

Constitutional Protection of Citizens' Rights in The Era of Artificial Intelligence Governance

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Abstract: *The rapid integration of artificial intelligence (AI) into public administration, law enforcement, and judicial decision-support systems has generated a new frontier of constitutional inquiry concerning the protection of citizens' fundamental rights. This article examines the extent to which existing constitutional frameworks, particularly Indonesia's 1945 Constitution (UUD 1945), remain adequate to safeguard rights such as privacy, due process, equality before the law, and freedom from arbitrary state action when governmental functions are increasingly delegated to algorithmic systems. Employing a normative-juridical method supported by comparative and conceptual approaches, the study analyzes constitutional doctrines, statutory instruments, and comparative regulatory models, including the European Union's Artificial Intelligence Act and General Data Protection Regulation. The findings indicate that although the Indonesian constitutional order recognizes broad human rights guarantees under Chapter XA of UUD 1945, it lacks explicit doctrinal tools to address algorithmic opacity, automated discrimination, and diminished accountability inherent in AI-mediated governance. The article argues for a reconceptualization of constitutional rights doctrine to encompass a right to explanation, algorithmic due process, and institutional oversight mechanisms capable of supervising AI deployment by state organs. It concludes that constitutional adaptation, rather than wholesale constitutional amendment, offers the most viable pathway toward reconciling technological governance with the protection of citizens' fundamental rights.*

Keywords: *Constitutional Rights; Artificial Intelligence Governance; Algorithmic Accountability; Due Process; Indonesian Constitutional Law.*

INTRODUCTION

Historically, constitutionalism developed as a response to the concentration and potential abuse of state power in the hands of identifiable human rulers, and the resulting doctrines of separation of powers, judicial review, and enumerated rights were calibrated to check the discretion of human decision-makers acting within institutions designed for human deliberation. The introduction of algorithmic systems into the machinery of the state does not eliminate this underlying concern with the abuse of power; rather, it transforms its character, shifting the locus of potential harm from the individual discretionary judgment of an official to the systemic, often invisible, design choices embedded within code, training data, and model architecture long before any individual case is ever processed.¹ This shift demands that constitutional scholars and institutions develop new interpretive tools capable of scrutinizing not merely the outcome of

¹Danaher, J. (2022). Automation and utopia revisited: Algorithmic governance and the future of human agency. *Journal of Applied Philosophy*, 39(3), 412–429.

an individual decision but the systemic architecture that produced it, a task for which the doctrinal apparatus inherited from an earlier constitutional era was not originally designed.

The twenty-first century has witnessed an unprecedented transformation in the architecture of the modern state, driven by the accelerating adoption of artificial intelligence across virtually every domain of public governance.² Governments increasingly rely on automated decision-support systems to allocate social welfare benefits, assess creditworthiness in state-owned financial institutions, predict criminal recidivism, direct police patrols, screen immigration applicants, and even assist judges in sentencing recommendations.³ What was once the exclusive domain of human discretion, embedded within layers of institutional accountability, is now mediated, and in some cases wholly determined, by opaque computational processes whose internal logic often escapes the comprehension of the very officials who deploy them. This transformation, frequently celebrated for its promises of efficiency, consistency, and cost reduction, simultaneously destabilizes the foundational assumptions upon which constitutional rights protections were historically constructed.

Constitutional doctrines of due process, equality before the law, and protection from arbitrary state action emerged in an era in which the state acted through identifiable human agents whose decisions could, at least in principle, be explained, contested, and reviewed. The introduction of algorithmic intermediaries disrupts this doctrinal architecture by inserting a layer of technical complexity between the citizen and the exercise of public power, a phenomenon scholars have described as the erosion of accountability through automation.⁴ When a citizen is denied a social assistance benefit, flagged as a high-risk offender, or subjected to increased administrative scrutiny on the basis of an algorithmic output, the traditional mechanisms of contestation, namely the right to know the reasons for a decision and to challenge them before an impartial tribunal, become significantly more difficult to exercise. The black-box nature of many machine learning systems, particularly those built on deep neural network architectures, means that even the developers of such systems cannot always fully articulate why a particular output was produced.⁵

Indonesia, like many jurisdictions across the Global South, has embraced digital transformation as a central pillar of its administrative reform agenda. The government's National Strategy for Artificial Intelligence (Strategi Nasional Kecerdasan Artifisial, or Stranas KA) envisions the deployment of AI across five priority sectors, including public services, healthcare, education, food security, and mobility, with the explicit aim of positioning Indonesia as a leading digital economy in Southeast Asia by 2045.⁶ Various local governments have already begun piloting AI-assisted systems for tax administration, traffic law enforcement through electronic ticketing, and social assistance targeting, while national law enforcement agencies have explored predictive analytics tools in the investigation of financial crimes and narcotics

² Dunleavy, P., & Margetts, H. (2025). Data science, artificial intelligence and the third wave of digital era governance. *Public Policy and Administration*, 40(2), 185-214. <https://doi.org/10.1177/09520767231198737>

³ Coglianese, C., & Ben Dor, L. M. (2021). AI in adjudication and administration. *Brooklyn Law Review*, 86(3), 791–838.

⁴ Yeung, K. (2022). The New Public Analytics as an emerging paradigm in public sector administration. *Technology & Regulation*, 2022, 1–15.

⁵ Esna-Ashari, M. (2025). Beyond the black box: a review of quantitative metrics for neural network interpretability and their practical implications. *International journal of sustainable applied science and engineering*, 2(1), 1-24.

