



Research Paper

Speaking the Language of Justice: The Algorithmic Precision Paradox and Judicial Legitimacy in Post-Authoritarian Courts

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Abstract

The accelerating digitalisation of judicial systems raises a neglected question: whether computational precision can enhance adjudication without displacing the contextual, justificatory, and discretionary dimensions through which judicial legitimacy is constituted. This article examines this problem through Bangladesh, where expanding digital judicial infrastructures have created a prospective setting for considering the implications of algorithmic decision-support, despite the absence of documented algorithmic adjudication. It asks how such technologies could reshape judicial reasoning and institutional authority, and under what conditions their adoption could remain compatible with the rule of law. Employing qualitative doctrinal and socio-legal analysis, and developing the concept of the algorithmic precision paradox, the article argues that computational gains may generate institutional costs when technical outputs become insufficiently transparent or acquire excessive decisional authority. It identifies opacity as a central mechanism connecting constrained judicial discretion, potential reproduction of bias, and weakened public reasoning. The article contributes a theoretically grounded account of algorithmic judicial legitimacy by distinguishing technological assistance from algorithmic authority and proposes governance safeguards centred on transparency, judicial primacy, contestability, and accountability.

Keywords: Algorithmic governance; Judicial decision-making; Post-authoritarian courts; Rule of law

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I. Introduction

Courts in societies emerging from authoritarian rule confront a distinctive problem of legitimacy.¹ Their authority depends not only on constitutional competence or formal independence, but also on their capacity to demonstrate that decisions are reached through reasons that are intelligible, contestable, and responsive to individual circumstances.² This justificatory dimension is particularly important where judicial institutions have experienced executive dominance, politicisation, or weakened institutional checks.³ At the same time, courts are being reshaped by digitalisation. Electronic filing, virtual proceedings, case-management platforms, and data infrastructures are increasingly incorporated into judicial administration, while algorithmic decision-support is presented as a means of improving consistency, efficiency, and informational capacity.⁴ Yet the characteristics that make computational systems attractive standardisation, speed, and precision may also reduce the visibility of the reasoning through which judicial authority is justified.⁵

Existing scholarship reflects two competing approaches. One emphasises functional benefits: standardised computational processes may reduce inconsistent treatment, identify patterns across large datasets, and limit some forms of arbitrary human decision-making. Such benefits matter where discretion may itself be vulnerable to political pressure or unequal application.⁶ Another strand emphasises opacity, embedded bias, weakened accountability, and displacement of contextual legal judgement. Yet these strands often treat benefits and risks as opposing properties of technology rather than potentially interconnected consequences of institutional deployment.⁷ Scholarship on judicial technology also insufficiently distinguishes administrative digitalisation from algorithmic adjudication. Digital infrastructure does not, by itself, transfer decisional authority from judges to computational systems. The critical question arises when systems designed to assist judicial reasoning acquire practical authority without equivalent mechanisms of explanation, scrutiny, and contestation.⁸

¹ Cynthia Farid, “Decolonizing Administrative Action,” in *Judicial Review of Administrative Action Across the Common Law World* (Cambridge University Press, 2021), 289–306, <https://doi.org/10.1017/9781108674355.017>.

² Abdulaziz Al-khawatreh et al., “Digital Technologies and Their Role in Supporting Judicial Oversight in Administrative Courts,” in *Studies in Systems, Decision and Control*, vol. 227 (Faculty of Law, Zarqa University, Zarqa, Jordan: Springer Science and Business Media Deutschland GmbH, 2026), 875–89, https://doi.org/10.1007/978-3-031-95310-1_66.

³ José Felipe Málaga Cruz et al., “INNOVATIVE MANAGEMENT IN THE LEGAL WORLD: KEYS TO MAKING THE RIGHT DECISIONS,” *PETITA: JURNAL KAJIAN ILMU HUKUM DAN SYARIAH* 10, no. 2 (July 2025): 489–510, <https://doi.org/10.22373/petita.v10i2.834>.

⁴ Lady Juliana Guevara Flórez, Luis Alfonso Botero Chica, and Víctor Julián Moreno Mosquera, “El Impacto de Las Tecnologías En El Proceso Judicial: Una Mirada a Partir de Los Conceptos de Juez Digital y Debido Proceso,” *Novum Jus* 18, no. 3 (December 2024): 179–207, <https://doi.org/10.14718/NovumJus.2024.18.3.7>.

⁵ D Patreliuk et al., “The Impact of Using Algorithmic Systems on the Criminal Trial: International Experience,” *Pakistan Journal of Criminology* 16, no. 16.3 (June 2024): 1185–98, <https://doi.org/10.62271/pjc.16.3.1185.1198>.

⁶ The Constitution of the People’s Republic of Bangladesh, arts. 94 & 116A. While Article 94 establishes the Supreme Court as the pinnacle of judicial independence, Article 116A explicitly guarantees that subordinate judicial officers shall be independent in the exercise of their judicial functions.

⁷ *Bangladesh v. Asaduzzaman Siddiqui (16th Amendment Case)*, 70 DLR (AD) 40 (2018). This case is the definitive contemporary authority on the “politicisation” of legal institutions in Bangladesh; the Appellate Division struck down the 16th Amendment to the Constitution, which had sought to restore Parliament’s power to remove Supreme Court judges, thereby reaffirming judicial autonomy against legislative encroachment.

