research Design

The research study adopts "Descriptive Research Design", describing the sample characteristics and the area of interest, for discovering new meaning, describing the situation as it naturally occurs, and discovering relationships among the selected variables. Descriptive Research Design is used in systematically observing and documenting the behaviors, characteristics and attributes of a particular situation, population, or phenomenon, without the manipulation of variables, aiming to provide an accurate and comprehensive picture of the subject being studied (Siedlecki, 2020). Quantitative research techniques are used in the study for analyzing survey data for identification of correlations between ethical considerations and effective AI-driven recruitment systems' implementation.

Quantitative research method was used to quantify the opinions and perceptions of the respondents and generalize results from the sample. It quantifies the problem through the generation of numerical data which can be transformed to useable statistics (Martin, 2020). Survey method was used, utilizing survey questionnaire as the primary data gathering instrument. Survey research can be used in quantitative research method to obtain information with the aim to describe the sample's characteristics reflecting their personal and demographic characteristics (Walter, 2021). Survey method utilized survey questionnaire as the primary data gathering instrument. Survey research in quantitative research method obtains information for describing the sample's characteristics reflecting their personal and demographic characteristics (Gul, 2023).

3.2. Respondents of the Study

Table 1 Distribution of Respondents of the Study

Respondent Government Agencies	Respondents	Sample Size	Sampling Method Used
Dept. of Finance	Employees & HR Personnel	30	Purposive Sampling Design
Insurance Commission	Employees & HR Personnel	30	Purposive Sampling Design
Securities & Exchange Commission	Employees & HR Personnel	30	Purposive Sampling Design
PDIC	Employees & HR Personnel	30	Purposive Sampling Design
BSP	Employees & HR Personnel	30	Purposive Sampling Design
Total		150	

Respondents of the study are government agency employees and HR professionals, selected by Purposive Sampling Design. Sampling design is used in the study in order to select the sample through estimation of the characteristics of

the population and be able to obtain information about an entire population through examination of only a part of it. The study utilizes sampling method in order to obtain a subset from the entire population to be able to make inference about the population of the study. Sampling involves selecting a subset of the population of interest, allowing the collection of data faster instead of the attempt to reach very member of the population (Turner, 2020).

3.2.1. Inclusion Criteria for Respondents

- Only those respondents who were willing to participate in the study will be taken as participants of the study.
- Ethical considerations were strictly followed in the conduct of data gathering procedure

3.2.2. Exclusion Criteria

- Respondents who were not willing to participate in the study.
- Respondents who were not be available during the administration of the questionnaire.

The respondent government agencies were selected using Purposive Sampling Design. Purposive sampling design, is a non- probability sampling design in which the researcher sets criteria for the selection of the sample and sample size of the study. It is also known as judgment sampling, which relates to the deliberate choice of the researcher to simply put what needs to be set out or known in order to find people who are willing and are able to provide the information by virtue of their experience or knowledge (Thomas, 2022). In this study, purposive sampling was used to select the respondent government agencies in Metro Manila, Philippines, in which respondents are viewed by the researcher as having knowledge, experience, well-informed, and proficient with the phenomenon of interest.

3.3. Research Locale

This section provides a description of the location where the research study was conducted, crucial to contextualize the study and help readers understand the setting and the potential influence on the study.

The study was conducted in finance-related Philippine government agencies in Metro Manila, in which the respondent organizations are perceived by the researcher as providing a mix of regulatory oversight, ethical insight, practical application, which make them suitable for research study, into the ethical considerations of AI-driven recruitment systems. The multi-site approach involving the DOF, IC, SEC, PDIC, and BSP, can provide a comprehensive view, which captures ethical, technological, and regulatory dimensions in the Philippine public sector. The choice for research locale strengthens the findings of the study on ethical readiness and feasibility of the AI-driven recruitment in the public sector.

3.4. Data Gathering Procedure

Approval from the Office of the Graduate School and the respondent government agencies were sought by the researcher for the conduct of the survey. An orientation session with the study participants was held, on the observance of ethical considerations during the conduct of the survey. Guidelines on the ethical issues in the conduct of the research study were strictly be followed. Figure 3, presents the procedure for the collection of data in the study.

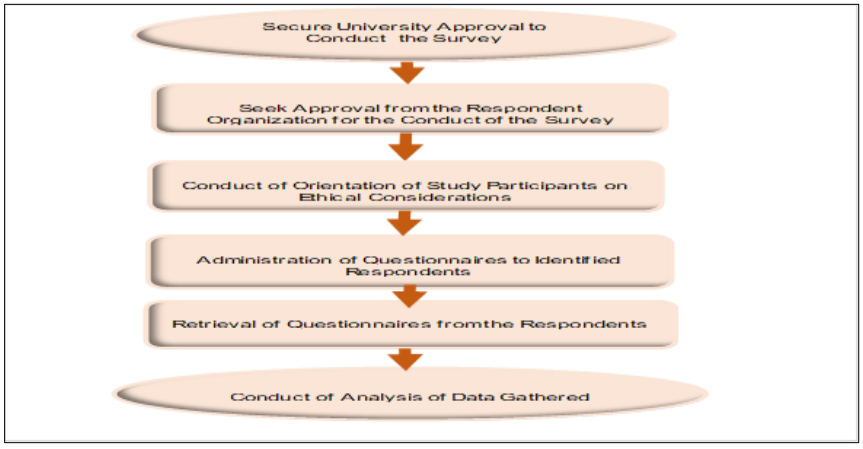

Figure 3 Flowchart for the Collection of Data

3.5. Research Instrument

The researcher formulated the survey instrument in order to deal with the various issues covered in this study. The data gathering instrument was specifically designed to address the problems identified in the study. The Likert Scale Self-made Questionnaire was used in the collection of data from the above-mentioned participants. The Likert Scale Questionnaire is designed to answer the questions indicated in the statement of the problem and developed following the sequencing of the statement of the problem, to ensure that the problems of the study are addressed in the conduct of the research analysis. The questionnaire is composed of a list of close-ended questions for which the respondents gave their answers, and were distributed to the respondents on the approved schedule.

3.6. Validity of the Research Instrument

The survey questionnaire used as the data gathering instrument was tested for validity. It is the extent to which a measure represents adequately the underlying construct or the attribute being investigated by the researcher. It explains the accuracy and effectiveness of the data collected in covering the actual area of investigation, measuring what is intended to be measured (Jiao & Sang, 2023). Content validity test involves the evaluation of the survey instrument designed to ensure that all essential items are included and eliminating undesirable items to the particular construct domain (Rozali et al., 2022).

In this study, to establish the validity of the survey instrument, the judgmental approach involved the validation of the questionnaire by 10 experts in recruitment in government agencies and employees in the public sector. The study determined the "Content Validity Ratio" developed by Lawshe's Method (1975), The "Critical Value Ratio" (CVR), proposed by Jeldres et al. (2023), is a linear transformation of a proportional level of agreement on how many experts within a panel rate the items in the survey instrument as "essential". The method eliminates items which are not significant at the critical level. The following formula was used:

$$CVR = (ne - ((N)/(2)))/(N/2)$$

Where:
CVR = Content Validity Ratio
n_e = Number of experts indicating the items as "essential"
N = Total number of experts

Content validity test was conducted, utilizing ten (10) government agency employees and HR professionals as respondents, to test the degree to which the items in the research instrument reflect the content universe. With panel size equivalent to 10 participants, responses of respondents were analyzed, that items in the instrument are important and essential.

3.7. Reliability Test of Survey Questionnaire Using Cronbach's Alpha:

Utilizing Cronbach's Alpha, "Reliability" test was conducted to ensure the precision, consistency, trustworthiness, and repeatability of the survey questionnaire to be used as the primary data gathering instrument of the study. The test establishes the faith on the data gathered using the survey instrument, of the degree to which the instrument controls for random error. Reliability indicates the measurement supplying consistent results and can be obtained in identical situations under different circumstances (Jiaoa & Sang, 2023). It is the degree that the instrument produces consistent results which are free from measurement errors and reflecting the true score of that measure.

Cronbach Alpha Coefficient of 0.70 is considered as acceptable minimum internal consistency coefficient (Jiaoa & Sang, 2023). Nawi et al. (2020), recommends the value for reliability as 0.6 or greater to indicate high association of consistency and reliability which enhances the quality of the study. In this study, the conduct of reliability test was done by distributing survey questionnaires to a minimum of 30 respondents who were excluded in the actual survey. The gathered data were analyzed and computed to determine the value of the Cronbach's Coefficient Alpha. A reliability of 0.70 indicates high reliability of the research instrument (Ahmed et al., 2022). Reliability must be combined with validity, thus, the test to be reliable must also be valid.

The reliability of the questionnaire was assessed using Cronbach's Coefficient Alpha. Survey questionnaires were distributed to 30 respondents for answering the questions. The chosen respondents for reliability testing did not participate anymore in the actual survey. Responses were analyzed and Cronbach's Coefficient Alpha was computed using the SPSS software. The items were checked whether as having a high level of internal consistency and reliability, utilizing the Cronbach's Coefficient Alpha. A pilot survey can be conducted in establishing the scientific clarity of the

research questions, vague questions are eliminated, and amendments to the questionnaire are made, based on the responses of the respondents (Shodiya & Adekunle, 2022).

3.8. Statistical Treatment

The collected data were consolidated, analyzed, and presented in tables. The following statistical tools were used:

Percentage and Frequency. The tools were used to present the findings on the profile of the respondents. Frequency is related to the basic measure utilized in describing and summarizing discrete or categorical data, presented in frequency distribution form to show the number of occurrences of each value within a dataset (Sutrisno, 2020). It provides insights into the characteristics and patterns of the data, helping the researchers to understand the prevalence of different values and categories for detection of patterns within the data set (Heuvel-Panhizen & Drijvers, 2020).

Percentage is used to express the proportion or part of a whole as a fraction of 100, for describing the relative proportions or frequencies of different values or categories within a set of data (Putrawangs et al., 2020). It allows for easy interpretation and comparison within the data set and providing understanding of the relative importance of values in relation to the whole (Shvarts et al., 2021).

Arithmetic Mean. This tool was used to describe the perceptions of respondents on key ethical considerations associated with the potential implementation of AI-driven recruitment systems in government agencies; perceptions of stakeholders of AI-driven recruitment systems; and the potential challenges in ethical considerations that can be encountered by stakeholders in the potential implementation of AI-Driven recruitment systems in the public sector.

Mean is the measure of central tendency used to represent the entire value of the distribution. It is a central tendency measure identifying a single value to represent an entire distribution, providing an accurate description of the entire data (Kumar & Reddy, 2023). It is used to represent the entire value of the distribution indicating the average value of a group of numbers (Ali, 2021).

Standard Deviation. This tool was used to measure variation of responses on the key ethical considerations associated with the potential implementation of AI-driven recruitment systems in government agencies; perceptions of stakeholders of AI-driven recruitment systems; and the potential challenges in ethical considerations that can be encountered by stakeholders in the potential implementation of AI-Driven recruitment systems in the public sector. Standard deviation will be used in the study to find the disparity between the calculated mean values indicated in the statement of the problem. It can reflect the degree of dispersion of a data set. It will be used to indicate the fluctuation of the variables around the mean and measures dispersion of values around the mean (Omda & Sergent, 2023).

Standard deviation refers to variability measure expressed in same units as the data, indicating variation within a group of values, measuring the deviation from the group's mean (Darling, 2022). It is a statistical measure demonstrating the variability of data, estimating the degree to which the value of the variable deviates from the mean (Chi et al., 2023). A low standard deviation indicates data points which are close to the mean and a high standard deviation shows the spread of data over a wide range of values.

