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**LAW LIBRARIANS' ROLES IN MITIGATING AI-ETHICAL CHALLENGES WITH
STRATEGIC AI-USE POLICIES FOR DATA PRIVACY, HUMAN RIGHTS AND
SOCIAL EQUITY AKWA IBOM STATE**

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ABSTRACT

This study examined the ethical challenges associated with Artificial Intelligence (AI) and examines the effectiveness of data protection, continuous algorithmic auditing, diverse development teams, and clear ethical policies in addressing these challenges. In carrying out this study, a descriptive survey research design was adopted. The study was conducted in Akwa Ibom State, Nigeria. The target population consisted of all lawyers and librarians in Akwa Ibom State. A simple random sampling technique was employed to select 30 lawyers and 30 librarians, making a total sample size of 60 respondents. The instrument used for data collection was a structured questionnaire entitled "Law Librarians' Roles in Mitigating AI-Ethical Challenges Questionnaire (LLRMACQ)." Face and content validation of the instrument were carried out by an expert in Test, Measurement, and Evaluation to ensure its validity, appropriateness, and adequacy for the study. The reliability coefficient obtained for the instrument was 0.85, indicating a high level of reliability and justifying its use for the study. The data collected were analyzed using appropriate statistical techniques, percentage analysis was used to answer the research questions. The findings revealed that among the roles of law librarians in mitigating AI-ethical challenges, "combating hallucinations" recorded the highest percentage response (30.00%), while "algorithmic transparency" recorded the least percentage response (20.00%). The findings also showed that "protection of privacy" recorded the highest percentage response (36.67%) among the effects of data protection on ethical challenges of Artificial Intelligence, while "reduction of bias and discrimination" recorded the least percentage response (30.00%). The study concluded that Artificial Intelligence has become a transformative force in modern society, offering significant benefits in efficiency, innovation, and decision-making across various sectors. One of the recommendations made was that Governments, organizations, and AI developers should implement robust data protection policies and comply with established privacy regulations to ensure the secure collection, storage, processing, and sharing of personal data.

KEYWORDS: Ethical, Artificial Intelligence, Data, Algorithmic Auditing, Human Rights, Social Equity.

INTRODUCTION

Artificial Intelligence (AI) has emerged as one of the most transformative technologies of the twenty-first century, revolutionizing various sectors including healthcare, education, finance, agriculture, transportation, and public administration. According to Paul and James (2025), AI-powered systems are increasingly being utilized for medical diagnosis, financial forecasting, and content generation, thereby improving productivity and reducing human effort. Despite these benefits, the widespread deployment of AI has raised significant ethical concerns regarding privacy, accountability, transparency, bias, and the protection of fundamental human rights, making ethical governance a critical aspect of AI development and implementation.

The ethical challenges associated with artificial intelligence arise from the potential conflicts between technological advancement and moral principles such as fairness, autonomy, accountability, justice, and non-maleficence. As AI systems become more autonomous and influential in decision-making processes, concerns have intensified regarding algorithmic bias, discriminatory outcomes, surveillance, data misuse, and the lack of transparency in automated decisions (Stahl & Eke, 2024). Data protection has therefore become an essential mechanism for addressing these ethical issues by ensuring that personal data are collected, processed, and stored in accordance with established legal and ethical standards (Voigt & Bussche, 2021).

In addition to data protection and continuous algorithmic auditing, the development of diverse AI teams and the implementation of clear ethical policies have become increasingly important in promoting responsible AI practices. Diverse development teams bring together individuals with different cultural, social, professional, and educational backgrounds, enabling them to identify potential biases and ethical concerns that may otherwise be overlooked during system design and deployment (Smith & Rustagi, 2021). Equally important are ethical policies that emphasize transparency, accountability, fairness, privacy, and human oversight, ensuring that AI systems remain aligned with societal values and human interests (Novelli, 2024). As AI continues to reshape human activities and organizational practices globally, there is a growing need to evaluate its ethical challenges and develop effective strategies that safeguard human rights and promote social equity.