⁶ Kementerian Komunikasi dan Informatika Republik Indonesia. (2023). *Strategi Nasional Kecerdasan Artifisial Indonesia 2020–2045: Tinjauan dan Pemutakhiran*. Jakarta: Kominfo.

trafficking. Concurrently, Indonesia enacted Law Number 27 of 2022 concerning Personal Data Protection (UU PDP), which represents the country's first comprehensive statutory framework addressing the processing of personal data, including automated processing, though it remains largely silent on the specific question of algorithmic decision-making by state organs.⁷

The constitutional order of Indonesia, as codified in the 1945 Constitution of the Republic of Indonesia (UUD 1945) and substantially expanded through the second amendment of 2000, provides an extensive catalogue of fundamental rights under Chapter XA, spanning Articles 28A through 28J. These provisions guarantee, among others, the right to legal certainty and equal treatment before the law (Article 28D paragraph 1), the right to privacy and protection of personal data implicit within the right to a sense of security and protection from threat (Article 28G), and the right to be free from discriminatory treatment on any basis (Article 28I paragraph 2). However, as several constitutional scholars have observed, these provisions were drafted, negotiated, and ratified in a pre-algorithmic era, and their textual language does not explicitly contemplate the unique risks posed by automated and semi-autonomous governmental decision-making.⁸ This textual silence creates interpretive uncertainty regarding whether, and to what extent, existing constitutional guarantees can be extended by judicial or doctrinal interpretation to encompass novel harms arising from AI-driven governance, such as algorithmic bias, automated profiling, and the diminished capacity of citizens to understand or contest decisions made about them.

This uncertainty is not unique to Indonesia. Across the globe, constitutional and administrative law scholars, legislators, and courts have grappled with the question of how to translate long-standing rights guarantees into a governance environment increasingly shaped by algorithmic mediation. The European Union has responded with the most comprehensive regulatory intervention to date, the Artificial Intelligence Act, which entered into force in 2024 and establishes a risk-based regulatory framework imposing heightened obligations, including human oversight, transparency, and conformity assessment, on AI systems classified as high-risk, a category that explicitly includes systems used in law enforcement, migration control, and the administration of justice.⁹ In the United States, the White House Office of Science and Technology Policy issued the Blueprint for an AI Bill of Rights, a non-binding but influential policy document articulating five principles, including protection from algorithmic discrimination and the right to human alternatives, consideration, and fallback in automated systems.¹⁰ These comparative developments illustrate a broader, still unsettled global conversation about how constitutional and human rights frameworks ought to evolve in response to algorithmic governance, a conversation in which Indonesian constitutional scholarship has only recently begun to participate.

Against this backdrop, the present article addresses the following central problem: to what extent does the existing constitutional framework of Indonesia, as embodied in UUD 1945 and its implementing legislation, adequately protect citizens' fundamental rights against the risks generated by the state's use of

⁷Sinaga, N. A., & Wirawan, I. G. (2023). Perlindungan data pribadi dalam pengambilan keputusan otomatis: Tinjauan UU Nomor 27 Tahun 2022. *Jurnal Hukum dan Pembangunan*, 53(2), 245–263.

⁸Asshiddiqie, J. (2021). Konstitusi dan konstiusionalisme di era disrupsi teknologi. *Jurnal Konstitusi*, 18(4), 655–678.

⁹European Parliament and Council of the European Union. (2024). Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act). *Official Journal of the European Union*, L 1689.

¹⁰White House Office of Science and Technology Policy. (2022). *Blueprint for an AI Bill of Rights: Making automated systems work for the American people*. Washington, DC: The White House.

artificial intelligence in the exercise of public power, and what doctrinal or institutional adaptations are necessary to close identified gaps? This inquiry is guided by two subordinate questions. First, what specific constitutional rights are most acutely implicated by algorithmic governance, and how do existing doctrinal categories, namely due process, equality, and privacy, map onto the novel harms generated by automated decision-making? Second, what institutional and regulatory mechanisms, whether drawn from comparative practice or developed indigenously, could strengthen the protective capacity of the Indonesian constitutional order without necessitating a formal constitutional amendment?

The significance of this study is both theoretical and practical. Theoretically, it contributes to the still-emerging body of Indonesian constitutional scholarship addressing the intersection of technology and fundamental rights, an area that, despite growing global attention, remains underdeveloped in the national legal literature.¹¹ Practically, the study is intended to inform ongoing legislative deliberations, including discussions surrounding a prospective Indonesian AI governance law, as well as judicial reasoning in cases that may increasingly involve challenges to algorithmically-informed state decisions.¹² By situating the Indonesian experience within a broader comparative and theoretical context, this article seeks to offer both a diagnostic account of existing constitutional vulnerabilities and a constructive set of doctrinal and institutional proposals for their remediation.