4. Pearson Correlation Analysis.

This statistical tool was used to measure the significant impact of key ethical considerations on the effectiveness of the potential implementation of AI-Driven recruitment systems in the public sector. Correlation analysis requires measuring the degree of association or relationship between two variables in ascertaining their positive or negative relationship or no relationship in any way, and expressed by the correlation coefficients (Yu & Hutson, 2024). The tool measures the degree of association between two variables in describing their relationship (Li et al., 2022). It explores the degree of relationship between the two variables under consideration in which the degree of relationship of the variables are quantified by the correlation coefficient (Senthilnathan, 2019). It is a measure of two random variables' association with the correlation coefficients describing the direction and strength of the association. (Sutradharal et al., 2023).

Multiple Regression Analysis. This statistical tool measured which of the key ethical considerations significantly achieve effectiveness in the potential implementation of AI-Driven recruitment systems in the public sector. It is a model used in practical problems to analyze and make judgment on future events and in obtaining reasonable decision results (Kang & Zhao, 2020). Acceptance and rejection of null hypothesis will be at 5% significance level.

5. Data Management Tool

To simplify the necessary statistical calculations, computer software was used. Microsoft Excel was used for data management while the SPSS facilitated the analysis of the data. An appropriate coding system was designed to enable the gathered data to fit into the computer software application.

5.1. Ethical Considerations

The study takes into account the rights, well-being, and dignity of study participants and the broader principles of ethics that guide the research study. In the conduct of research, the following key ethical considerations were considered:

5.2. Informed Consent

The researcher obtained informed consent from study participants, to ensure that respondents have clear understanding of the procedures, purpose, benefits, risks, and their rights as participants. Participants must be aware that participation in the study is voluntary, without undue influence or coercion, thus, informed consent is maintained and documented throughout the study.

5.3. Privacy and Confidentiality

The researcher protects the confidentiality and privacy of the respondents, keeping personal identifiable information of respondents.

5.4. Minimization of Risks and Harms

The study took measures in minimizing potential social, psychological, and physical harm to study participants, ensuring that the benefits of the study outweigh foreseeable risks, thus, participants will not be exposed to unnecessary discomfort or risk.

5.5. Voluntary Participation and Withdrawal

Study participants were given the freedom to choose for participation or withdrawal for participation in the study. Their right to decline participation or withdrawal without penalty was considered.

5.6. Conflict of Interest

Potential conflicts of interest that can affect the design, reporting of results, or conduct of the study shall be disclosed. This can include professional. Financial, or personal conflicts that can compromise the objectivity or integrity of the research undertaking.

5.7. Research Integrity and Misconduct

The researcher ensured adherence to the highest standards of research integrity, avoiding any of misconduct during the research study, with the results of the study, will be reported honestly and accurately.

The study adheres to the ethical principles and guidelines, ensuring the protection of the rights and welfare of the respondents, in maintaining the credibility and integrity of the research process. As research involves human participants, ethical issues must be considered during the research approach design and approved by the relevant ethical committee prior to data collection (Fleming & Zegwaard, 2018). Ethical issues of informed consent, confidentiality, risk of harm, conflict of interest, and anonymity are presented with a plan on how the issues will be managed to encourage, inform, and enable further research (Committee of Publishing Ethics, 2018). Ethical considerations in research are set of practices and principles guiding research designs, which must be followed in the conduct of research to ensure that the rights of participants are maintained, research validity is enhanced, and scientific integrity is maintained (Ederio et al., 2023). Ethical issues of informed consent, confidentiality, risk of harm, conflict of interest, and anonymity are presented with a plan on how the issues will be managed to encourage, inform, and enable further research (Ubi et al, 2020).

6. Results

This chapter presents the analysis, interpretation, and discussions of statistical findings of the study. The findings are presented following the order of the statement of the problem.

6.1. Profile of the Respondents

Table 2 Distribution of Respondents According to Age

Age	Frequency	Percent
21 – 30 years	66	44
31 to 35 years	34	22.7
36 to 40 years	32	21.3
41 years & above	18	12
Total	150	100

Distribution of the respondents according to age is presented in Table 2.

Findings show that majority of the respondents who participated in the survey for key ethical considerations in the potential implementation of AI-driven recruitment systems in the public sector, are in the age range of 21 to 30 years old, with 66 employees in the age range of 21 to 30 years, corresponding to 44%; 34 respondents are in the age group of 31 to 35 years (22.7%) and 32 respondents in the age range of 36 to 40 years or 21.3%. The lowest group are respondents who are 41 years and above, with 18 employees or 12%.

Table 3 Distribution of Respondents According to Gender

Gender	Frequency	Percent
Male	64	42.7
Female	86	57.3
Total	150	100

Table 3, presents the distribution of respondents according to gender. Findings show that majority of the participants of the study are female, with 86 respondents, corresponding to 57.3%, followed by male participants, with 64 respondents or 42.7%.

Table 4 Distribution of Respondents According to Educational Attainment

Educational Attainment	Frequency	Percent
College Graduates	64	42.7
Master's Degree	54	36
Doctoral Degree	32	21.3
Total	150	100

Distribution of respondents according to educational attainment are shown in Table 4. Majority of the respondents are college graduates, with 64 respondents or 42.7%, followed by those having master's degree, with 54 respondents, or 36%. The smallest group, with 32 respondents, have doctoral degree, or 21.3%.

Table 5 Distribution of Respondents According Civil Status

Civil Status	Frequency	Percent
Single	56	37.3
Married	94	62.7

Total	150	100

As depicted in Table 5, 94 respondents are married or 62.7%, the highest group, followed by 56 respondents, who are single, equivalent to 56%.

Table 6 Distribution of Respondents According to the Number of Years in Service

Number of Years in Service	Frequency	Percent
5 to 10 years	62	41.3
10 to 15 years	47	31.3
16 to 20 years	23	15.3
21 years & above	18	12
Total	150	100

Table 6 shows the distribution of respondents according to the number of years in the service. Findings revealed that majority of study participants have 5 to 10 years job experience, with 62 respondents or 41.3%. It is followed by the second biggest group with 47 respondents or 31.3% having 10 to 15 years job experience. The smaller groups are those with 16 to 20 years of experience, with 23 respondents or 15.3% and 18 respondent or 12%, with job experience of 21 years and above.

6.2. Key Ethical Considerations Associated with the Potential Implementation of AI-driven Recruitment Systems in Government Agencies

Table 7 Bias in AI-driven Recruitment Systems in the Public Sector

No.	Bias in AI-driven Recruitment Systems	N	Mean	Std. Deviation	Description
1	AI-driven recruitment counteracts historical bias, removing variables that introduce unfair preferences.	150	4.45	0.729	Agree
2	The system applies detection techniques and tools for identifying and reducing problematic patterns within the data.	150	4.31	0.685	Agree
3	The system provides fairness-aware tools and models that flag potentially variables that are problematic for ensuring the use of only relevant and non-biased factors.	150	4.06	0.605	Agree
4	The system ensures diverse representation in the validation of model's accuracy and representation of training data sets across different demographic groups, to mitigate exclusion of marginalized and minority groups.	150	4.09	0.590	Agree
5	The system allows the conduct of regular bias audits on AI systems for identifying and addressing emerging bias, to ensure that the process of recruitment is relevant and fair over time.	150	4.46	0.598	Agree
Arithmetic Mean		150	4.28	0.641	Agree

As shown in Table 7, respondents agree that implementation of AI-driven recruitment systems in the public sector recognizes key ethical considerations in the form of bias, thus, enable the system to conduct regular bias for identifying and addressing, to ensure relevant and fair recruitment process over time, with the highest mean of 4.46. AI-driven recruitment counteracts historical bias, removing variables that introduce unfair preferences; applies detection techniques and tools for identifying and reducing problematic patterns within the data; provides fairness-aware tools and models that flag potentially variables that are problematic for ensuring the use of only relevant and non-biased factors; and ensures diverse representation in the validation of model's accuracy and representation of training data sets across different demographic groups, to mitigate exclusion of marginalized and minority groups, with mean values of 4.45, 4.37, 4.06, and 4.09, respectively.

The grand mean of 4.28, revealed the overall agreement of the respondents on the recognition of bias in AI-driven recruitment systems in the public sector, supported by the homogeneity of respondents' responses, with the average standard deviation of 0.641. Ethical consideration is emphasized in the AI system for the reduction and avoidance of bias and increased efficiency and accuracy in decision-making processes, to ensure that the delivery of government services is provided to citizens equitably in the identification, attracting, and hiring of top talent.

Table 8 Transparency in AI-driven Recruitment Systems in the Public Sector

No.	Transparency in AI-driven Recruitment Systems	N	Mean	Std. Deviation	Description
1	Transparency in data sources and algorithms in AI-driven system allows greater trust and scrutiny in the recruitment process.	150	4.35	0.716	Agree
2	Transparency in AI-driven system provides candidates with clear information of the recruitment process, that enhances candidate's overall experience and promotes informed consent.	150	4.31	0.794	Agree
3	The system utilizes interpretable models and explains key decision factors for clarifying the choices of AI.	150	4.55	0.719	Strongly Agree
4	Candidate awareness is provided on AI-driven assessments in the recruitment process for ethical transparency, enabling the candidate to make informed choices.	150	4.57	0.717	Strongly Agree
5	Decision-making process of the AI recruitment model provides transparency allowing applicants to understand decisions made for rejection and shortlisting, ensuring consistent and fair hiring practices.	150	4.10	0.343	Agree
Arithmetic Mean		150	4.38	0.658	

Table 8, presents ethical considerations on transparency, with respondents in agreement of its integration in the implementation of AI-driven recruitment systems in the public sector. Candidate awareness is provided on AI-driven assessments in the recruitment process for ethical transparency, enabling the candidate to make informed choices, with the highest mean of 4.57. Transparency in data sources and algorithms in AI-driven system allows greater trust and scrutiny in the recruitment process; provides candidates with clear information of the recruitment process, that enhances candidate's overall experience and promotes informed consent; clear information of the recruitment process, that enhances candidate's overall experience and promotes informed consent; utilization of interpretable models and explains key decision factors for clarifying the choices of AI; and decision-making process of the AI recruitment model providing transparency allowing applicants to understand decisions made for rejection and shortlisting, ensuring consistent and fair hiring practices, with the mean values of 4.35, 4.31, 4.55, and 4.10, respectively.

The grand mean of 4.38, revealed the overall agreement of the respondents on the recognition of transparency in AI-driven recruitment systems in the public sector, supported by the homogeneity of respondents' responses, indicated by the average standard deviation of 0.658.

Table 9 Accountability in AI-driven Recruitment Systems in the Public Sector

No.	Accountability in AI-driven Recruitment Systems	N	Mean	Std. Deviation	Description
1	The AI-driven recruitment system establishes clear lines of accountability for decisions made in the system, which ensure mechanisms are in place for addressing grievances.	150	4.58	0.495	Strongly Agree
2	The system implements feedback loops allowing for continuous improvement and monitoring of the AI system.	150	4.27	0.776	Agree
3	Accountability of the system allows responding to feedback from stakeholders and candidates about the process of recruitment.	150	4.08	0.574	Agree
4	The system ensures that parties involved are taking responsibility for AI system's impact and outcomes, providing oversight mechanisms for ensuring unbiased, fair, and reliable recruitment system.	150	4.15	0.408	Agree
5	The system introduces and amplify biases through ongoing evaluation for identifying, addressing, and prevention of biases, and detecting unfair treatment of candidates.	150	4.17	0.607	Agree
Arithmetic Mean		150	4.25	0.572	Agree

As shown in Table 9, respondents agree that implementation of AI-driven recruitment systems in the public sector recognizes key ethical considerations in the form of accountability, allowing the system to establish clear lines of accountability for decisions made in the system, which ensure mechanisms are in place for addressing grievances, with the highest mean of 4.58. The system implements feedback loops allowing for continuous improvement and monitoring of the AI system; accountability of the system allows responding to feedback from stakeholders and candidates about the process of recruitment; ensures that parties involved are taking responsibility for AI system's impact and outcomes, providing oversight mechanisms for ensuring unbiased, fair, and reliable recruitment system; and introduces and amplify biases through ongoing evaluation for identifying, addressing, and prevention of biases, and detecting unfair treatment of candidates, with mean values of 4.27, 4.08, 4.15, and 4.7, respectively.