Statement of the problem

Artificial Intelligence (AI) has become a transformative force in modern society, significantly improving efficiency, decision-making, and service delivery across various sectors such as law, education, healthcare, and governance. However, despite these benefits, the rapid integration of AI into information and legal systems has raised serious ethical concerns. These concerns include issues of data privacy violations, algorithmic bias, lack of transparency, misinformation (hallucinations), and threats to human rights and social equity.

In the legal information environment, where accuracy, confidentiality, and trust are critical, the emergence of AI tools presents additional challenges. Generative AI systems may produce incorrect or fabricated legal information, thereby undermining the integrity of legal practice. Furthermore, AI systems trained on biased datasets may reinforce discrimination and inequality, particularly in sensitive decision-making processes. The increasing dependence on AI-driven systems also raises concerns about the protection of personal data and the extent to which individuals' rights and autonomy are safeguarded.

This gap in knowledge creates uncertainty regarding how law librarians can effectively contribute to mitigating AI-related ethical risks while promoting data privacy, human rights, and social equity in legal and information systems. Therefore, there is a pressing need to examine the roles of law librarians in mitigating AI-ethical challenges through strategic AI-use policies, as well as to assess the effects of key interventions such as data protection in addressing these ethical concerns.

Objective of the study

1. To find out the roles of law librarians' in mitigating AI-ethical challenges.
2. To examine the effects of data protection on the ethical challenges of Artificial Intelligence

Research Questions

1. What are the roles of law librarians in mitigating AI-ethical challenges?
2. What are the effects of data protection on the ethical challenges of Artificial Intelligence?

LITERATURE REVIEW

Concept of Artificial Intelligence

Artificial Intelligence (AI) refers to the branch of computer science concerned with the development of systems and machines capable of performing tasks that normally require human intelligence. The development and use of AI in a number of industries, including healthcare, education, finance, agriculture, manufacturing, and transportation, has been greatly accelerated by the quick development of processing power, the accessibility of massive datasets, and advancements in machine learning techniques. According to Paul & James (2025), AI-powered systems now perform complex tasks such as medical diagnoses, financial predictions, and even creative writing, reducing human effort and enhancing productivity.

Machine learning, deep learning, natural language processing, computer vision, robotics, and expert systems are just a few of the subfields that fall under the umbrella of artificial intelligence. Computers that are not explicitly programmed for every task can learn patterns from data and make predictions thanks to machine learning. To handle complicated data and attain high levels of accuracy in tasks like image recognition and language translation, deep learning, a subset of machine learning, uses artificial neural networks with several layers.

According to Russell and Norvig (2021), AI can be viewed as the science and engineering of creating intelligent agents capable of perceiving their environment and taking actions that maximize the likelihood of achieving specified goals. AI can analyze equipment performance data, identify potential issues before they escalate, schedule proactive maintenance, and minimize downtime, ensuring uninterrupted availability of resources (Nwachukwu & Ohalet, 2024).

Concept of Ethical Challenges

Ethical challenges refer to situations, issues, or dilemmas that arise when individuals, organizations, or societies must make decisions involving competing moral values, principles, and responsibilities. These challenges occur when determining the right course of action is

difficult because different ethical standards, stakeholder interests, or societal expectations may conflict. In professions including healthcare, business, education, technology, engineering, and public administration, where choices have a big impact on people, communities, and the environment, ethical dilemmas are frequent.

Ethical theories and concepts like justice, beneficence, non-maleficence, autonomy, accountability, honesty, and fairness serve as the foundation for the idea of ethical difficulties. When these values are hard to maintain at the same time, ethical issues arise. In the digital era, emerging technologies such as artificial intelligence, big data analytics, and social media have created new ethical challenges related to privacy, transparency, algorithmic bias, cyber security, and informed consent (Stahl & Eke, 2024).

According to Hemberg and Hemberg (2020), ethical challenges often involve uncertainty, moral distress, and conflicting obligations that require careful judgment and ethical reasoning. Organizations are realizing more and more how crucial it is to deal with ethical issues in order to preserve public confidence, their reputation, and sustainable growth. To assist people in navigating difficult ethical situations, ethical decision-making frameworks, professional codes of conduct, and regulatory requirements are frequently utilized.