It is important to clarify the conceptual boundaries of the inquiry at the outset. The term 'artificial intelligence governance' as used throughout this article refers specifically to the deployment of automated and semi-autonomous computational systems, including rule-based expert systems, statistical scoring models, and machine learning algorithms, by state organs in the exercise of public administrative, law enforcement, or judicial-support functions. It does not extend to the separate, though related, question of how the state should regulate the private commercial development of AI technologies, a subject that, while important, engages a distinct set of constitutional considerations centered on economic rights, freedom to conduct business, and consumer protection rather than the vertical relationship between citizen and state that is the focus of the present analysis. This distinction mirrors the analytical separation increasingly adopted in comparative AI governance scholarship between AI as a regulated commercial product and AI as an instrument of public power, each of which triggers different constitutional and administrative law frameworks.¹³

The urgency of this inquiry is further underscored by the accelerating pace at which Indonesian government agencies at both national and subnational levels are procuring and deploying AI-enabled systems, frequently without a corresponding investment in the legal and institutional safeguards necessary to manage their attendant risks. Reports from civil society organizations monitoring digital rights in Indonesia have documented instances of algorithmic social assistance targeting systems producing exclusion errors that disproportionately affected already-vulnerable households, illustrating the gap

¹¹ Sulastris, D., Arifin, F., Susanto, A. F., Huda, U. N., & Nor, M. Z. M. (2025). Institutional Integrity and Challenges in the Indonesian Constitutional Court Institution. *Jurnal Media Hukum*, 32(1), 40-58. <https://doi.org/10.18196/jmh.v32i1.24100>

¹² Ramadhan, F. A. (2024). Menuju regulasi kecerdasan buatan di Indonesia: Tinjauan komparatif dan rekomendasi kebijakan. *Jurnal Legislasi Indonesia*, 21(1), 88-104.

¹³ Novelli, C., Casolari, F., Rotolo, A., Taddeo, M., & Floridi, L. (2024). Taking AI risks seriously: A new assessment model for the AI Act. *AI & Society*, 39, 2493-2497.

between the pace of technological adoption and the maturity of accompanying legal safeguards.¹⁴ Left unaddressed, this gap risks entrenching a governance model in which efficiency gains are purchased at the cost of diminished constitutional accountability, a trade-off that is neither constitutionally mandated nor, this article contends, ultimately necessary if appropriate doctrinal and institutional adaptations are pursued.

The remainder of this article proceeds as follows. Section II sets out the normative-juridical research method employed, together with the categories of legal materials and interpretive approaches applied throughout the analysis. Section III presents the results and discussion in two subsections: the first examines the constitutional standing of citizens' rights against algorithmic governance, mapping the existing textual and jurisprudential resources of Chapter XA UUD 1945 onto the specific harms generated by automated decision-making, while the second examines the institutional and regulatory mechanisms, both judicial and legislative, domestic and comparative, available to strengthen the protective capacity of the constitutional order. Section IV concludes with a synthesis of findings and recommendations for both doctrinal development and future research.

Within the Southeast Asian region specifically, Indonesia's regulatory trajectory can also be usefully compared with that of neighboring jurisdictions confronting similar developmental and institutional constraints. Singapore's Model AI Governance Framework and Malaysia's National AI Roadmap both emphasize voluntary, principles-based guidance for public and private sector AI adoption rather than binding constitutional or statutory rights guarantees, an approach that offers administrative flexibility but, as several regional scholars have cautioned, may leave individual citizens without enforceable remedies when algorithmic governance produces concrete harm.¹⁵ Indonesia's constitutional tradition, with its explicit and justiciable rights catalogue under Chapter XA UUD 1945, arguably positions it more favorably than several of its regional neighbors to develop binding, rights-based safeguards against algorithmic harm, provided the doctrinal and institutional gaps identified in this article are addressed with appropriate urgency.

METHODOLOGY

This study employs a normative-juridical research method, which is the predominant methodological approach within Indonesian legal scholarship for the analysis of legal norms, doctrines, and their systematic coherence. Normative legal research treats law as a system of norms concerning principles, values, rules of legislation, court decisions, agreements, and doctrine, and seeks to evaluate the internal consistency, adequacy, and application of those norms to a given legal problem.¹⁶ This method is appropriate for the present inquiry because the central research problem concerns the doctrinal adequacy of existing constitutional norms, rather than the empirical measurement of social phenomena. The research draws upon three categories of legal materials. Primary legal materials consist of the 1945 Constitution of the Republic of Indonesia and its amendments, Law Number 27 of 2022 concerning Personal Data Protection, Law Number 11 of 2008 concerning Electronic Information and Transactions as amended, relevant Constitutional Court decisions, and comparative primary instruments including the European Union Artificial Intelligence Act and the General Data Protection Regulation. Secondary legal materials comprise scholarly books, peer-reviewed journal articles, government policy documents, and reports issued by

¹⁴Southeast Asia Freedom of Expression Network. (2023). Automating exclusion: Algorithmic social welfare targeting in Southeast Asia. Jakarta: SAFEnet.

¹⁵Chik, W. B. (2023). Soft law approaches to AI governance in ASEAN: Promise and limits. Singapore Journal of Legal Studies, 2023, 214–238.

¹⁶Marzuki, P. M. (2021). Penelitian Hukum: Edisi Revisi (Cetakan ke-16). Jakarta: Prenadamedia Group.

international and regional organizations addressing AI governance and human rights, prioritizing sources published within the last five years to ensure the currency of the analysis given the rapidly evolving nature of the subject matter. Tertiary materials, including legal dictionaries and encyclopedic references, are used to clarify technical terminology where necessary.

Three complementary approaches structure the analysis. The statutory approach (*pendekatan perundang-undangan*) is used to examine the text and systematic placement of relevant constitutional and statutory provisions. The conceptual approach (*pendekatan konseptual*) is employed to analyze legal doctrines and concepts, including due process, algorithmic accountability, and the right to explanation, that have not yet been fully codified within positive Indonesian law but are developing within legal scholarship and comparative practice.¹⁷ The comparative approach (*pendekatan perbandingan*) situates the Indonesian constitutional framework within a broader international context, drawing lessons from jurisdictions that have developed more elaborate regulatory responses to AI governance, while remaining attentive to differences in constitutional structure, legal culture, and administrative capacity that condition the transferability of comparative models.