The grand mean of 4.25, revealed the overall agreement of the respondents on the recognition of accountability in AI-driven recruitment systems in the public sector, supported by the homogeneity of respondents' responses, with the average standard deviation of 0.572.

6.3. Perceptions of Stakeholders of AI-driven Recruitment Systems:

Table 10 Fairness in AI-driven Recruitment Systems in the Public Sector

No.	Fairness in AI-driven Recruitment Systems	N	Mean	Std. Deviation	Description
1	The AI system ensures the avoidance of bias based on race, gender, personal characteristics, or age, utilizing diverse training data for identifying and mitigating discriminatory outcomes.	150	3.93	0.848	Agree

2	AI-driven recruitment system provides equal opportunity for all applicants to ensure fairness through creation of processes which are inclusive and transparent to enable the access of job opportunities to underrepresented groups.	150	4.05	0.553	Agree
3	The system provides bias-detection techniques and tools for promoting equality, such as regular testing for demographic parity and fairness constraints.	150	4.29	0.471	Agree
4	AI system employ fairness metrics and reporting that allows monitoring of recruitment decisions to ensure alignment and commitment to equity and diversity.	150	4.72	0.519	Strongly Agree
5	The system creates and maintains processes for evaluating candidates impartially, minimizing biases and avoiding discrimination based on characteristics which are not related to job performance.	150	4.75	0.508	Strongly Agree
Arithmetic Mean		150	4.35	0.519	Agree

As shown in Table 10, respondents agree that implementation of AI-driven recruitment systems in the public sector recognizes key ethical considerations in the form of fairness, allowing the AI system to create and maintain processes for evaluating candidates impartially, minimizing biases and avoiding discrimination based on characteristics which are not related to job performance, with the highest mean of 4.75. The AI system ensures the avoidance of bias based on race, gender, personal characteristics, or age, utilizing diverse training data for identifying and mitigating discriminatory outcomes; provides equal opportunity for all applicants to ensure fairness through creation of processes which are inclusive and transparent to enable the access of job opportunities to underrepresented groups; provides bias-detection techniques and tools for promoting equality, such as regular testing for demographic parity and fairness constraints; and employs fairness metrics and reporting that allows monitoring of recruitment decisions to ensure alignment and commitment to equity and diversity, with mean values of 3.93, 4.05, 4.29, 4.72, respectively.

The grand mean of 4.35, revealed the overall agreement of the respondents on the recognition of bias in AI-driven recruitment systems in the public sector, supported by the homogeneity of respondents' responses, indicated by the average standard deviation of 0.519.

Table 11 Diversity in AI-driven Recruitment Systems in the Public Sector

No.	**Diversity in AI-driven Recruitment Systems**	**N**	**Mean**	**Std. Deviation**	**Description**
1	The AI system captures diverse skills and experiences of marginalized groups, ensuring account for diverse career paths vital for equitable public sector hiring.	150	4.733	0.587	Agree
2	Standardized criteria are applied in AI-driven recruitment, emphasizing job-relevant experience and skills, which minimizes subjective biases that can disadvantage certain groups.	150	4.29	0.640	Agree

3	Diversity is promoted by removing and identifying unbiased language that deter diverse candidates for promoting inclusivity in presentation of roles.	150	4.19	0.673	Agree
4	The AI system is trained on data for varied career and demographic backgrounds, helping ensure the recognition of the model for range of experiences and qualifications.	150	4.41	0.706	Agree
5	The system allows the conduct of audits of AI-driven recruitment for maintain public trust and enabling government agencies to proactively address biases.	150	4.44	0.596	Agree
Arithmetic Mean		150	4.36	0.640	Agree

As shown in Table 11, respondents agree that implementation of AI-driven recruitment systems in the public sector recognizes key ethical considerations in the form of diversity, thus, allows the AI system to capture diverse skills and experiences of marginalized groups, ensuring account for diverse career paths vital for equitable public sector hiring, with the highest mean of 4.46. Standardized criteria are applied in AI-driven recruitment, emphasizing job-relevant experience and skills, which minimizes subjective biases that can disadvantage certain groups; diversity is promoted by removing and identifying unbiased language that deter diverse candidates for promoting inclusivity in presentation of roles; AI system is trained on data for varied career and demographic backgrounds, helping ensure the recognition of the model for range of experiences and qualifications; and the system allows the conduct of audits of AI-driven recruitment for maintain public trust and enabling government agencies to proactively address biases, with mean values of 4.29, 4.19, 4.41, and 4.44. respectively.

The grand mean of 4.36, revealed the overall agreement of the respondents on the recognition of diversity in AI-driven recruitment systems in the public sector, supported by the homogeneity of respondents' responses, shown by the average standard deviation of 0.640.

7. Effectiveness of the Potential Implementation of AI-driven Recruitment

7.1. System in the Public Sector

Table 12 Effectiveness of the AI-driven Recruitment Systems in the Public Sector

No.	Effectiveness of the in AI-driven Recruitment Systems	N	Mean	Std. Deviation	Description
1	AI has the ability in quickly processing large volumes of applications, reduces time needed for candidate's initial screening.	150	4.13	0.887	Effective
2	Automation of parts of the hiring process allows public sector agencies to reduce the time to hire, and helping address requirement for urgent staffing and filling positions faster than traditional methods.	150	3.58	0.813	Effective
3	Candidates' assessments are standardized through the application of same criteria to all applicants, reducing the risk of human biases that affect hiring decisions.	150	3.64	0.717	Effective

4	AI-driven recruitment creates hiring process which is more inclusive, minimizing subjective biases, improving public service effectiveness.	150	4.17	0.800	Effective
5	Candidates are consistently assessed by AI-driven systems, based on predetermined criteria, helping ensure that all candidates are equally evaluated, for minimizing inconsistencies that can arise from different human evaluators.	150	4.21	0.765	Effective
Arithmetic Mean		150	3.95	0.797	Effective

As shown in Table 12, respondents agree on the effectiveness of AI-driven recruitment systems in Philippine public sector, assessed in the dimensions of bias, transparency, accountability, fairness, and diversity, for the enhancement of the recruitment processes. Candidates are consistently assessed by AI-driven systems, based on predetermined criteria, helping ensure that all candidates are equally evaluated, for minimizing inconsistencies that can arise from different human evaluators, with the highest mean of 4.21. AI has the ability in quickly processing large volumes of applications, reduces time needed for candidate's initial screening; automation of parts of the hiring process allows public sector agencies to reduce the time to hire, and helping address requirement for urgent staffing and filling positions faster than traditional methods; candidates' assessments are standardized through the application of same criteria to all applicants, reducing the risk of human biases that affect hiring decisions; AI-driven recruitment creates hiring process which is more inclusive, minimizing subjective biases, improving public service effectiveness, with mean values of 4.13, 3.58, 3.64, and 4.17, respectively.

The grand mean of 3.95, revealed the overall agreement of the respondents on the effectiveness of the potential implementation of AI-driven recruitment systems in the public sector, supported by the homogeneity of respondents' responses, with the average standard deviation of 0.797.

7.2. Significant Impact of Key Ethical Consideration on the Effectiveness of the Implementation of AI-driven Recruitment Systems in the Public Sector

Table 13 Significant Impact of Key Ethical Considerations on the Effectiveness of the Implementation of AI-driven Recruitment Systems in the Public Sector

Key Ethical Considerations' Variables	N	Mean	Standard Deviation	Pearson Correlation	Sig. (2-tailed)	Description	Interpretation
Bias	150	4.26	0.294	0.325**	0.000	Positive Correlation	Significant Impact
Transparency	150	4.38	0.459	0.435**	0.000	Positive Correlation	Significant Impact
Accountability	150	4.25	0.329	0.307**	0.000	Positive Correlation	Significant Impact
Fairness	150	4.35	0.301	0.286**	0.000	Positive Correlation	Significant Impact
Diversity	150	4.36	0.283	0.467**	0.000	Positive Correlation	Significant Impact

* Correlation is significant at the .05 level (2-tailed); ** Correlation is significant at the .01 level (2-tailed).

Table 13 presents the significant impact of key ethical considerations on the effectiveness of the implementation of AI-driven recruitment systems in the Philippine public sector.

7.3. Bias in AI-driven Recruitment

Bias in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment. The Correlation Coefficient of .325, at ρ value of .000, is significant at 1% significance level. The null hypothesis is rejected, there is positive significant impact of bias as key ethical consideration on the effectiveness of the system's implementation in the public sector. A change in the level of ethical consideration of bias will directly result in a change in the effectiveness of the implementation of AI-driven recruitment process in the public sector.

7.4. Transparency in AI-driven Recruitment

Transparency in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment. The Correlation Coefficient of .435, at ρ value of .000, is significant at 1% significance level. The null hypothesis is rejected, there is positive significant impact of transparency as key ethical consideration on the effectiveness of the system's implementation in the public sector. A change in the level of ethical consideration of transparency will directly result in a change in the effectiveness of the implementation of AI-driven recruitment process in the public sector.

7.5. Accountability in AI-driven Recruitment

Accountability in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment. The Correlation Coefficient of .307, at ρ value of .000, is significant at 1% significance level. The null hypothesis is rejected, there is positive significant impact of accountability as key ethical consideration on the effectiveness of the system's implementation in the public sector. A change in the level of ethical consideration of accountability will directly result in a change in the effectiveness of the implementation of AI-driven recruitment process in the public sector.

7.6. Fairness in AI-driven Recruitment

Fairness in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment. The Correlation Coefficient of .286, at ρ value of .000, is significant at 1% significance level. The null hypothesis is rejected, there is positive significant impact of fairness as key ethical consideration on the effectiveness of the system's implementation in the public sector. A change in the level of ethical consideration of fairness will directly result in a change in the effectiveness of implementation of AI-driven recruitment process in the public sector.

7.7. Diversity in AI-driven Recruitment

Diversity in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment. The Correlation Coefficient of .467, at ρ value of .000, is significant at 1% significance level. The null hypothesis is rejected, there is positive significant impact of diversity as key ethical consideration on the effectiveness of the system's implementation in the public sector. A change in the level of ethical consideration of diversity will directly result in a change in the effectiveness of the implementation of AI-driven recruitment process in the public sector.

7.8. Key Considerations Significantly Achieving Effectiveness of the Implementation of AI-driven Recruitment Systems in the Public Sector

Table 14 Regression Model Summary for the Predictors of Effectiveness of AI-driven Recruitment Systems' Implementation in the Public Sector

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.683[a]	0.466	0.448	0.21053	0.466	25.142	5	144	0.000	2.121
a. Predictors: Bias, Transparency, Accountability, Fairness, Diversity										

As presented in Table 14, of the Regression Model Summary, the R values show the assessment of the overall fit of the regression model. The R value represents the correlation between the independent and dependent variables. These are

values observed and the values predicted based on the obtained regression equation of the dependent variable of effectiveness of AI-driven recruitment systems. A value greater that 0.4 is acceptable (Adhikari, 2022). In this model. The R value of 0.683 indicates a good level of effectiveness of AI-driven recruitment systems' prediction.

The Coefficient of Determination (R^2), shows the variance proportion in the dependent variable accounted for which can be explained by the set of independent variables chosen for the regression model. It identifies how well the ethical considerations in the AI recruitment systems are able to achieve the dependent variable of effectiveness of AI-driven recruitment systems' implementation. The R^2 value of 0.466 measures the proportion of variation in the ethical considerations strategies' variable explained by variations in AI-driven recruitment systems' implementation indicators. It captures 46.6% deviations in the dependent variable explained by the regression model, a measure of the extent to which total variations of ethical considerations' variables are explained by the model. The high value of R^2 below 1.0 suggests that the regression model explains well the variations in the ethical considerations' variables. R^2 value of 0.466 less than 0.75 indicates the absence of multicollinearity (Kulayat et al., 2023).