Concept of Data Protection

Data protection refers to the policies, practices, technologies, and legal frameworks designed to safeguard personal, sensitive, and organizational data from unauthorized access, misuse, disclosure, alteration, loss, or destruction. It is a fundamental component of information governance and cyber security, aimed at ensuring that data are collected, processed, stored, and shared in a manner that respects individuals' privacy rights and maintains data integrity, confidentiality, and availability.

Information security and privacy are strongly related to the idea of data protection. Data protection includes the systems and laws that guarantee these rights are upheld, whereas privacy focuses on people's rights to control their personal information. Lawfulness, fairness, openness, purpose limitation, data minimisation, accuracy, storage limitation, integrity, secrecy, and accountability are important data protection tenets. These principles are reflected in major regulatory frameworks such as the European Union's General Data Protection Regulation (GDPR), which has significantly influenced global data governance practices (Voigt & Von demBussche, 2021).

Organizations use online platforms, cloud computing systems, mobile applications, and artificial intelligence technologies to gather enormous volumes of personal and behavioral data in today's digital world. Effective data protection requires the implementation of technical safeguards such as encryption, access controls, and authentication systems, secure data storage, and regular security audits, alongside organizational measures including employee training, risk assessment, and compliance monitoring (Tikkinen-Piri, 2020).

Concept of Continuous Algorithmic Auditing

Continuous Algorithmic Auditing (CAA) refers to the ongoing and automated evaluation of algorithms and artificial intelligence (AI) systems to ensure that they operate fairly, accurately, transparently, ethically, and in compliance with established regulations and

organizational standards. Unlike traditional audits, which are conducted periodically, continuous algorithmic auditing employs real-time monitoring mechanisms that assess algorithmic behavior throughout the lifecycle of the system

As noted by Minkkinen, Laine, and Mäntymäki (2022), continuous auditing of AI systems developed in response to the growing complexity and adaptive characteristics of modern algorithms, which may alter their behavior as they process new data and learn from changing environments. Conventional auditing methods often provide only a one-time assessment of system performance, making it difficult to identify emerging issues over time. In contrast, continuous algorithmic auditing offers ongoing supervision and enables the prompt identification of risks, biases, and operational irregularities.

The concept is closely associated with algorithmic accountability, which emphasizes the responsibility of organizations to ensure that automated systems produce reliable and justifiable outcomes. According to Mökander (2023), algorithmic auditing involves evaluating AI systems from legal, ethical, and technical perspectives to uncover potential risks and negative consequences. AI applications are widespread, affecting healthcare, finance, transportation, and everyday life (Umofia & Okorie 2026).

Diverse Development Teams

Diverse development teams refer to groups of professionals involved in the design, development, implementation, and management of products, technologies, services, or projects who possess varied backgrounds, experiences, perspectives, skills, cultures, genders, ages, ethnicities, and areas of expertise. In contemporary enterprises, diversity in development teams has grown in significance, especially in domains like software engineering, artificial intelligence (AI), product design, healthcare innovation, and business management.

Diverse development teams are intimately linked to innovation, inclusivity, and better decision-making. According to research, diverse teams improve critical thinking and problem-solving skills by bringing a wider range of experiences and expertise. Diversity in technology development mitigates prejudices that may exist when a homogeneous group primarily designs things. For example, diverse software and AI development teams are more likely to recognize ethical concerns, accessibility issues, and cultural sensitivities that could otherwise be overlooked during the development process (Richard, 2021). As a result, businesses are beginning to see diversity as a strategic asset that supports social responsibility and creativity.

Diverse development teams not only encourage innovation but also equitable and user-centered results. People from a variety of social and cultural backgrounds use digital products and services, thus having a diverse representation among developers helps guarantee that products are made to serve a wider range of users. This is particularly important in artificial intelligence and machine learning systems, where lack of diversity among development teams has been linked to algorithmic bias and discriminatory outcomes (Miller & Del Carmen Triana, 2020).

Concept of Human Rights

Human rights are the fundamental rights and freedoms that belong to every individual by virtue of being human, regardless of nationality, ethnicity, gender, religion, age, social status,

or any other characteristic. These rights are universal, inalienable, indivisible, and interdependent, meaning they apply equally to all people and cannot be arbitrarily taken away. Human dignity, equality, fairness, freedom, and respect for personal autonomy are the cornerstones of the idea of human rights.