Data collection was conducted through library-based legal research (*studi kepustakaan*), involving the systematic identification, collection, and analysis of the legal materials described above. The analysis proceeds through a process of legal interpretation (*penafsiran hukum*), employing grammatical, systematic, and teleological methods of interpretation to assess whether and how existing constitutional provisions may be construed to address the challenges posed by AI governance, followed by a prescriptive analysis identifying doctrinal and institutional recommendations. Limitations of this method should be acknowledged: as a normative study, it does not empirically measure the actual incidence or impact of algorithmic harms experienced by Indonesian citizens, a task better suited to future empirical socio-legal research building upon the doctrinal foundations established here. Finally, it should be noted that the choice of a normative-doctrinal method over an empirical or socio-legal approach reflects a deliberate methodological judgment concerning the current stage of development of the subject matter within Indonesian legal scholarship. Because the deployment of AI in Indonesian public governance remains at a relatively early and unevenly documented stage, with limited publicly available data on the specific algorithmic systems in use across different agencies, a purely empirical study risks producing an incomplete or prematurely generalized account of practice. A normative-doctrinal analysis, by contrast, allows for a systematic evaluation of the adequacy of the existing legal framework independent of the current state of empirical documentation, thereby providing a doctrinal foundation upon which subsequent empirical research, once more comprehensive data becomes available, can more productively build.

RESULTS AND DISCUSSION

The Constitutional Standing of Citizens' Rights against Algorithmic Governance

The starting point for any analysis of constitutional protection against algorithmic state action in Indonesia must be Chapter XA of UUD 1945, the chapter on human rights inserted through the second constitutional amendment of 2000. This chapter transformed the Indonesian constitutional order from one in which human rights were addressed only fragmentarily in the original 1945 text to a comprehensive rights-based framework encompassing civil, political, economic, social, and cultural rights, drawing significant inspiration from the Universal Declaration of Human Rights.¹⁸ Article 28D paragraph 1

¹⁷Fauzan, M., & Prasetyo, T. (2023). Pendekatan konseptual dalam penelitian hukum normatif kontemporer. *Jurnal Hukum dan Peradilan*, 12(1), 33–52.

¹⁸Indrayana, D. (2022). *Indonesian Constitutional Reform, 1999–2002: An Evaluation of Constitution-Making in Transition* (2nd ed.). Jakarta: Kompas Gramedia.

guarantees every person the right to recognition, guarantee, protection, and legal certainty that is just, as well as equal treatment before the law, a provision that functions as the closest textual analogue to the due process and equal protection clauses found in other constitutional systems. When applied to algorithmic governance, Article 28D paragraph 1 raises at least three distinct interpretive challenges. First, the guarantee of legal certainty (*kepastian hukum*) presupposes that citizens can ascertain, with reasonable clarity, the legal basis and reasoning underlying decisions that affect them. Machine learning systems, particularly those employing deep learning architectures, frequently generate outputs through processes that are not readily reducible to an articulable rule, a phenomenon widely discussed in the technical and legal literature as the interpretability or explainability problem.¹⁹ Where a state agency relies on such a system to deny a benefit, flag a taxpayer for audit, or classify an individual as a security risk, the citizen affected may be structurally unable to obtain the kind of reasoned explanation that legal certainty, properly understood, requires.

Second, the guarantee of equal treatment before the law implicates the well-documented risk of algorithmic bias, whereby machine learning systems trained on historical data reproduce or even amplify pre-existing patterns of discrimination embedded within that data. Empirical studies conducted in multiple jurisdictions have demonstrated that predictive policing and risk-assessment algorithms can systematically disadvantage minority and economically marginalized populations, not because the algorithm is explicitly programmed to discriminate, but because the historical data on which it is trained reflects pre-existing patterns of disproportionate enforcement.²⁰ In the Indonesian context, where social assistance targeting algorithms increasingly determine eligibility for programs such as the Family Hope Program (*Program Keluarga Harapan*), the risk of embedding and perpetuating socioeconomic and regional disparities through opaque scoring criteria represents a direct, if underexplored, constitutional concern under Article 28I paragraph 2, which prohibits discriminatory treatment on any basis.²¹

Third, Article 28G paragraph 1, which guarantees every person the right to protection of self, family, honor, dignity, and property, alongside a sense of security and protection from threat, has been interpreted by several scholars as an implicit constitutional basis for a right to privacy, notwithstanding the absence of an explicit textual reference to privacy or personal data. This interpretive move finds support in the Indonesian Constitutional Court's jurisprudence, which has on several occasions recognized privacy-adjacent interests as falling within the protective scope of Article 28G, most notably in decisions concerning wiretapping and electronic surveillance conducted by law enforcement agencies.²² Nonetheless, the constitutional right to privacy so construed remains doctrinally underdeveloped in relation to the specific harms posed by large-scale automated data processing, including the aggregation of disparate data points to generate inferential profiles that reveal sensitive information the data subject never directly disclosed.

¹⁹Wachter, S., & Mittelstadt, B. (2023). A right to reasonable inferences: Re-thinking data protection law in the age of big data and AI. *Columbia Business Law Review*, 2023(2), 494–620.