The Adjusted R Square value shows how well the data points are fitting the regression line, indicating the percentage of variations which are explained by the only independent variables that influence the dependent variable. The value of the adjusted R Square of .448 shows that the independent variables (ethical considerations) in the model account for 44.8% variance in the dependent variable, AI implementation. In this model, Adjusted R^2 equivalent to 0.448 is less than R^2 value of 0.466, indicating how well the data points fit the regression line (Poon & Feng, 2023). An Adjusted R Square value far from 0.509, will be a good fit (Adhikari, 2022).

Standard Error of Estimate measures the precision of the regression model, to get the predicted values' predicted values, and hence, should be as small as possible (Nayebi, 2020). The Standard Error of Estimate of 0.211 in the model, measuring dispersion of ethical considerations' variables around its mean is very low compared to ten percent of the mean of its predicted value, with the value assessing the accuracy or precision of the predictions.

The p-value tests the significance, corresponds to Sig, F Change of .000, significant at 10% level of significance, which imply that the inclusion of the ethical considerations, improves the model in achieving high level of effectiveness of AI-driven recruitment systems' implementation.

The Durbin-Watson test statistic was used to detect relationship between values separated from each other through a given time lag in prediction errors from the regression analysis. The value of d equivalent to 2.121 assumes the absence of first order auto-correlation in the set of data, with Durbin-Watson statistic in between the critical values of 1.5 and 2.5.

Table 15 Statistical Significance of the Regression Model: Analysis of Variance

ANALYSIS OF VARIANCE (ANOVA)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.572	5	1.114	25.142	0.000b
	Residual	6.383	144	0.044		
	Total	11.954	149			
a. Dependent Variable: Effectiveness of AI-driven Recruitment Systems						
b. Predictors: (Constant), Bias, Transparency, Accountability, Fairness, Diversity						

7.9. Diversity

Table 15, for Analysis of Variance shows the significance of the regression model to explain deviations in the ethical considerations' variables and that the independent variables statistically significantly predict the dependent variable of effectiveness of the AI implementation. The F-ratio in the ANOVA test, shows the good fit of the data in the overall regression model.

The independent variables are statistically significantly are predictors of AI-driven system implementation, F (5, 144) = 25.142. The value of ρ equivalent to 0.000 less than 0.05, shows model fit of the regression data, with the model,

significant at 95%, thus, the model is accepted and R^2 is significantly different from zero. The F-ratio in the ANOVA test shows fit of the regression model for the data.

The F value was used to determine statistically significant predictive capability of the model as a whole. F-test value of 25.142, rejects the null hypothesis of no linear relationship between the ethical considerations' variables with the dependent variable of the effectiveness of AI-driven recruitment systems' implementation and the model has predictive capability where all regression coefficients are not equal to zero. The test is highly significant, with R^2 not equal to zero, there is linear relationship between ethical considerations' variables and effectiveness of AI-driven recruitment variable in the model, with 95% confidence of the ability of the regression model to explain the dependent variable of AI-driven recruitment implementation.

Table 16 Regression Coefficients for Ethical Considerations Variables

Regression Coefficients for Cost Optimization Strategies								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	(Constant)	1.96	0.371		5.27	0.000		
	Bias	-0.372	0.070	-0.385	-5.342	0.000	0.713	1.403
	Transparency	0.169	0.040	0.274	4.216	0.000	0.880	1.136
	Accountability	0.086	0.059	0.100	1.471	0.143	0.796	1.256
	Fairness	0.118	0.075	0.125	1.566	0.120	0.582	1.719
	Diversity	0449	0.071	0.496	6.292	0.000	0.596	1.678
a. Dependent Variable: Effectiveness of AI-driven Recruitment Systems								

Table 16, presents the Regression Coefficients of the ethical considerations' variables. Regression Coefficient in the model measures how strongly each of the ethical considerations effectiveness of AI-driven recruitment systems' implementation return on investment.

The coefficients not equivalent to zero proves the statistical significance of the independent variables of ethical considerations. The ρ values further show that the testing of the null hypotheses for Table 16 presents data on how strongly the independent variables of bias, transparency, accountability, fairness, and diversity, achieve the dependent variable of effectiveness of AI-driven recruitment system's implementation and the reliability of individual beta coefficients. It describes the statistical relationship between each of the predictor ethical considerations' variables and the effectiveness of AI-driven recruitment systems' variable.

The ρ values of 0.000, 0.000, 0.000, for bias, transparency, and diversity, respectively, at 0.10 and 0.05 significance levels, reveal that the ethical considerations' variables are predictors of the achievement of effectiveness of AI-driven recruitment systems. The null hypotheses of the three (3) variables are rejected, with sufficient evidence to reject the null hypotheses that the ethical considerations' variables do not significantly achieve effectiveness of AI-driven recruitment systems.

The ρ values of 0.143 and 0.120, for accountability and fairness, respectively, at 0.10 and 0.05 significance levels, reveal that the ethical considerations' variables are not predictors of the achievement of effectiveness of AI-driven recruitment systems. The null hypotheses of the two (2) variables are accepted, with sufficient evidence to accept the null hypotheses that the ethical considerations' variables do not significantly achieve effectiveness of AI-driven recruitment systems.

7.10. Collinearity Diagnostics Tests

Collinearity diagnostics tests the multicollinearity in the regression model. Tolerance presents the inverse of VIF, is a collinearity diagnostic factor used in identifying the multicollinearity in the explanatory variables. Tolerance less than 0.1 indicates the presence of multicollinearity (Kyriazos & Poga, 2023; Arum et al., 2023). In the present model, the

Tolerance values of the ethical considerations' variables of 0.713, 0.880, 0.796, 0.582, and 0.596, greater than 0.1, shows the absence of multicollinearity among the independent variables and the significance of the independent variables.

7.11. Variance Inflation Factor

Values for Variance Inflation Factor (VIF) shows how much variances are inflated by multicollinearity which occurs when independent variables are not independent from each other. Variance inflation factors were used to measure the inflation in the variances of the parameter estimates. A value greater than 10, shows collinearity between predictors (Naluba et al., 2023).

The VIF values of 1.403, 1.136, 1.256, 1.719, 1.678, for bias, transparency, accountability, fairness, and diversity, respectively, less than 10, indicates the absence of potential significant multicollinearity between the independent variables of ethical considerations.

Table 17 Multi-Collinearity Diagnostics

Model	Dimension	Condition Index	Variance Proportions					
			(Constant)	Bias	Transparency	Accountability	Fairness	Diversity
1	1	1.000	0.00	0.00	0.00	0.00	0.00	0.00
	2	21.53	0.00	0.05	0.07	0.00	0.02	0.01
	3	23.42	0.00	0.01	0.10	0.06	0.00	0.05
	4	25.65	0.04	0.03	0.00	0.01	0.02	0.04
	5	25.43	0.00	0.00	0.08	0.02	0.08	0.05
	6	21.05	0.08	0.05	0.01	0.02	0.00	0.02

The Multi-Collinearity Diagnostics values are presented in Table 17. Multicollinearity relates to two or more independent variables which are highly correlated with each other. With multicollinearity, an inflation is created in the standard error of regression coefficients which can result in reduced of their significance. The Collinearity diagnostics is used in making assessments of the presence of multicollinearity in the data.

7.12. Condition Index Test:

Another multicollinearity measure is the "Condition Index", testing is any two of the ethical considerations' variables have "Variance Proportions" in excess of the value of 0.09, with Condition Index in excess of the value of 30 (Subrata & Das, 2018). In the present model, Variance proportions of the ethical considerations' variables are less than 0.09, and Condition Index values less than 30, indicates the absence of multicollinearity among the data for independent variables.

7.13. Potential Challenges in Ethical Consideration in the Potential Implementation of AI-driven Recruitment Systems in the Public Sector

Table 18 Potential Challenges in Ethical Considerations Encountered in the Potential Implementation of AI-driven Recruitment Systems

No.	Potential Challenges in Ethical Considerations in AI-driven Recruitment Systems' Implementation	N	Mean	Std. Deviation	Description
1	The AI system can rely on historical data for training when not carefully managed, which can embed biases that are existing and can lead to discriminatory hiring practices.	150	4.43	0.618	Agree
2	Complexity in ensuring that the AI models equally treat all candidates, which requires defining what constitutes fairness and its achievement.	150	3.87	0.726	Agree

3	Lack of transparency due to black box operations, makes it hard for stakeholders to understand the formulation of recruitment and AI-generated decisions, undermining accountability and trust.	150	4.08	0.909	Agree
4	Burden on committing resources for regular review and update of models in the fast-paced technological landscape, for ensuring the systems remain effective and ethical.	150	4.23	0.687	Agree
5	Determining accountability is difficult when biased decisions are made by AI systems, requiring the need for clarifying the responsibility for AI's outcomes and performance.	150	4.18	0.676	Agree
6	Over-reliance on AI processes can lead to overlooking of critical human judgment, to ensure appropriate levels of human oversight, vital in maintaining ethical standards.	150	4.41	0.706	Agree
7	Stakeholders can experience resistance from candidates who are skeptical on the role of AI in recruitment with the fear that it lacks understanding of human evaluators.	150	4.44	0.596	Agree
8	Implementation Ai-driven recruitment requires specialized knowledge in ethics and technology, hindering effective oversight and implementation.	150	4.13	0.887	Agree
9	Limited resources and budgets can restrict the ability of stakeholders to invest in ethical AI practices involving comprehensive audits and training programs.	150	3.58	0.813	Agree
10	Difficulty in making a balance between efficiency and ethical standards, as public sector agencies may give priority to speed and efficiency over ethical considerations which can lead to compromises in inclusivity and fairness.	150	3.64	0.717	Agree
Arithmetic Mean		150	4.09	0.735	Agree

Table 18, presents the challenges in ethical considerations encountered in the potential implementation of AI-driven recruitment systems. Stakeholders can experience resistance from candidates who are skeptical on the role of AI in recruitment with the fear that it lacks understanding of human evaluators, with the highest mean of 4.44. The AI system can rely on historical data for training when not carefully managed, which can embed biases that are existing and can lead to discriminatory hiring practices; complexity in ensuring that the AI models equally treat all candidates, which requires defining what constitutes fairness and its achievement; lack of transparency due to black box operations, makes it hard for stakeholders to understand the formulation of recruitment and AI-generated decisions, undermining accountability and trust; burden on committing resources for regular review and update of models in the fast-paced technological landscape, for ensuring the systems remain effective and ethical; determining accountability is difficult when biased decisions are made by AI systems, requiring the need for clarifying the responsibility for AI's outcomes and performance; and over-reliance on AI processes can lead to overlooking of critical human judgment, to ensure appropriate levels of human oversight, vital in maintaining ethical standards, with mean values of 4.43, 3.87, 4.08,4.23, 4.18, and 4.41, respectively.

Implementation Ai-driven recruitment requires specialized knowledge in ethics and technology, hindering effective oversight and implementation; limited resources and budgets can restrict the ability of stakeholders to invest in ethical AI practices involving comprehensive audits and training programs; and difficulty in making a balance between efficiency and ethical standards, as public sector agencies may give priority to speed and efficiency over ethical considerations which can lead to compromises in inclusivity and fairness, with mean values of 4.13, 358, and 3.64, respectively.

The grand mean of 4.09, revealed the overall agreement of the respondents on the recognition of the challenges encountered by stakeholders in ethical considerations in AI-driven recruitment systems' implementation in the public sector, supported by homogeneity of responses, indicated by the average standard deviation of 0.735.