The United Nations' 1948 adoption of the Universal Declaration of Human Rights (UDHR) serves as a major foundation for contemporary conceptions of human rights. Since then, human rights have evolved into a comprehensive legal and ethical framework encompassing civil and political rights, such as the right to life, freedom of expression, freedom of religion, and fair trial, as well as economic, social, and cultural rights, including the rights to education, healthcare, work, and an adequate standard of living (Mégret, 2021). International treaties, national constitutions, laws, and institutional frameworks created to guarantee justice and accountability all acknowledge and defend human rights.

The idea of human rights has evolved in modern society to confront new global issues like public health emergencies, gender equality, migration, digital privacy, artificial intelligence, and climate change. The increasing use of digital technologies has raised concerns about surveillance, data protection, and online freedom, leading scholars and policymakers to examine human rights within the context of the digital age (Land, 2022).

Concept of Social Equity

Social equity refers to the principle of fairness and justice in the distribution of resources, opportunities, rights, and responsibilities within society. It emphasizes ensuring that all individuals and groups, regardless of their socioeconomic status, gender, ethnicity, age, disability, or other characteristics, have access to the conditions necessary to achieve their full potential. In contrast to equality, which emphasizes giving everyone access to the same opportunities or resources, social equity acknowledges that various people and groups may experience varying degrees of disadvantage and, as a result, may need different kinds of assistance to attain just results.

Theories of social justice and fairness, which support the fair distribution of societal advantages and disadvantages, are the foundation of the idea of social equity. Along with effectiveness and efficiency, social fairness is becoming more widely acknowledged as a key component of public administration and policy-making. It guides governments and institutions in developing policies that reduce disparities and promote inclusion, particularly among marginalized and vulnerable populations (Cepiku&Mastrodascio, 2021). Access to high-quality education, healthcare, work opportunities, housing, public amenities, and political representation are just a few of the many aspects of social fairness.

Growing concerns about income inequality, racial and gender imbalances, environmental justice, and unequal access to digital technology have made social equity more prominent in recent years. Researchers argue that achieving social equity requires targeted interventions, inclusive governance, and policies that address the root causes of inequality rather than merely treating its symptoms (Benfer, 2021).

Types of AI Clear Ethical Policies

Ethical policies for artificial intelligence (AI) are rules, standards, and legal frameworks created to guarantee that AI systems are created and applied ethically. These regulations assist enterprises in reducing risks, upholding human rights, and fostering confidence in AI technologies.

➤ **Transparency and Explainability Policies**

Transparency policies require AI systems to operate in a manner that is understandable to users, regulators, and stakeholders. Explainability ensures that decisions made by AI can be interpreted and justified (Hauer, 2023). These regulations boost public confidence and lessen the "black box" issue related to intricate AI algorithms. Organizations are urged, for instance, to record AI algorithms, data sources, and decision-making procedures. Particularly in delicate industries like healthcare, banking, and education, transparent AI systems allow users to comprehend how results are produced.

➤ **Accountability Policies**

Accountability policies clearly define who is responsible for the activities and results of AI systems. These regulations specify who is responsible for mistakes, discrimination, or injury caused by AI systems. Governance structures, monitoring systems, and auditing processes are frequently included in accountability frameworks. According to Novelli. (2024), accountability involves answerability, oversight, and mechanisms for correcting harmful outcomes. Organizations implementing AI are expected to maintain human supervision and provide avenues for redress when AI decisions negatively affect individuals. Henry & Akpan (2025) mentioned that Artificial intelligence (AI) is capable of enabling computational systems to perform tasks typically associated with human intelligence, such as learning, reasoning, problem solving, perception, and decision-making

➤ **Fairness and Non-Discrimination Policies**

Fairness policies aim to prevent AI systems from producing biased or discriminatory outcomes against individuals or groups based on race, gender, age, religion, or socioeconomic status. These policies emphasize equitable treatment and inclusion during AI design, training, and deployment. Developers are encouraged to use diverse datasets, conduct bias testing, and continuously monitor AI outputs. Fairness policies are particularly important in recruitment, lending, healthcare diagnosis, and criminal justice applications where biased decisions can have serious consequences.