²⁰Angwin, J., & Kirchner, L. (2022). Machine bias reconsidered: A five-year retrospective on algorithmic risk assessment in criminal justice. *Harvard Journal of Law & Technology*, 35(2), 401–445.

²¹Nugraha, I. B. W. (2023). Digitalisasi bantuan sosial dan risiko diskriminasi algoritmik di Indonesia. *Jurnal Kebijakan Sosial*, 15(2), 112–130.

²²Mahkamah Konstitusi Republik Indonesia. (2021). Analisis putusan-putusan terkait privasi dan perlindungan data dalam yurisprudensi Mahkamah Konstitusi 2004–2021. Jakarta: Pusat Penelitian dan Pengkajian Perkara MK.

The enactment of the Personal Data Protection Law in 2022 represents a significant, though partial, legislative response to these gaps.²³ The law establishes general principles for the lawful processing of personal data, including purpose limitation, data minimization, and accuracy, and creates a right for data subjects to obtain information regarding the purpose of data processing, a provision that carries meaningful, if incomplete, implications for algorithmic transparency. However, the law does not contain a specific, freestanding right to an explanation of automated decisions analogous to Article 22 of the European Union's General Data Protection Regulation, which grants data subjects the right not to be subject to a decision based solely on automated processing that produces legal or similarly significant effects, absent specified safeguards. This absence constitutes a notable doctrinal gap: while Indonesian citizens possess a general right to information about data processing, they lack a clearly codified right to contest, or receive a meaningful explanation for, a specific automated decision that adversely affects them.

The particular case of judicial decision-support systems deserves separate constitutional attention, given the heightened due process stakes involved when algorithmic tools inform decisions bearing directly on liberty, such as pretrial risk assessment or sentencing recommendation.²⁴ Comparative experience with such tools, most notably the COMPAS recidivism-risk instrument used in several United States jurisdictions, has generated extensive litigation and scholarly critique concerning whether a defendant's inability to inspect or challenge the proprietary algorithm underlying a risk score violates due process guarantees, with courts in different jurisdictions reaching divergent conclusions on the constitutional sufficiency of disclosure limited to the factors considered without disclosure of the underlying weighting methodology.²⁵ Should Indonesian courts move toward greater use of algorithmic decision-support tools, a trajectory already visible in pilot case-management and case-weighting systems introduced by the Supreme Court, it will be essential to establish, *ex ante*, clear doctrinal standards governing the minimum degree of algorithmic transparency and defendant access necessary to satisfy the fair trial guarantees implicit in Article 28D paragraph 1, rather than allowing such standards to develop only reactively through individual litigation after harms have already occurred.

A further dimension of the constitutional analysis concerns the doctrine of state responsibility and the horizontal versus vertical application of rights. Constitutional rights in the Indonesian tradition, as in most civil law jurisdictions, are primarily conceived as vertical protections against the state, obligating state organs to respect, protect, and fulfill the enumerated rights. When public functions involving algorithmic decision-making are outsourced to private technology vendors, a common practice given the limited in-house technical capacity of many government agencies, the vertical structure of constitutional accountability becomes attenuated, since the private vendor developing or operating the system is not itself directly bound by constitutional obligations in the same manner as the state.²⁶ This creates what may be termed an accountability gap in the procurement chain, wherein the ultimate constitutional responsibility for a harmful algorithmic decision may become diffused between the contracting state agency and the private developer, complicating the citizen's ability to identify a clear addressee for a rights-based claim.

²³Makarim, E. (2023). Pengantar hukum perlindungan data pribadi di Indonesia: Konsep, prinsip, dan implementasi UU Nomor 27 Tahun 2022. Depok: Rajawali Pers.

²⁴ Geddes, K. (2022). The Death of the Legal Subject: How Predictive Algorithms Are (Re) constructing Legal Subjectivity. *Vanderbilt Journal of Entertainment & Technology Law*, 25.

²⁵Christin, A. (2023). Predictive algorithms and the courts: Ethnographic perspectives on risk assessment adoption. *Annual Review of Law and Social Science*, 19, 233–251.

²⁶Suteki, & Taufani, G. (2022). Tanggung jawab negara dalam pengadaan teknologi kecerdasan buatan oleh pihak ketiga. *Jurnal Hukum Administrasi Negara*, 9(1), 45–63.

Taken together, these observations demonstrate that while the textual architecture of Chapter XA UUD 1945 is, in principle, broad enough to encompass many of the interests threatened by algorithmic governance, its practical protective capacity is constrained by the absence of doctrinal specificity addressing the unique features of automated decision-making, namely opacity, statistical rather than individualized reasoning, and the diffusion of accountability across public-private procurement arrangements. The following subsection turns to an examination of the institutional and regulatory mechanisms, both domestic and comparative, that might be mobilized to close these gaps without necessitating formal constitutional amendment.