8. Discussions

8.1. Profile of the Respondents

8.1.1. Age of Respondents

The distribution of respondents in the different age ranges, enables the study to gather wide range of perspectives on ethical considerations, as they have the vital experiences shaping respondents' expectations, acceptance, and biases in AI-driven recruitment and their ethical views. The study considers age as important profile variable in the study, typically associated with the stages of career, in which older participants can have experienced practices in traditional recruitment and younger ones can be primarily experienced in automated or digital hiring processes. Age diversity of study participants is critical in the gathering of insights on ethical concerns, of AI-driven recruitment in the public sector, with age diversity providing nuanced insights into experiences of different age groups and their responses to AI-driven hiring practices.

Different age groups have generational perspectives on technology and varying levels of familiarity with artificial intelligence technologies, in which differences can impact perceptions of AI trustworthiness, fairness, and ethical concerns (Zhang, 2024). As age is associated with career stages, the experiences shape the ethical views, expectations, and acceptance of AI-driven recruitment, ensuring broad range of ethical perspectives (Horadyski, 2023).

8.2. Gender of Respondents

For understanding ethical concerns and unique challenges that different genders can experience in AI-driven recruitment systems, the gender variable in the study is important. Inclusion of gender in the study enables better evaluation of issues related to fairness, gender bias, and equity, that ultimately contribute to more inclusive ethical AI recruitment practices in the public sector. AI-based recruitment systems can amplify and reflect existing biases in the practices of hiring, as learning of systems is from historical data, which can contain gender-biased patterns. The inclusion of participants of different genders, allow better understanding of perceptions and experiences of individuals of the potential gender biases in AI-based recruitment. Understanding of different genders in AI-recruitment systems provides better evaluation of issues related to fairness and gender bias, that contribute to ethical practices in AI recruitment in the public sector.

Different genders have varied expectations for ethical concerns in recruitment processes, which can allow better addressing of gender needs and concerns in AI-driven recruitment (Horodyski, 2023). Gender has influence on individual's perspectives on ethical issues, providing fuller understanding and capturing of broader spectrum of views on what constitute equitable and fair recruitment (Zhang, 2024).

8.3. Educational Attainment of Respondents

Crucial in understanding diverse perspectives on systems of AI recruitment is educational attainment, in the aspects of trust, knowledge, fairness' perceptions, and ethical awareness, providing the study with insights in exploring the impact of education on AI recruitment. Educational attainment can contribute to equitable understanding of ethical considerations in the implementation of practices on AI recruitment in the public sector. It is considered crucial in understanding and familiarity of advanced technologies, which can ensure that the study is capturing a wide range of perspectives in AI-driven recruitment, with the contributions of highly knowledgeable people on technology use. Higher educational attainment of participants provides greater awareness of ethical issues related to bias, privacy, and transparency in AI systems, ensuring that the study is considering practical and ethical concerns from participants about the complexities of AI.

Ethical perspectives can be shaped by educational attainment, specifically, concerning automation and employment, in which diverse perspectives can provide the study, well-rounded view of ethical considerations that surround AI-driven recruitment (Horodyski, 2023). Educational attainment is an important factor in the assessment of the suitability of candidate's job, in AI-driven recruitment systems, influencing skills matching and job preparedness (Ligeiro et al., 2024; Rathore, 2023). Individuals having various educational backgrounds can have unique insights into the impact of AI on skills matching, critical for understanding the influence of AI recruitment on hiring practices (Zhang, 2024).

8.4. Civil Status of Respondents

Civil status of study participants is important in the examination of how systems for AI-driven recruitment can impact individuals differently based on relationship and family relations, allowing the study to consider fairness in civil status, privacy concerns, potential biases, ensuring the comprehensive evaluation of AI-driven recruitment across diverse life circumstances. Understanding of civil status profile variable helps in the identification of ethical safeguards required in maintaining fairness, inclusivity, and respectful AI-driven hiring practices.

Married study participants or those having children can have different considerations for flexibility, stability, and remote work options and are more likely to scrutinize work-balance factors provided by AI recruitment systems, especially relevant to roles in public sector. They are likely to give priority to job security more than single individuals, with different perceptions on suitability of AI-based processes for hiring, revealing potential ethical issues for financial and career stability.

Ethical expectations are shaped by civil status in transparency, fairness, and inclusivity in the recruitment process for awareness of unfair evaluation of personal circumstances, informing recommendations for more transparent and fairer AI-based recruitment systems (Sentamilselvan & Thilagavathy, 2023). Individuals with different statuses can have varying interest levels in career growth and stability which contribute to better understanding of suitability and stability of AI-based processes for hiring, revealing potential ethical issues related to financial and career stability (Drage & Mackereth, 2022; Albaroudi et al., 2024).

8.5. Number of Years in Service

The number of years in service is crucial in understanding the effect of AI-driven recruitment systems on employees in the public sector, based on their tenure, in which varying service levels allows study participants to explore range of ethical concerns, relative to transparency, fairness, potential bias, recognition of experience, and trust in artificial intelligence. Better understanding of AI-driven recruitment systems helps ensure that implementation of the systems is sensitive to the concerns of both new and long-serving employees in the public sector, which can foster ethically sound approach to AI-based recruitment. The inclusion of study participants with different tenures enables the study to gauge perceptions of fairness and how they vary by years of service.

Longer-tenured employees can be skeptical about fairness and transparency in AI-recruitment compared to employees having fewer years of service who are more open to AI-driven recruitment and still have concern about fairness. Employees with extensive years in service can have vested interest in knowing the impact of AI-driven recruitment systems on promotions, career advancement, internal mobility within the public sector, and concern on the fair evaluation of AI systems on their accomplishment, experience, and loyalty over time. Newer employees are mostly focusing on the impact of AI on hiring and career opportunities, enabling the study to gain deeper understanding on the influence of AI on hiring practices, employee retention, and career progression.

Employees with different tenures provide knowledge on gauging perceptions of fairness and how they vary in years of service, and the feeling of fair treatment of experience of long-term employees (Zhang, 2024). The inclusion of study participants with varying years of service can help explore concerns related to AI algorithms' adequacy in the assessment of skills relevant to public sector positions (Horodyski, 2023).

9. Key Ethical Considerations Associated with the Potential Implementation of AI-driven Recruitment Systems in Government Agencies:

9.1. Bias in AI-driven Recruitment Systems in the Public Sector

Ethical consideration is emphasized in the AI system for the reduction and avoidance of bias and increased efficiency and accuracy in decision-making processes, to ensure that the delivery of government services is provided to citizens equitably in the identification, attracting, and hiring of top talent.

Findings show that the key ethical consideration of bias is critical in the implementation of AI-driven recruitment systems in the Philippines' public sector, due to its potential impact on fairness of the practices for hiring. As AI systems learn from historical data, it is assumed to contain bias rooted in past practices of hiring. With data for training AI reflects historical patterns of discrimination, AI systems can perpetuate the biases. Biases in the AI-based recruitment can result in decisions lacking in transparency which can undermine trust in the process of recruitment in the public

sector, with accountability being crucial to the public. Candidates need to trust evaluations from AI systems which requires transparency and explainability for demonstrating that decisions from AI are made based on objective criteria.

Bias in AI can lead to decisions lacking in transparency which can undermine trust in the recruitment process, in organizations where accountability is crucial, requiring transparency and explainability for addressing biases (Zhang, 2024). AI-recruitment systems that are biased can lead to lack of diversity that can affect the ability of the organization for representing and responding to the needs of applicants, making elimination of bias vital in AI recruitment (Hunkenschroer & Luetge, 2022).

9.2. Transparency in AI-driven Recruitment Systems in the Public Sector

Transparency is viewed as a crucial ethical consideration in the implementation of AI-driven recruitment systems in the Philippine public sector, ensuring fairness, accountability, and trust in the hiring process. Transparent systems aid in upholding ethical standards, maintain public confidence, and comply with legal requirements, which can allow government agencies to use AI ethically and responsibly, and are aligned with public service values in the Philippines.

Transparency in AI-driven recruitment systems was perceived to be essential in building trust among applicants and the public, fostering confidence that hiring decisions are fair, objective, and impartial. Philippine public sector recognizes transparency as a key ethical consideration in the potential AI-driven systems' implementation, directly affecting fairness, trust, and accountability.

AI systems that are transparent provide clear explanations for outcomes in hiring that enable better accountability to the public, ensuring the meeting of legal and ethical standards in the recruitment process (Jamaylin, 2023). Transparency plays an important role in the promotion of equal opportunity and fairness, essential in Philippine public sector, where equal opportunity and fairness are core values expected of government agencies (Atienza, 2023).

9.3. Accountability in AI-driven Recruitment Systems in the Public Sector

Awareness of government personnel of the consideration of accountability in AI recruitment systems' implementation in the public sector, ensuring the maintenance of ethical, fair, and lawful hiring practices, requiring definition of clear responsibilities, enabling of transparency, provision of recourse for candidates, and ensuring oversight. Perceptions show the ability of public sector organizations in upholding trust, ensuring compliance with legal and ethical standards, and creating a recruitment process that reflects the values of integrity and fairness, vital in public service, by being accountable in AI systems' actions and outcomes.

Accountability was found to be a key ethical consideration in AI-driven recruitment systems' implementation in Philippine public sector, ensuring Philippine government agencies are answerable for their decisions, and are upholding standards of integrity and fairness. Accountability was perceived in AI-driven recruitment systems, taking responsibility for identifying, monitoring, correcting of biases in the systems, and the establishment of mechanisms for the conduct of regular audit for improvement of the system to ensure fairness. Through accountability for biases in AI systems, government agencies can work for the prevention of discrimination that ensures prevention of unfair disadvantage of certain groups of candidates.

Public sector in the Philippines is expected to operate under high ethical standards, giving priority to equal opportunity, fairness, and public trust, with accountability mechanisms being answerable for the use of AI systems, ensuring their alignment with ethical obligations of public service and reinforcing public sector's commitment to fair treatment of all applicants (Zhang, 2024). Accountability in the public sector maintains human oversight over the AI system for reviewing and intervening as AI decisions may not be aligned with hiring objectives or ethical standards (Lee & Cha, 2023).

10. Perceptions of Stakeholders of AI-driven Recruitment Systems:

10.1. Fairness in AI-driven Recruitment Systems in the Public Sector

Government employees are aware of the key ethical consideration for fairness in the AI-driven recruitment systems in the Philippine public sector, which addresses the need for non-discrimination and equitable treatment in hiring processes. As government jobs are highly sought after and having significant implications for social and economic mobility, respondents perceive the consideration of fairness in AI recruitment practices making the system unbiased and just. AI recruitment systems which are viewed to be trained on historical data, are carefully monitored and designed, to enable the system eliminate discriminatory outcomes. As the Philippine public sector is believed to

maintain core values, fairness is ensured through the implementation of safeguards against discrimination in AI systems for recruitment.

Fairness in AI-driven recruitment systems works actively in mitigating algorithmic biases which can lead to unjust treatment of candidates from diverse backgrounds (Kelley, 2022). It ensures equal opportunity for all candidates and decisions are free from bias or discrimination, requiring careful attention to bias mitigation, data quality, inclusivity, and transparency, for addressing issues that arise in the hiring process (Lavanchy et al., 2023).

10.2. Diversity in AI-driven Recruitment Systems in the Public Sector

Ethical consideration of diversity in AI-driven recruitment in the Philippine public sector, which enhances public trust, improves the effectiveness of the government, and the alignment with ethical commitments of the government to equal opportunity and inclusivity. Through the implementation of strategies giving priority to diversity, the public sector enables AI recruitment systems to contribute to a more equitable, fairer, and representative workforce. Diversity in AI-driven recruitment system in Philippine public sector is viewed as supporting equitable representation and ensures that the government agencies reflect the population being served. The AI systems are perceived to promote diversity through the avoidance of biases, resulting in homogeneity in hiring.