➤ **Privacy and Data Protection Policies**

Privacy policies focus on safeguarding personal and sensitive information used by AI systems. Since AI often relies on large volumes of data, ethical policies require organizations to collect, store, process, and share data responsibly. These policies promote informed consent, data minimization, confidentiality, and compliance with privacy regulations. Strong privacy frameworks help prevent unauthorized access, misuse of personal information, and breaches of individual rights.

➤ **Data Privacy and Confidentiality:**

Law librarians play a critical role in establishing strong data governance frameworks that protect sensitive client and case information within AI-driven legal environments. They develop institutional guidelines that determine which artificial intelligence tools meet acceptable standards for legal privilege, confidentiality, and regulatory compliance. This ensures that personally identifiable information and case-related data are not unintentionally exposed through cloud-based AI systems or third-party platforms. According to the International Federation of Library Associations (IFLA, 2021), information professionals are essential in enforcing ethical data stewardship, particularly in environments where digital tools process sensitive user data. Similarly, the American Library Association (ALA, 2022) emphasizes that librarians must ensure that emerging technologies comply with privacy laws and institutional ethical standards.

➤ **Mitigating Algorithmic Bias**

Law librarians are also responsible for identifying and addressing algorithmic bias in legal AI systems. They critically evaluate training datasets to detect imbalances related to gender, race, socioeconomic status, or geographic representation that may influence unfair legal outputs. By implementing data quality standards and audit procedures, librarians help reduce the risk of biased legal research results or decision-support recommendations. Barocas, Hardt, and Narayanan (2019) explain that biased datasets can lead to systematic discrimination in algorithmic systems if not properly corrected at the design stage. In addition, O'Neil (2020) warns that unchecked algorithms may reinforce inequality, especially when deployed in sensitive sectors such as law and justice.

➤ **Combating Hallucinations**

Generative AI systems are known to produce hallucinations, which include fabricated case law, incorrect citations, or misleading legal interpretations. Law librarians therefore enforce strict verification policies requiring that all AI-generated legal content be validated against authoritative legal databases such as court records, statutes, and peer-reviewed legal sources. This verification process ensures the integrity and reliability of legal information used in practice. Floridi and Chiriatti (2020) argue that large language models may generate plausible but incorrect information, making human oversight essential. Similarly, OpenAI (2023) acknowledges that generative AI systems require human-in-the-loop validation to reduce factual inaccuracies and improve reliability in professional use cases.

➤ **Algorithmic Transparency**

Law librarians advocate for transparency in AI systems used in legal research and information services. They ensure that users understand how AI tools generate outputs, what data sources are used, and what limitations exist in the system's reasoning processes. This promotes accountability and helps legal practitioners make informed decisions when relying on AI-generated information. The European Commission (2020) emphasizes that transparency is a

core principle of trustworthy AI, requiring that systems be explainable and understandable to end users. Likewise, UNESCO (2021) highlights that transparency supports ethical governance by enabling users to recognize both the capabilities and limitations of artificial intelligence systems.

Effects of data protection on the ethical challenges of Artificial Intelligence

Data protection plays a crucial role in addressing ethical concerns associated with AI systems. By regulating how personal data is collected, stored, processed, and shared, data protection frameworks help ensure that AI technologies are developed and used responsibly.

➤ Protection of Privacy

Data protection helps address one of the most significant ethical challenges in AI: the protection of individual privacy. AI systems rely heavily on large datasets, many of which contain personal and sensitive information such as names, locations, health records, and online activities. Without adequate protection, this information can be collected, analyzed, and shared without the knowledge or consent of individuals. Consequently, data protection enhances public trust in AI technologies and ensures that individuals' rights to privacy are respected (European Union Agency for Fundamental Rights, 2020).

➤ Promotion of User Rights and Autonomy

Data protection empowers individuals by granting those rights over their personal information. These rights typically include access to personal data, correction of inaccurate information, deletion of data, and restriction of certain processing activities. Such provisions allow individuals to exercise greater control over how their information is used by AI systems. This promotes autonomy and respects human dignity, which are fundamental ethical principles. It also encourages organizations to prioritize human-centered approaches in the design and deployment of AI technologies (Organisation for Economic Co-operation and Development [OECD], 2021).