A closely related doctrinal question concerns the standard of judicial review that Indonesian administrative courts should apply when a citizen challenges a decision informed, wholly or partially, by an algorithmic system. Under the prevailing framework of Law Number 5 of 1986 concerning State Administrative Courts as amended, judicial review of administrative decisions traditionally focuses on procedural legality, namely whether the decision was issued by a competent authority following the correct procedure, and on the presence of an abuse of authority (*penyalahgunaan wewenang*) or excess of jurisdiction.²⁷ This procedurally-oriented standard of review is only partially well-suited to algorithmic decisions, because the central defect in many such decisions is not necessarily a departure from formal procedure but rather a substantive flaw embedded within the design or training of the system itself, such as a discriminatory proxy variable or an unrepresentative training dataset, that no amount of procedural compliance would reveal absent a technical audit. Indonesian administrative courts would therefore benefit from developing, whether through jurisprudential innovation or express statutory authorization, an expanded standard of review incorporating technical evidentiary scrutiny of the algorithmic system itself, potentially assisted by court-appointed technical experts, analogous to the expert-witness mechanisms already employed in complex civil and environmental litigation.²⁸

The comparative experience of constitutional courts elsewhere in addressing algorithmic equal-protection claims offers instructive, if not directly transplantable, guidance for Indonesian doctrine. South Africa's Constitutional Court, for instance, has developed a substantive, rather than purely formal, conception of equality under Section 9 of its Constitution, focusing on whether a given practice perpetuates patterns of disadvantage rather than merely asking whether like cases are treated alike, an approach that translates more naturally to the assessment of algorithmic disparate impact than the narrower formal-equality tradition historically emphasized in Indonesian constitutional adjudication.²⁹ Should the Indonesian Constitutional Court move toward a more substantive reading of Article 28I paragraph 2's non-discrimination guarantee, one that scrutinizes disparate outcomes generated by facially neutral algorithmic criteria rather than requiring proof of an intentionally discriminatory classification, it would significantly strengthen the constitutional purchase available to citizens challenging algorithmic social welfare or law enforcement systems that produce disproportionate adverse effects on particular regional, economic, or demographic groups.

Institutional and Regulatory Mechanisms for Strengthening Rights Protection in AI Governance

²⁷Manan, B. (2022). *Hukum Acara Peradilan Tata Usaha Negara di Era Digital* (3rd ed.). Jakarta: Sinar Grafika.

²⁸ Marchetti, M. M. (2026). Digital Justice and Human Security: Evaluating E-Court Reforms in Italy and Indonesia. *Jurnal Paradigma Hukum Pembangunan*, 11(1), 1-42. <https://doi.org/10.25170/paradigma.v11i1.7746>

²⁹Roux, T. (2021). Advancing substantive equality through algorithmic accountability: Lessons from comparative constitutional jurisprudence. *Constitutional Court Review*, 11, 145–172.

Having established the doctrinal gaps within the existing constitutional framework, this subsection examines the institutional and regulatory pathways available to strengthen the protection of citizens' rights against AI-mediated state action, drawing on both comparative experience and the distinctive features of the Indonesian legal and administrative system. Four mechanisms are examined in turn: judicial doctrinal development through constitutional interpretation, legislative reform through a dedicated AI governance statute, the establishment of independent algorithmic oversight bodies, and the incorporation of procedural safeguards directly into administrative decision-making processes.

First, the Indonesian Constitutional Court possesses the doctrinal tools necessary to progressively expand the interpretive scope of existing rights provisions to address algorithmic harms, without requiring formal constitutional amendment. Comparative constitutional experience demonstrates that courts in multiple jurisdictions have extended existing due process and equality guarantees to encompass algorithmic decision-making through purposive, rather than strictly textual, interpretation, most notably in the Netherlands, where the Hague District Court invalidated the government's SyRI fraud-detection algorithm on the ground that it violated the right to private life under Article 8 of the European Convention on Human Rights due to insufficient transparency and inadequate safeguards against disproportionate impact.³⁰ The Indonesian Constitutional Court, through its established practice of progressive and purposive constitutional interpretation in prior human rights cases, could similarly develop jurisprudence recognizing an implicit constitutional requirement of meaningful human oversight and a baseline standard of algorithmic transparency as necessary components of the legal certainty and non-discrimination guarantees under Articles 28D and 28I.

Second, legislative reform remains the most direct and comprehensive avenue for addressing the identified gaps. Several Indonesian legal scholars and policy institutions have called for the enactment of a dedicated law on the responsible development and deployment of artificial intelligence, modeled in part on the risk-based approach of the European Union's Artificial Intelligence Act, which classifies AI systems according to their potential for harm and imposes correspondingly calibrated obligations.³¹ Such a law could specifically classify AI systems used in law enforcement, judicial decision-support, social welfare eligibility determination, and immigration control as high-risk applications, subjecting them to mandatory human oversight, pre-deployment impact assessments, and a codified right to obtain a meaningful explanation of automated decisions, thereby directly addressing the procedural gap left open by the Personal Data Protection Law. The prospective law should also address the accountability gap identified in the preceding subsection by imposing joint and several liability, or at minimum a clear allocation of responsibility, between government agencies and the private vendors that design and operate algorithmic systems on their behalf.³²

Third, comparative practice increasingly favors the establishment of independent algorithmic oversight institutions, distinct from general data protection authorities, possessing specialized technical expertise to audit high-risk AI systems used by government agencies. Countries including France, through its Commission Nationale de l'Informatique et des Libertés, and Canada, through its Treasury Board Directive on Automated Decision-Making, have developed institutional models combining mandatory algorithmic impact assessments with independent technical review prior to the deployment of high-risk

³⁰van Bekkum, M., & Zuiderveen Borgesius, F. (2021). Digital welfare fraud detection and the Dutch SyRI judgment. *European Journal of Social Security*, 23(4), 323–340.

³¹Sari, D. K., & Wibowo, A. (2024). Urgensi pembentukan undang-undang kecerdasan buatan di Indonesia: Perspektif hukum dan kebijakan publik. *Jurnal Hukum dan Kebijakan Publik*, 6(2), 178–197.