AI system utilizes bias mitigation techniques for correcting patterns and imbalances that can disadvantage demographic groups, which can involve adjustment of algorithms, reweighting of data, and the use of fairness-aware machine learning approaches (Horodyski, 2023). AI is designed to account geographical diversity through ensuring that applicants from different regions are having equal access to opportunities, including those from underrepresented or remote areas (Hewage, 2023).

11. Effectiveness of the Potential Implementation of AI-driven Recruitment

11.1. System in the Public Sector

Government employees believe on the effectiveness of the potential implementation of AI-driven recruitment systems in the public sector, which is dependent on variety of factors involving its capability for promoting transparency, fairness, diversity, inclusivity, and its alignment with the goals of the government for social justice and equity. Proper safeguards are perceived to be in place, allowing AI recruitment process to create a fairer and more efficient public sector workforce. Respondents perceived the implementation of AI-driven recruitment systems as leading to significant reduction in resources and time spent on administrative tasks for making the process in the public sector more efficient and streamlined, with the potential of improving fairness through standardization and objectifying candidates' evaluation. Human bias is reduced through reliance on algorithms that focus on job-related and quantifiable qualifications and performance metrics.

AI-based recruitment systems allow for data-driven decision-making, resulting in improvement of speed and consistency with the development of hiring decisions, by tracking and analyzing key metrics that enable faster and more informed decisions (Hewage, 2023). Appropriate safeguards and monitoring are essential in maintain effectiveness of AI-driven recruitment for reduction of bias and the promotion of fairness in public sector recruitment (Mikalef & Gupta, 2021).

12. Significant Impact of Key Ethical Consideration on the Effectiveness of the Implementation of AI-driven Recruitment Systems in the Public Sector

12.1. Bias in AI-driven Recruitment

Bias in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment. Government employees show their belief that bias is a critical factor significantly undermining the effectiveness of the AI-driven recruitment systems in the public sector, requiring careful management for preventing exclusionary practices, reinforcement of historical inequalities, and erosion of public trust in recruitment processes. The direct impact of bias on the effectiveness of AI-driven recruitment systems indicates the need for the adoption of robust oversight, inclusive data sets, transparent practices, and continuous monitoring to mitigate and address bias in recruitment processes. Ethical consideration on bias in AI systems, allows effective recruitment processes, making them more equitable and aligned with the ethical goals of inclusivity and fairness in public sector recruitment.

In AI-driven recruitment, HR professionals device transparent decision-making process for detecting and correcting bias, to prevent being ingrained in the system, which can cause biased hiring outcomes (Horadyski, 2023). As AI recruitment can erode public trust, transparency become important in the development of decisions to enhancing fairness and legitimacy of public sector hiring practices (Hunkenschroer & Luetge, 2022).

12.2. Transparency in AI-driven Recruitment

Transparency in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment which imply full knowledge of government employees on transparency consideration in AI-driven recruitment, viewed as crucial factor in determining recruitment systems' effectiveness in the public sector. Respondents perceive that consideration on transparency results in understandable and accessible to relevant stakeholders of AI system mechanisms, ensuring that decisions made are explainable and aligned with the principles of equity and fairness. Transparent AI systems in the public sector is viewed as compliant to anti-discrimination policies and laws on fair hiring practices, serving as framework for ensuring that hiring decisions are aligned with the legal requirements for equality, diversity, and fairness. Ethical consideration in AI-driven recruitment systems for transparency demonstrate the design of AI models that integrate ethical principles of bias avoidance, privacy protection, and ensuring of accountability.

Cornerstone in ethical and effective AI-driven recruitment systems is transparency, with far-reaching impacts on ensuring accountability, building of trust, promotion of fairness, and the enhancement of candidate experience (Mikalef & Gupta, 2021). The fostering of transparent recruitment process ensures AI systems for developing explainable decisions, correction and detection of bias, and maintaining of confidence in hiring practices (Lee & Cha, 2023).

12.3. Accountability in AI-driven Recruitment

Accountability in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment which imply the belief of government employees that AI-driven recruitment systems in the public sector, integrates accountability as key ethical consideration, playing the central role of ensuring systems' effectiveness. It imposes obligations of organizations and individuals for answerability of their actions, including the decisions and outcomes produced by systems for AI-driven recruitment. Accountability is believed to ensure AI systems are operating in transparent, fair, and ethical manner while promoting effectiveness and efficiency. It is crucial in the effective implementation of the AI-based recruitment systems in the public sector, ensuring that the systems are compliant to ethical and legal standards, are fair, and transparent, for building trust with citizens.

Accountability in AI systems facilitates continuous improvement for maintaining effectiveness of the systems, through the creation of structures for error correction, monitoring, aligned with public interest, and feedback in the public sector, where ethical governance and public trust are crucial (Kochling et al., 2023). Proper governance is in place in AI-recruitment processes, for overseeing deployment, development, and maintenance of the systems, ensuring that the systems are functioning as designed and holding the organization accountable for ethical lapses (Lee & Cha, 2023; Koch-Bayam & Kaibel, 2023).

12.4. Fairness in AI-driven Recruitment

Fairness in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment which imply the view of respondents that fairness is a fundamental ethical consideration, directly impacting AI-driven recruitment systems' effectiveness in the public sector, for the creation of equitable hiring process and ensuring that the systems are achieving the goals for attracting, selection, and retention of the most qualified candidates while avoiding bias and discrimination. Fairness is regarded as priority in AI recruitment systems' design and implementation, strengthening their legitimacy, efficiency, and public trust, crucial in the overall effectiveness of the recruitment systems. Fairness is perceived to have primary impact in recruitment, on the elimination of discrimination, with all candidates being evaluated based on their skills and qualifications, and not subjected to biases derived from socioeconomic background. Non-discriminatory practices are key priorities of the AI systems in the public sector, ensuring a fair recruitment process which ensures elimination of discriminatory factors.

Fairness in AI-driven recruitment systems promotes equal opportunity for all applicants, crucial in the public sector in which government jobs must reflect population's diverse demographics, for creating inclusive and representative workforce (Kelley, 2022). Fairness contributes to the enhancement of the recruitment system's overall effectiveness aimed at meeting public needs (Jaymalin, 2023).

12.5. Diversity in AI-driven Recruitment

Diversity in AI-driven recruitment systems has positive significant correlation with the effectiveness of the implementation of AI-driven recruitment which imply the belief of government employees on the importance of diversity, having significant impact on the effectiveness of AI-driven recruitment systems' implementation in the public sector. AI-based recruitment is seen as considering diversity, with inclusion of applicants from various backgrounds, to ensure that the ethical consideration of diversity leads to dynamic, inclusive and representative public workforce, vital in the effective functioning of Philippine government services. Ensuring diverse recruitment pool in AI-based systems contribute to the effectiveness and quality of the processes of decision-making which can lead to better public governance.

To ensure effectiveness of AI-driven recruitment systems, diversity plays a central role, through the fostering of representative, more inclusive, and dynamic workforce, enhancing the quality of public services and organizational performance (Langer et al., 2023; Mori et al., 2024). Giving priority to diversity in AI-recruitment systems contributes to improved decision-making, greater public trust, and better service delivery, which are critical for the effectiveness and success of public sector recruitment, supporting social justice, and compliance to legal and international standards (da Motta Veiga et al., 2023; Feldkamp et al., 2023).

13. Key Considerations Significantly Achieving Effectiveness of the Implementation of AI-driven Recruitment Systems in the Public Sector

13.1. Predictors of Effectiveness of AI-driven Recruitment Systems' Implementation in the Public Sector

The p-value tests the significance, corresponds to Sig, F Change of .000, significant at 10% level of significance, which imply that the inclusion of the ethical considerations, improves the model in achieving high level of effectiveness of AI-driven recruitment systems' implementation.

The low ρ values provide the strong evidence of the rejection of the null hypotheses, which imply that changes in adoption levels of ethical considerations will significantly affect the achievement of high level of effectiveness of AI-driven recruitment systems' implementation. Changes in the predictor variables of bias, transparency and diversity, are associated in high level of effectiveness of AI-driven recruitment systems' implementation in the pubic sector.

The ρ values of 0.143 and 0.120, for accountability and fairness, respectively, at 0.10 and 0.05 significance levels, reveal that the ethical considerations' variables are not predictors of the achievement of effectiveness of AI-driven recruitment systems. The null hypotheses of the two (2) variables are accepted, with sufficient evidence to accept the null hypotheses that the ethical considerations' variables do not significantly achieve effectiveness of AI-driven recruitment systems.

The high ρ values provide the strong evidence of the acceptance of the null hypotheses. These findings imply that changes in adoption levels of ethical considerations will not significantly affect the achievement of high level of effectiveness of AI-driven recruitment systems' implementation. Changes in the predictor variables of accountability and fairness, are not associated in high level of effectiveness of AI-driven recruitment systems' implementation in the public sector.

Significance of Bias, Transparency, and Diversity in the Effectiveness of AI-driven Recruitment Systems in the Philippine Public Sector:

The presence of bias can impact significantly in the effectiveness of the implementation of AI-driven recruitment system in the public sector, requiring proper addressing, as it can lead to discriminatory practices, reinforcement of existing social inequalities, and undermine AI-based recruitment processes' legitimacy. AI systems can perpetuate inadvertently existing social inequalities from the data they are trained on, and can continue replicating the bias.

Transparency is found to be a critical ethical consideration and a key factor in the effective implementation of AI-driven recruitment systems in the public sector, that ensures fairness, builds rust, enhances integrity of data, facilitates laws compliance, and enabling continuous improvement of the system. In the public sector, government employees perceive transparency as creating a recruitment process that is accountable, understandable, and responsive to the concerns of the public, which contributes ultimately to the successful AI systems implementation aligned with the values of the public sector. The absence of transparency is viewed as biased, that undermines effectiveness of AI systems and the trust of the public in the recruitment process.

Diversity was found to be significant in the achievement of effectiveness in the implementation of AI-driven recruitment systems in the Philippine public sector, playing a critical role to ensure increased public trust and the promotion of a more representative and inclusive government workforce. The incorporation of diverse data in the AI systems can reflect gender diversity resulting in better and fair evaluation of candidates, creating a more equitable hiring process and reducing the risk of unintentional biases, aligned to the commitment of the public sector to represent all citizens.

Diversity in AI-driven recruitment systems support public policies for inclusive and fair representation across agencies of the government through ensuring that AI systems evaluate applicants from all backgrounds based on equal footing, focusing on inclusion and fairness (Vivek, 2023). Public trust is important where the public sector is under constant scrutiny regarding accountability and transparency, when embedded in recruitment polices and algorithms, allowing the government to commit to equitable practices that enhance the acceptance and legitimacy of AI-driven recruitment (Avery, 2023).

Non-significance of Accountability and Fairness in the Effectiveness of AI-driven Recruitment Systems in the Philippine Public Sector:

The ρ values of 0.143 and 0.120 for accountability and fairness, respectively, at 0.10 and 0.05 significance levels, reveal that the ethical considerations' variables are not predictors of the achievement of effectiveness of AI-driven recruitment systems.

Accountability consideration was found not significant on the effectiveness of the AI-driven recruitment systems' implementation as government personnel strongly believe that accountability in the design of AI recruitment systems is automatically producing efficient and fair decisions, so the less perceived need for accountability and human oversight. Design of AI-riven systems are seen as effective in reduction of human error risk, discriminations, and bias in recruitment processes, indicating that AI systems are viewed as more consistent and accurate than humans, making the need for accountability secondary as government employees assume the effective performance of the system in the performance of recruitment tasks, without the need for explanation to human decision-makers. Non-significance of accountability in the implementation of AI recruitment systems can be due to built-in transparency mechanisms in the design of AI systems such as understandable criteria and the use of clear decision trees, making it easier for users to follow the logic of decisions. The transparency of the design of AI-driven recruitment systems in the public sector has been perceived by government personnel as sufficient for ensuring that the systems are working as intended, with the belief that the process is traceable and clear with no immediate need for accountability measures in terms of responsibility and human oversight.