➤ Reduction of Bias and Discrimination

Another important effect of data protection is its contribution to reducing bias and discrimination in AI systems. AI algorithms learn from the data on which they are trained. If the data contains historical prejudices or lacks diversity, the AI system may produce unfair outcomes against certain groups based on gender, race, age, or socioeconomic status. This strengthens ethical standards and ensures equal treatment of individuals affected by AI decisions (Jobin, Ienca, & Vayena, 2019).

Effects of continuous algorithmic auditing on the ethical challenges of artificial intelligence

Mökander, Morley, Taddeo, and Floridi (2021) emphasized that continuous algorithmic auditing plays a crucial role in addressing transparency and fairness challenges in AI. Because many AI systems function as "black boxes," making their actions hard to explain, ethical issues frequently come up. Organizations can spot ethical problems, including discrimination, unfair treatment, and unexpected repercussions, before they spread by using continuous auditing. Minkkinen, Laine, and Mäntymäki (2022) observed that continuous AI auditing helps mitigate the risks associated with adaptive and self-learning AI systems. After

implementation, ethical concerns may arise because AI models might change over time due to fresh data inputs.

Mökander and Floridi (2022) noted that continuous auditing strengthens organizational AI governance by embedding ethical oversight into everyday operations. Organizations can guarantee adherence to ethical norms, including justice, privacy, accountability, and non-maleficence, by conducting systematic assessments of AI performance, data management procedures, and decision-making processes.

Schiff, Kelley, and Camacho Ibáñez (2024) found that the emergence of AI ethics auditing has significantly improved organizations' ability to address ethical challenges proactively. By offering continual assessments of AI systems, continuous auditing promotes risk identification, regulatory compliance, and stakeholder confidence.

Effects of diverse development teams on the ethical challenges of Artificial Intelligence

Diverse development teams play a crucial role in addressing the ethical challenges associated with Artificial Intelligence (AI). Diversity within AI development teams encompasses +differences in gender, ethnicity, culture, educational background, and professional expertise, age, and life experiences. As AI systems increasingly influence decision-making in areas such as healthcare, finance, education, recruitment, and law enforcement, concerns regarding bias, discrimination, fairness, accountability, and transparency have become more prominent.

As noted by Smith and Rustagi (2021), the inclusion of individuals from different backgrounds in AI development teams enhances the ability to detect and address algorithmic bias. People with varied experiences often possess unique insights that enable them to identify forms of discrimination or exclusion that may otherwise go unnoticed. Therefore, AI systems developed by diverse teams are more likely to reflect fairness and equity, thereby minimizing adverse effects on underrepresented or vulnerable populations.

In addition, diverse development teams promote greater fairness and inclusivity in the design and implementation of AI technologies. According to Cows (2021), the involvement of professionals with different social, cultural, and professional perspectives encourages a more comprehensive evaluation of the ethical implications of AI systems. This broader outlook enables developers to better understand the needs and concerns of diverse user groups, resulting in technologies that are more socially acceptable and widely trusted.

METHODOLOGY

In carrying out this study, a descriptive survey research design was adopted. The study was conducted in Akwa Ibom State, Nigeria. The target population consisted of all lawyers and librarians in Akwa Ibom State. A simple random sampling technique was employed to select 30 lawyers and 30 librarians, making a total sample size of 60 respondents. The instrument used for data collection was a structured questionnaire entitled "Law Librarians' Roles in Mitigating AI-Ethical Challenges Questionnaire (LLRMACQ)." Face and content validation of the instrument were carried out by an expert in Test, Measurement, and Evaluation to ensure its validity, appropriateness, and adequacy for the study. The reliability coefficient obtained for the instrument was 0.85, indicating a high level of reliability and justifying its use for the study. The data collected were analyzed using appropriate statistical techniques, percentage analysis was used to answer the research questions

RESULTS AND DISCUSSIONS

Research Question 1

The research question sought to examine the roles of law librarians in mitigating AI-ethical challenges. To answer the research question, percentage analysis was performed on the data (see Table 1).