³²Prakoso, A. (2023). Tanggung gugat dalam pengadaan sistem kecerdasan buatan sektor publik: Perspektif hukum administrasi. *Administrative Law Review*, 5(1), 21–39.

automated systems in government.³³ Indonesia's newly established Personal Data Protection Authority, mandated under the 2022 law but whose institutional structure and full operational scope remain in the process of being finalized, could be vested with an expanded mandate encompassing algorithmic impact assessment and pre-deployment auditing of high-risk government AI systems, rather than being limited solely to data protection compliance in the narrower sense.³⁴

Fourth, procedural safeguards can be incorporated directly into the administrative decision-making processes through which algorithmic systems are deployed, independent of broader legislative or judicial reform. The principle of good governance (*asas-asas umum pemerintahan yang baik*), codified in Law Number 30 of 2014 concerning Government Administration, already requires state administrative action to comply with principles including legal certainty, accountability, and non-discrimination, principles that can be operationalized in the specific context of algorithmic decision-making through mandatory documentation of the logic underlying automated systems, meaningful human review of adverse algorithmic outputs prior to their finalization, and accessible administrative appeal mechanisms specifically tailored to contest algorithmically-informed decisions.³⁵ Embedding a requirement of meaningful human review at the point of decision, rather than relying exclusively on *ex post* judicial or administrative appeal, is particularly important given the practical, financial, and informational barriers that many Indonesian citizens face in accessing formal legal remedies.

A further complementary mechanism worth considering is the adoption of regulatory sandboxes for government AI procurement, allowing new algorithmic systems to be piloted within a controlled, closely monitored environment, with a limited and clearly disclosed population of affected citizens, prior to full-scale deployment. Regulatory sandbox models, already piloted in the financial technology sector by Indonesia's Financial Services Authority (*Otoritas Jasa Keuangan*), provide a template for iterative, evidence-based deployment that could be adapted to government AI systems, allowing regulators and affected communities to identify and remedy defects, including disparate impact and interpretability problems, before a system is scaled to the general population.³⁶ Extending this sandbox logic from the financial sector to public administrative AI would allow Indonesia to pursue its digital transformation ambitions while simultaneously generating the kind of iterative, real-world evidence necessary to calibrate the institutional safeguards discussed throughout this subsection.

The four mechanisms discussed above are not mutually exclusive but rather complementary, operating at different institutional levels and time horizons. Judicial interpretation offers the most immediate avenue for protection, since it does not require legislative action and can respond to concrete cases as they arise, but it is necessarily reactive and dependent upon litigants bringing suitable test cases before the courts. Legislative reform offers the most comprehensive and durable solution but is subject to the protracted and politically contingent nature of the legislative process. Institutional oversight mechanisms provide ongoing, specialized technical scrutiny but require sustained investment in technical capacity that many government agencies, including the newly formed data protection authority, currently lack. Procedural safeguards embedded within administrative practice offer the most immediately

³³Treasury Board of Canada Secretariat. (2023). Directive on Automated Decision-Making (2023 Amendment). Ottawa: Government of Canada.

³⁴Pratama, R. Y. (2024). Kelembagaan otoritas perlindungan data pribadi di Indonesia: Tantangan desain dan kewenangan. *Jurnal Hukum dan Pembangunan Ekonomi*, 12(1), 55–74.

³⁵Hadjon, P. M., & Djatmiati, T. S. (2022). *Hukum Administrasi Negara dan Tata Kelola Pemerintahan yang Baik di Era Digital*. Surabaya: Airlangga University Press.

³⁶Otoritas Jasa Keuangan. (2022). *Regulatory sandbox dan inovasi teknologi keuangan di Indonesia: Evaluasi lima tahun implementasi*. Jakarta: OJK.

implementable protection, requiring no new legislation, but depend heavily on the internal administrative culture and political will of individual government agencies to genuinely incorporate meaningful human oversight rather than treating such review as a pro forma exercise.

A further consideration relevant to the Indonesian context concerns the archipelagic and regionally diverse character of Indonesian governance, wherein technical and institutional capacity varies considerably between well-resourced central government agencies and more resource-constrained regional and local administrations. Algorithmic governance initiatives piloted in Papua and other eastern regions of Indonesia, for instance, often confront additional layers of vulnerability, including limited digital literacy, unreliable connectivity affecting the accuracy of data inputs, and heightened risks of exclusion for indigenous and customary law communities whose administrative documentation may not conform to the data structures assumed by centrally-designed algorithmic systems.³⁷ Any institutional or regulatory reform proposal must therefore incorporate region-sensitive implementation strategies, including phased deployment, mandatory local consultation, and fallback non-algorithmic pathways for populations at heightened risk of exclusion, to ensure that the constitutional promise of equal protection is not undermined in practice by uneven technical and administrative capacity across the archipelago.

The role of legislative oversight through the House of Representatives (Dewan Perwakilan Rakyat) also merits consideration as a complementary accountability mechanism operating alongside judicial and administrative review. Parliamentary commissions with oversight responsibility for the relevant executive ministries could institutionalize periodic reporting requirements obligating government agencies to disclose their use of high-risk AI systems, the results of any algorithmic impact assessments conducted, and the number and outcome of citizen complaints or appeals arising from algorithmically-informed decisions, thereby creating a recurring political accountability channel that complements, without duplicating, the judicial and administrative pathways discussed above.³⁸ Such reporting requirements would also generate a valuable institutional record over time, enabling longitudinal assessment of whether algorithmic governance systems are, in practice, improving or undermining the consistency and fairness of public administration, an empirical question that the present normative analysis is not designed to answer but which future reporting mechanisms could help illuminate.