The design of AI models provides explanations of decisions formulated by the system, which are automated, allowing the system to replace the need for human accountability, already embedded within the functioning of the algorithm, for choosing the right candidate (Novelli et al., 2023). Properly designed and trained AI systems are objective and neutral, for assessing candidates on experience, qualifications, and skills without human biases and accountability is no longer significant (Busuioc, 2021; OECD, 2023).

Fairness is believed to have no significance in the achievement of effectiveness of AI-driven recruitment systems' implementation in the public sector, where government employees give more priority on efficiency and speed and the ethical consideration for fairness is already implicitly embedded in AI recruitment systems, thus the need for explicit ethical intervention for fairness is reduced. Government employees perceive that data used in training the AI recruitment systems already include unbiased and fair representation of applicants from various backgrounds, making it unnecessary for explicit checks. Perceptions show full awareness of government personnel that fairness is embedded implicitly within the process of recruitment, and the algorithm is performing simply a neutral assessment of the qualifications of candidates. Fairness is viewed as adequately considered by the AI systems, eliminating long-term consequences in the aspects of social inequity, underrepresentation, and diminished public confidence in the process of recruitment, ensuring that AI systems are serving broader public sector goals of diversity, social justice, and equal opportunity.

In the public sector, operational efficiency is an essential goal in which large numbers of applications require processing in a timely manner, and the adoption of AI-driven systems allow the rapid processing of vast amounts of data, that can provide efficiency in hiring decisions (Distor, 2021). AI systems are designed to accelerate the process of decision-making in the public sector through the automation of recruitment stages, which outweigh concerns about fairness in recruitment decision, especially when confronted with pressure in meeting tight timelines (Micaella et al., 2024).

14. Potential Challenges in Ethical Consideration in the Potential Implementation of AI-driven Recruitment Systems in the Public Sector

Government employees are aware and identify core concerns in the effective implementation of AI-based recruitment in the public sector, reflecting a mix of ethical and legal issues, pointing to the need for governance standards and ethical frameworks for the use of AI in recruitment. Prominent concerns in AI-driven recruitment involve bias and fairness, which requires addressing the issues. Lack of transparency can undermine trust and addressing requires AI to be explainable for accessibility of decision-making logic to non-experts. With limited legal frameworks in the public sector governing AI recruitment use, government agencies can face uncertainty on ethical AI utilization. The absence of regulations that are comprehensive can lead to reputational risks to organizations utilizing the AI systems and risks on unintentional rights' violation.

The use of AI in public administration has the potential in transforming completely public governance and service delivery, however, it presents challenges, specifically, in regulatory and legal landscape, as AI presents multitude of difficulties requiring careful attention in public administration (Alampay, 2020). AI is adopted in the public sector for the redesign of policymaking and internal service delivery procedures, considering its capability for generating large amounts of data, improvement of operations, and augmenting the quality of public service (Alhosani & Alhashmi, 2024). The effective implementation and pervasive use of AI in the public sector requires strategic understanding incorporation of AI, AI governance, and streamlining application processes, for mitigating challenges for governments (Alhosani & Alhasmi, 2023). Presenting formidable challenges in the public sector involves ethical considerations on fairness, bias, privacy, and the preservation of democratic values (Amil, 2024).

14.1. Practical Implications of the Study

The study has practical implications in providing a roadmap for Philippine government agencies for the ethical implementation of AI-driven recruitment systems, offering insights in addressing key challenges involving bias, transparency, accountability, fairness, and diversity in the hiring process, for ensuring that the systems are aligned with the values of the public sector. Through the identification of potential ethical risks and in proposing solutions, helping policymakers and HR professionals in creating more accountable, inclusive, and legally compliant to the process of recruitment. The study guides AI systems design for enhancing the effectiveness and efficiency of hiring practices in the public sector.

14.2. Theoretical Implications of the Findings of the Study

The study has theoretical implications in the expansion of understanding on the ethical integration of AI into the public sector recruitment, contributing to the body of knowledge on ethical AI, specifically in government employment practices' context, through exploring of the key concepts of transparency, fairness, bias, accountability, and diversity in automated systems. The study provides a framework to address ethical dilemmas in AI implementation, challenging the traditional recruitment models. Findings of the study bridge gaps between ethics, technology, and public administration, which offer a theoretical foundation for future research on AI-driven decision-making and its impact on public trust and social justice in government processes.

14.3. Importance of the Study

The study is essential as it addresses the ethical dimensions of AI integration into public recruitment, vital in the creation of an AI-driven system that considers the values of transparency, fairness, trust, accountability, and diversity, which are critical in the service delivery in the public sector. The study focuses on ensuring that AI technologies are integrated into public hiring practices in a fair, responsible, and transparent way. As governments turn increasingly to AI for the enhancement of efficiency in recruitment, heightened risk is expected of unintentional biases, privacy, and lack of transparency concerns as ethical standards are not considered carefully. The study ensures that hiring in the public sector remains non-discriminatory and just through the examination of the impact of AI-driven recruitment on fairness including underrepresentation of marginalized groups and potential biases in algorithms. Public institutions are strengthened with awareness of people on the development of AI-driven decisions and the consideration on fairness, offering guidelines and insights for ethical AI use in recruitment. Emphasized in the study, is the importance of adherence to regulations on data protection, highlighting the alignment of AI recruitment with privacy laws for the protection of applicants' information.

14.4. Contributions of the Study to the Body of Knowledge and Real-world Contexts

The study contributes to the existing body of knowledge through the provision of a comprehensive analysis of the ethical challenges associated with systems in AI-driven recruitment in the public sector. In expands on concepts of fairness, transparency, accountability, and diversity, in the context of processes for government hiring. Practical frameworks are offered by the study in the mitigation of biases and to ensure that AI technologies are effectively and ethically used in recruitment. In real-world contexts, the study provides guidance to public sector agencies in the implementation of AI-driven recruitment systems, aligned with legal standards and societal values, fostering of diversity and trust, and accountability. Development of polices is supported for addressing the ethical and technical dimensions of AI adoption, to ensure a balanced approach to social responsibility and innovation in government employment practices.

14.5. Limitations of the Study and Strategies for Addressing the Limitations

The study addresses its limitations aimed at contributing more effectively to the ethical and responsible implementation of AI-driven recruitment systems in the public sector. The adoption of measures, ensure that AI technologies are used in a way, for the alignment of recruitment with the core values of fairness, transparency, accountability, and diversity.

Scope of Data. In addressing the limitation on scope of data, the study incorporated data from multiple financial government agencies in the different cities of Metro Manila to ensure a more comprehensive understanding of the global diversity of recruitment and ethical concerns in the public sector. Expansion of the scope of study enhanced the generalizability of the study's findings, which make them applicable to a broader context, offering insights into the mitigation of ethical concerns across diverse public sector environments.

Rapid Technological Change. With the rapid evolving of AI technologies, study findings can become outdated as new AI models, regulations, and frameworks emerge that address ethical concerns in different ways. To address the limitation, the study is updated with emerging AI technologies and the evolving regulatory landscapes, which involved the tacking of trends in AI algorithms, tools, and frameworks for the mitigation of bias and regulations in the public sector that impact AI recruitment. Through the adoption of measure to stay current with technological changes, the study is relevant, offering up-to-date recommendations on ethical implementation of systems for AI-driven recruitment.

Complexity of Implementation. The study may not fully account for the costs and practical challenges in implementation of AI-driven recruitment systems, despite the identification of ethical considerations. To address the limitation, implementation challenges were acknowledged in the study, utilizing a roadmap for AI systems' adoption, taking into consideration resistance to change, resource constraints, and existing infrastructure, offering scalable solutions for different public sector sizes. The addressing of real-world challenges in implementation, actionable insights are provided by the study to help public sector organizations in better navigating transition to AI-driven systems for recruitment.

Long-term Bias Mitigation Monitoring. The study might not fully address the elimination of entrenched biases in historical data in recruitment, that can be replicated by AI systems, or ensuring bias detection ongoing effectiveness mechanisms over time. The study establishes long-term auditing and monitoring frameworks for AI-systems, for tracking the effectiveness of strategies for bias mitigation, over time. Reviews and regular audits are considered integral part of AI deployment process for ensuring that biases are identified and eliminated consistently. Real-time interventions and continuous monitoring can ensure remaining unbiased of AI systems, throughout its lifecycles and the mitigation of discriminatory outcomes' risk.

14.6. Directions for Future Research

The study addresses directions and areas for future research which can provide deeper insights into the opportunities and challenges in implementation of AI-driven recruitment systems in the public sector, to ensure that AI systems are used effectively, ethically, and equitably.

Longitudinal studies on outcomes of AI recruitment can be conducted in the future, for tracking the long-term AI-driven recruitment outcomes in the public sector, and its effects on workforce fairness, diversity, and public trust. Recruitment data can be compared before and after AI systems implementation across various government agencies. The studies can help in assessing the capability of AI systems to reduce bias and improve recruitment efficiency over extended periods.

Future studies can focus on the evaluation of AI bias mitigation strategies for effectiveness in AI recruitment systems including transparency measures, diverse dataset inclusion, and algorithmic fairness techniques. Case studies can be implemented for testing and comparing the results of different bias-mitigation strategies for identifying the most

effective approaches in bias reduction. The evaluation of practical outcomes and application of the strategies can inform the fair and ethical application of AI in recruitment.

Investigations can focus on the influence of AI recruitment systems on the overall composition of workforce of the public sector in the areas of underrepresented or marginalized groups. Research methods can be used in analyzing workforce demographics before and after AI systems' introduction in recruitment. Studies can provide deeper understanding of the impact of AI recruitment on greater inclusion and entrenchment of historical biases, essential for AI's ethical implementation.

15. Conclusion

This section provides a summary of the key findings of the study and their implications, offering final insights on study outcomes.

Addressing of bias was found crucial for the effective implementation of AI-driven recruitment systems in Philippine public sector, for its significant impact undermining the integrity, fairness, and inclusivity of the hiring process. The presence of bias in AI algorithms can result in discriminatory practices in hiring, reinforces existing inequalities, and can lead to damage in public trust in government agencies. As diversity in the Philippines is highly pronounced in the aspects of ethnicity, language, socioeconomic status, and culture, considerations on bias become essential to ensure support of AI systems for equitable public service delivery. Through bias mitigation, the Philippine government can effectively promote a fair, divers, and trusted hiring process, vital in the creation of representative and capable workforce serving the best interests of the public.

Transparency is crucial for achieving success in AI-driven recruitment implementation in Philippine public sector, specifically, in the promotion of accountability, public trust, and in providing support for legal compliance, fairness, and adaptability, thus, create a robust framework for effective and ethical AI recruitment practices. Ethical consideration on transparency enables government agencies to harness AI benefits while ensuring alignment of recruitment processes with the values of public service, justice, and equity. The significance of transparency in the Philippine public sector lies in ensuring fairness, fostering of trust, and alignment with regulatory and ethical standards, crucial for legitimacy and accountability of the public sector.

In the effective implementation of AI-driven recruitment in the public sector, diversity was found as critical factor, contributing to the promotion of social equity, inclusivity, and fairness in hiring practices. Embracing of diversity ensures the alignment of diversity with the government's mandate for the provision of equal employment opportunities and reflection of the country's diverse linguistic, cultural, and socioeconomic backgrounds. Effective, ethical, and socially responsible implementation of AI-driven recruitment in the public sector requires diversity consideration, vital in ultimately building public workforce reflecting diversity of the Filipino people and the enhancement of public trust in AI systems.