Table 1
Percentage Analysis of the Roles of Law Librarians in Mitigating AI-Ethical Challenges

Roles of Law Librarians	Frequency	Percentage
Data Privacy and Confidentiality	16	26.67
Mitigating Algorithmic Bias	14	23.33
Combating Hallucinations	18	30.00**
Algorithmic Transparency	12	20.00*
TOTAL	60	100%

** The highest percentage frequency

* The least percentage frequency

SOURCE: Field survey

The above Table 1 presents the percentage analysis of the roles of law librarians in mitigating AI-ethical challenges. From the result of the data analysis, it was observed that the highest percentage (30.00%) was recorded against “Combating Hallucinations”, while the least percentage (20.00%) was recorded against “Algorithmic Transparency”. This implies that law librarians play a critical role in ensuring the reliability of AI-generated legal information by verifying outputs and preventing misinformation that could affect legal decision-making. This finding agrees with the opinion of Barocas, Hardt, & Narayanan (2019) who asserted that biased datasets can lead to systematic discrimination in algorithmic systems if not properly corrected at the design stage. His opinion also align with that of Floridi & Chiriatti (2020) who mentioned that large language models may generate plausible but incorrect information, making human oversight essential.

Research Question 2

The research question sought to examine the effects of data protection on the ethical challenges of Artificial Intelligence. To answer the research question, percentage analysis was performed on the data (see Table 2).

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Table 2
Percentage Analysis of the Effects of Data Protection on the Ethical Challenges of Artificial Intelligence

Effects of Data Protection	Frequency	Percentage
Protection of Privacy	22	36.67* *
Promotion of User Rights and Autonomy	20	33.33
Reduction of Bias and Discrimination	18	30.00*
TOTAL	60	100%

** The highest percentage frequency

* The least percentage frequency

SOURCE: Field survey

The above Table 2 presents the percentage analysis of the effects of data protection on the ethical challenges of Artificial Intelligence. From the result of the data analysis, it was observed that the highest percentage (36.67%) was recorded for "Protection of Privacy", while the least percentage (30.00%) was recorded for "Reduction of Bias and Discrimination". This suggests that data protection is most effective in safeguarding privacy rights compared to other ethical dimensions, indicating that more attention is still needed in addressing bias and discrimination in AI systems. This finding agrees with the opinion of the European Union Agency for Fundamental Rights (2020), which stated that AI systems rely heavily on large datasets containing personal and sensitive information. Therefore, effective data protection safeguards individuals' privacy rights, prevents unauthorized access to personal information, and promotes public trust in AI technologies. The finding also aligns with the view of Jobin, Ienca and Vayena (2019), who asserted that proper data governance and protection mechanisms help reduce bias and discrimination by ensuring that AI systems are trained on fair, accurate, and representative datasets.

CONCLUSION

In conclusion, Artificial Intelligence has become a transformative force in modern society, offering significant benefits in efficiency, innovation, and decision-making across various sectors. However, its rapid advancement has also introduced critical ethical challenges related to privacy, data security, algorithmic bias, transparency, accountability, human rights, and social equity. Addressing these challenges requires a comprehensive and responsible governance framework that integrates robust data protection measures, continuous algorithmic auditing, diverse development teams, and clear ethical policies. Data protection safeguards individual privacy and autonomy, continuous auditing ensures fairness and accountability in AI operations, diverse teams help minimize bias and promote inclusiveness, while ethical policies provide guidelines for responsible AI development and deployment. Therefore, the effective implementation of these strategies is essential to ensuring that AI technologies serve humanity in a fair, transparent, and equitable manner, while protecting fundamental human rights and fostering sustainable social development.

RECOMMENDATION

1. Governments, organizations, and AI developers should implement robust data protection policies and comply with established privacy regulations to ensure the secure collection, storage, processing, and sharing of personal data.
2. Organizations should establish continuous algorithmic auditing mechanisms to regularly monitor AI systems for bias, discrimination, inaccuracies, and ethical violations.
3. Governments, regulatory bodies, and organizations should formulate comprehensive ethical guidelines that emphasize transparency, accountability, fairness, human oversight, and respect for human rights.

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