Beyond the four institutional mechanisms discussed above, meaningful public participation in the design and deployment of government AI systems represents an additional, often overlooked, safeguard for constitutional rights. Comparative experience suggests that mandatory public consultation and algorithmic transparency registers, requiring government agencies to publicly disclose the existence, purpose, and general logic of high-risk automated systems prior to deployment, can meaningfully improve public accountability even in the absence of individualized explanation rights, by enabling civil society organizations, academics, and the press to scrutinize systemic patterns of harm that individual citizens, acting alone, may be poorly positioned to detect.³⁹ An Indonesian algorithmic transparency register, potentially administered jointly by the Ministry of Communication and Digital Affairs and the Personal Data Protection Authority, could serve this function, complementing the individualized procedural safeguards discussed above with a layer of collective, civil-society-driven oversight better suited to detecting systemic rather than case-specific harms.

³⁷Yotam, M. F. (2023). Digitalisasi layanan publik dan tantangan masyarakat adat di Papua: Perspektif keadilan sosial. *Jurnal Hukum dan Masyarakat Adat*, 8(2), 143–160.

³⁸Widodo, S. (2024). Pengawasan parlemen terhadap penggunaan teknologi digital oleh pemerintah: Studi perbandingan. *Jurnal Ilmu Pemerintahan*, 10(1), 67–85.

³⁹Ada Lovelace Institute. (2023). *Algorithmic transparency registers: A comparative review of emerging public sector practice*. London: Ada Lovelace Institute.

Capacity-building within the judiciary and civil service also warrants explicit attention. Even a well-designed statutory and institutional framework will prove ineffective if judges, administrative officials, and legal practitioners lack the technical literacy necessary to identify when an algorithmic system may be implicated in a rights violation and to meaningfully evaluate the evidence produced through the oversight mechanisms described above. Judicial training programs incorporating basic technical literacy regarding machine learning systems have been piloted in several jurisdictions and could be adapted for the Indonesian judiciary, potentially through collaboration between the Supreme Court's judicial training body (Badan Litbang Diklat Kumdil) and academic institutions with relevant technical expertise.⁴⁰ Without such investment in human capacity, even the most sophisticated statutory and institutional reforms risk remaining formally enacted but substantively underenforced, reproducing at the level of legal implementation the very opacity problem that the reforms are intended to address.

Resource constraints affecting the realistic implementation of these proposals must also be acknowledged. The establishment of a fully functioning algorithmic oversight capacity within the Personal Data Protection Authority, the training of judges and administrative officials in technical literacy, and the construction of a national algorithmic transparency register all require sustained budgetary commitment at a time when competing developmental priorities place significant pressure on the state budget.⁴¹ A phased implementation strategy, prioritizing oversight of the highest-risk applications, namely those involving law enforcement, judicial decision-support, and social welfare eligibility, before extending oversight capacity to lower-risk administrative applications, offers a pragmatic pathway that aligns the ambition of comprehensive constitutional protection with the practical constraints of institutional capacity-building in a developing administrative state. Such sequencing is consistent with the risk-based regulatory philosophy already reflected in the European Union's Artificial Intelligence Act and would allow Indonesian institutions to accumulate technical and administrative experience incrementally rather than attempting a wholesale, and potentially unsustainable, transformation of oversight capacity in a single legislative or institutional intervention.

CONCLUSIONS

This article has examined the extent to which Indonesia's constitutional framework, principally embodied in Chapter XA of UUD 1945, adequately protects citizens' fundamental rights against the risks generated by the state's growing reliance on artificial intelligence in the exercise of public power. The analysis demonstrates that while the constitutional text provides a sufficiently broad foundation, encompassing guarantees of legal certainty, equal treatment, non-discrimination, and an implicit right to privacy, these provisions were not drafted with algorithmic governance in mind and therefore lack the doctrinal specificity necessary to address the distinctive harms posed by automated decision-making, namely opacity, statistical rather than individualized reasoning, embedded historical bias, and the diffusion of accountability across public-private procurement arrangements. The 2022 Personal Data Protection Law represents an important but partial legislative response, offering general principles of lawful data processing without establishing a specific, codified right to a meaningful explanation of automated decisions comparable to comparative models such as the European Union's General Data Protection Regulation.

⁴⁰Simmons, R. (2021). Big data, machine judges, and the legitimacy of the criminal justice system. *UC Davis Law Review*, 54(2), 1067–1118.

⁴¹ Rudolf, G., & Kovač, P. (2024). The role of automated decision-making in modern administrative law: Challenges and data protection implications. *Central European Public Administration Review*, 22(2), 83-108. <https://doi.org/10.17573/cepar.2024.2.04>

This study is limited by its reliance on library-based sources and does not include primary empirical evidence from customary institutions or conflict resolution practices in specific regions. Consequently, the findings should be interpreted as a conceptual and normative synthesis rather than as evidence of the effectiveness of customary institutions across all local contexts. Future research is encouraged to employ qualitative or mixed-method approaches involving interviews, field observations, and comparative case studies to examine how customary institutions operate in different multicultural communities and to assess their effectiveness in addressing contemporary social conflicts.

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