The Philippine public sector has lower perceptions of the direct impact of accountability on effective AI-driven recruitment systems' implementation, as they put priority to efficiency, reliance on legal standards, distributed nature of responsibility, and cultural trust, lessening the immediate need for stringent measures of accountability. Accountability is believed to play a supportive rather than central role in the determination of effectiveness of AI-driven recruitment. The perspective was found not to entirely negate accountability, but rather contextualizing the relative impact on practical outcomes of implementation. AI-driven recruitment systems' technical complexity involving the opaque nature of machine learning models, limits traditional accountability measure's practicality, making it challenging in assigning individual accountability for specific recruitment outcomes. While accountability is considered vital aspect in effectiveness and theoretically desirable in the recruitment process, its impact can be seen as less significant and the practical enforcement can have limited direct impact in the highly technical domain and the overall AI-driven recruitment systems' effectiveness.

Fairness is seen as non-significant to the effective AI-driven recruitment systems' implementation in the Philippine public sector, as efficiency, objective data, resource constraints, transparency, accountability, short-term recruitment outcomes, and merit-based selection, can take precedence over considerations of fairness. The perspective is assumed to make a balance with societal and ethical goals for ensuring a holistic approach in public sector hiring. As the public sector considers operational efficiency as primary measure of success, fairness becomes secondary in the achievement of recruitment objectives. Perceptions revealed the belief that the public sector gives priority to gains in efficiency over nuanced adjustments necessary for ensuring fair outcomes, most especially, if measures of fairness are slowing down the process of hiring.

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Appendix A

- **QUESTIONNAIRE**

Your honest opinion in answering the following questions will be very much appreciated. All responses will be used for the purpose of this research only.

What is the profile of the respondent in terms of:

Age

1. 26 to 30 years [ ]

2. 31 to 35 years [ ]

3. 36 to 40 years [ ]

4. 41 years & above [ ]

Gender

1. Male [ ]

2. Female [ ]

- **Educational Attainment**

1. College Graduate [ ]

2. Master's Degree [ ]

3. Doctoral Degree [ ]

- **Civil Status**

  1. Single [ ]

  2. Married [ ]

- **Number of Years in Service**

5 to 10 years [ ]

11 to 15 years [ ]

16 to 20 years [ ]

20 years & above [ ]

- **How do stakeholders perceive key ethical considerations associated with the potential implementation of AI-driven recruitment systems in government agencies?**

Please rate your answers according to the following guide by putting a

check mark on the rating space provided:

Mean	Verbal Interpretation
5	Strongly Agree
4	Agree
3	Moderately Agree
2	Disagree
1	Strongly Disagree

No.	Bias in AI-driven Recruitment Systems	Rating

		1	2	3	4	5
1	AI-driven recruitment counteracts historical bias, removing variables that introduce unfair preferences.	☐	☐	☐	☐	☐
2	The system applies detection techniques and tools for identifying and reducing problematic patterns within the data.	☐	☐	☐	☐	☐
3	The system provides fairness-aware tools and models that flag potentially variables that are problematic for ensuring the use of only relevant and non-biased factors.	☐	☐	☐	☐	☐
4	The system ensures diverse representation in the validation of model's accuracy and representation of training data sets across different demographic groups, to mitigate exclusion of marginalized and minority groups.	☐	☐	☐	☐	☐
5	The system allows the conduct of regular bias audits on AI systems for identifying and addressing emerging bias, to ensure that the process of recruitment is relevant and fair over time.	☐	☐	☐	☐	☐

Source: (Sanchez-Monedero et al., 2020; Woods et al., 2020; Arcilla et al., 2023; Bansal et al., 2023; Min, 2023; Varsha, 2023; Ferrara, 2023).

No.	**Transparency in AI-driven Recruitment Systems**	**Rating**				
		1	2	3	4	5
1	Transparency in data sources and algorithms in AI-driven system allows greater trust and scrutiny in the recruitment process.	☐	☐	☐	☐	☐
2	Transparency in AI-driven system provides candidates with clear information of the recruitment process, that enhances candidate's overall experience and promotes informed consent.	☐	☐	☐	☐	☐
3	The system utilizes interpretable models and explains key decision factors for clarifying the choices of AI.	☐	☐	☐	☐	☐
4	Candidate awareness is provided on AI-driven assessments in the recruitment process for ethical transparency, enabling the candidate to make informed choices.	☐	☐	☐	☐	☐
5	Decision-making process of the AI recruitment model provides transparency allowing applicants to understand decisions made for rejection and shortlisting, ensuring consistent and fair hiring practices.	☐	☐	☐	☐	☐

Source: (Sanchez-Monedero et al., 2020; Mergel et al., 2023; Cheong, 2024; Larrson et al., 2023; Balasubramaniam, 2023; Cheong, 2024).

No.	**Accountability in AI-driven Recruitment Systems**	**Rating**				
		1	2	3	4	5
1	The AI-driven recruitment system establishes clear lines of accountability for decisions made in the system, which ensure mechanisms are in place for addressing grievances.	☐	☐	☐	☐	☐
2	The system implements feedback loops allowing for continuous improvement and monitoring of the AI system.	☐	☐	☐	☐	☐
3	Accountability of the system allows responding to feedback from stakeholders and candidates about the process of recruitment.	☐	☐	☐	☐	☐

4	The system ensures that parties involved are taking responsibility for AI system's impact and outcomes, providing oversight mechanisms for ensuring unbiased, fair, and reliable recruitment system.	☐	☐	☐	☐	☐
5	The system introduces and amplify biases through ongoing evaluation for identifying, addressing, and prevention of biases, and detecting unfair treatment of candidates.	☐	☐	☐	☐	☐

Source: (Novelli et al., 2024; Amil, 2024; Cheong, 2024; OECD, 2023; Novelli et al., 2024; Hohma et al., 2023; Cheong, 2024).

- **What are the perceptions of stakeholders of AI-driven recruitment Systems?**

Please rate your answers according to the following guide by putting a

check mark on the rating space provided:

Mean	Verbal Interpretation
5	Strongly Agree
4	Agree
3	Moderately Agree
2	Disagree
1	Strongly Disagree

No.	Fairness in AI-driven Recruitment Systems	Rating				
		1	2	3	4	5
1	The AI system ensures the avoidance of bias based on race, gender, personal characteristics, or age, utilizing diverse training data for identifying and mitigating discriminatory outcomes.	☐	☐	☐	☐	☐
2	AI-driven recruitment system provides equal opportunity for all applicants to ensure fairness through creation of processes which are inclusive and transparent to enable the access of job opportunities to underrepresented groups.	☐	☐	☐	☐	☐
3	The system provides bias-detection techniques and tools for promoting equality, such as regular testing for demographic parity and fairness constraints.	☐	☐	☐	☐	☐
4	AI system employ fairness metrics and reporting that allows monitoring of recruitment decisions to ensure alignment and commitment to equity and diversity.	☐	☐	☐	☐	☐
5	The system creates and maintains processes for evaluating candidates impartially, minimizing biases and avoiding discrimination based on characteristics which are not related to job performance.	☐	☐	☐	☐	☐

Source: (Gunawan et al., 2024; Mergel et al., 2023; Amil, 2024; Gupta et al., 2024; Mujtaba &. Mahapatra, 2024; Rigotti & Fosch-Villaronga, 2024; Lavancy et al., 2023).

No.	Diversity in AI-driven Recruitment Systems	Rating				
		1	2	3	4	5
1	The AI system captures diverse skills and experiences of marginalized groups, ensuring account for diverse career paths vital for equitable public sector hiring.	☐	☐	☐	☐	☐
2	Standardized criteria are applied in AI-driven recruitment, emphasizing job-relevant experience and skills, which minimizes subjective biases that can disadvantage certain groups.	☐	☐	☐	☐	☐

3	Diversity is promoted by removing and identifying unbiased language that deter diverse candidates for promoting inclusivity in presentation of roles.	☐	☐	☐	☐	☐
4	The AI system is trained on data for varied career and demographic backgrounds, helping ensure the recognition of the model for range of experiences and qualifications.	☐	☐	☐	☐	☐
5	The system allows the conduct of audits of AI-driven recruitment for maintain public trust and enabling government agencies to proactively address biases.	☐	☐	☐	☐	☐

Source: (Vivek, 2023; Vivek, 2023; Sentamilselvan & Thilagavathy, 2023; Ashik, 2023).

- **How do stakeholders perceive the effectiveness of the potential implementation of AI-Driven recruitment systems in the public sector?**

Please rate your answers according to the following guide by putting a

check mark on the rating space provided:

Mean	Verbal Interpretation
5	Highly Effective
4	Effective
3	Moderately Effective
2	Slightly Effective
1	Not Effective

No.	Effectiveness of AI-driven Recruitment Systems	Rating				
		1	2	3	4	5
1	AI has the ability in quickly processing large volumes of applications, reduces time needed for candidate's initial screening.	☐	☐	☐	☐	☐
2	Automation of parts of the hiring process allows public sector agencies to reduce the time to hire, and helping address requirement for urgent staffing and filling positions faster than traditional methods.	☐	☐	☐	☐	☐
3	Candidates' assessments are standardized through the application of same criteria to all applicants, reducing the risk of human biases that affect hiring decisions.	☐	☐	☐	☐	☐
4	AI-driven recruitment creates hiring process which is more inclusive, minimizing subjective biases, improving public service effectiveness.	☐	☐	☐	☐	☐
5	Candidates are consistently assessed by AI-driven systems, based on predetermined criteria, helping ensure that all candidates are equally evaluated, for minimizing inconsistencies that can arise from different human evaluators.	☐	☐	☐	☐	☐

Source: (Tarwal & Agarwal, 2022; Sentamilselvan & Thilagavathy, 2023; Rathore, 2023; Koman et al., 2024).

- **What are the challenges in ethical considerations that can be encountered by stakeholders in the potential implementation of AI-Driven recruitment systems in the public sector?**

Please rate your answers according to the following guide by putting a

check mark on the rating space provided:

Mean	Verbal Interpretation
5	Strongly Agree

4	Agree
3	Moderately Agree
2	Disagree
1	Strongly Disagree

No.	Challenges in Ethical Considerations in the Potential Implementation of AI-driven Recruitment Systems	Rating				
		1	2	3	4	5
1	The AI system can rely on historical data for training when not carefully managed, which can embed biases that are existing and can lead to discriminatory hiring practices.	☐	☐	☐	☐	☐
2	Complexity in ensuring that the AI models equally treat all candidates, which requires defining what constitutes fairness and its achievement.	☐	☐	☐	☐	☐
3	Lack of transparency due to black box operations, makes it hard for stakeholders to understand the formulation of recruitment and AI-generated decisions, undermining accountability and trust.	☐	☐	☐	☐	☐
4	Burden on committing resources for regular review and update of models in the fast-paced technological landscape, for ensuring the systems remain effective and ethical.	☐	☐	☐	☐	☐
5	Determining accountability is difficult when biased decisions are made by AI systems, requiring the need for clarifying the responsibility for AI's outcomes and performance.	☐	☐	☐	☐	☐
6	Over-reliance on AI processes can lead to overlooking of critical human judgment, to ensure appropriate levels of human oversight, vital in maintaining ethical standards.	☐	☐	☐	☐	☐
7	Stakeholders can experience resistance from candidates who are skeptical on the role of AI in recruitment with the fear that it lacks understanding of human evaluators.	☐	☐	☐	☐	☐
8	Implementation Ai-driven recruitment requires specialized knowledge in ethics and technology, hindering effective oversight and implementation.	☐	☐	☐	☐	☐
9	Limited resources and budgets can restrict the ability of stakeholders to invest in ethical AI practices involving comprehensive audits and training programs.	☐	☐	☐	☐	☐
10	Difficulty in making a balance between efficiency and ethical standards, as public sector agencies may give priority to speed and efficiency over ethical considerations which can lead to compromises in inclusivity and fairness.	☐	☐	☐	☐	☐

Source: (Peramo et al., 2024; Kingsley et al., 2024; Min, 2023; Vivek, 2023; Sentamilselvan & Thilagavathy, 2023; Vivek, 2023; Murko et al., 2023)