⁸ Ministry of Law, Justice and Parliamentary Affairs, *e-Judiciary Project: Digitalisation of the Subordinate Judiciary of Bangladesh* (Dhaka: Justice and Parliamentary Affairs Division, 2020), accessed March 16, 2026, <https://lawjusticediv.gov.bd/e-judiciary>.

This article conceptualises that tension as the algorithmic precision paradox: the process through which gains in computational accuracy, consistency, or efficiency may simultaneously generate losses in transparency, contextual judicial discretion, or public trust in legal reasoning. The concept moves beyond the binary question of whether algorithms are beneficial or harmful by examining how technological assistance can alter the allocation and visibility of decisional authority. Opacity is treated as the central mechanism. When an algorithmic recommendation cannot be meaningfully interrogated, judges may become less able or less institutionally positioned to depart from computational outputs; litigants may struggle to challenge them; and the public may find judicial reasoning less intelligible. Potential bias and weakened public reasoning therefore emerge as connected risks rather than isolated defects. The argument nevertheless recognises that algorithmic assistance could mitigate arbitrary or politically influenced decision-making, making it necessary to distinguish technological assistance from delegation of judicial authority.

Bangladesh provides an institutionally grounded setting for examining these questions. Its constitutional order protects judicial independence, while its judiciary has pursued digital reforms involving case management, virtual proceedings, electronic filing, and related data infrastructures. Bangladesh is not treated as evidence of established algorithmic adjudication. Rather, it is examined prospectively: its trajectory of judicial digitalisation provides a concrete setting for analysing conditions under which algorithmic decision-support might subsequently enter judicial processes. This distinction prevents normative risks from being presented as observed consequences of an algorithmic system that the available evidence does not establish.

Against this background, the article asks: how might prospective algorithmic decision-support reshape judicial reasoning, discretion, and institutional legitimacy in a post-authoritarian judicial setting, and what legal and institutional safeguards are necessary to keep technological assistance compatible with judicial independence, due process, and the rule of law? The study adopts a qualitative doctrinal and socio-legal approach, drawing on constitutional provisions, statutory frameworks, judicial decisions, policy materials, and scholarship on judicial digitalisation and algorithmic governance. Its theoretical framework combines the algorithmic precision paradox with judicial legitimacy understood through reason-giving, human responsibility, transparency, and contestability. The article makes three contributions. First, it develops the algorithmic precision paradox as a framework for explaining how computational gains may generate institutional costs rather than automatically enhance legitimacy. Secondly, it identifies opacity as a connecting mechanism through which constrained discretion, potential bias, and weakened public reasoning may interact. Thirdly, it distinguishes algorithmic assistance from algorithmic authority, arguing that legitimate technological mediation requires human judicial responsibility for legal interpretation, contextual evaluation, and publicly reasoned judgment. By treating Bangladesh as a prospective institutional case rather than evidence of existing algorithmic adjudication, the study extends debates on law and technology into the underexamined relationship between algorithmic governance and judicial legitimacy in post-authoritarian settings.

This study employs a qualitative doctrinal and socio-legal methodology. It examines Bangladesh as a prospective institutional setting for algorithmic judicial decision-support, rather than as evidence of existing algorithmic adjudication. The analysis draws on four categories of sources: constitutional and statutory provisions governing judicial independence and adjudication; selected judicial decisions addressing judicial autonomy and institutional authority; official policy and judicial digitalisation documents; and scholarly literature on

algorithmic governance, judicial reasoning, transparency, discretion, and legitimacy. Sources were selected for their direct relevance to Bangladesh's judicial framework and to the normative implications of integrating algorithmic technologies into adjudication. The analysis is guided by the algorithmic precision paradox, using opacity as the central analytical mechanism through which constrained discretion, potential bias, weakened public reasoning, and institutional legitimacy are examined. The socio-legal dimension situates these doctrinal questions within the institutional conditions shaping judicial authority and technological reform.

2. Finding and Analysis

2.1. Algorithmic Rationality and the Transformation of Judicial Authority

The growing incorporation of algorithmic and data-driven technologies into judicial administration raises a question that extends beyond technological efficiency: how may computational forms of reasoning alter the epistemic and institutional foundations of judicial authority? Courts traditionally derive authority from interpretive judgement, normative reasoning, and the capacity to relate legal rules to the factual and social circumstances of individual disputes. Judicial reasoning is therefore not simply a mechanism for producing outcomes; it is a public practice of justification through which judges explain why particular legal consequences follow from contested facts, norms, and principles. Algorithmic systems introduce a different rationality, grounded in statistical modelling, pattern recognition, optimisation, and predictive inference. The significance of this shift lies not merely in adopting new tools, but in the possibility that computational methods may influence what counts as relevant evidence, how alternatives are evaluated, and how decisions are subsequently justified.

Bangladesh provides an important institutional context for examining this transformation, but the distinction between digitalisation and algorithmic adjudication is essential. Existing judicial reforms include digital case-management systems, virtual court proceedings, electronic filing, and judicial data-management initiatives. These reforms are principally administrative and do not, on the evidence considered here, establish the use of algorithmic decision-support in adjudication.⁹ Their significance is prospective: they illustrate the development of technological infrastructures through which more sophisticated forms of data-driven assistance could eventually be introduced into judicial processes. The analysis therefore does not attribute existing algorithmic practices to Bangladeshi courts. Instead, it asks what institutional consequences might arise if computational systems move from facilitating administration to influencing substantive judicial reasoning.

This distinction is important because algorithmic assistance can produce genuine institutional benefits. Computational tools may help courts manage large caseloads, identify procedural bottlenecks, organise information, and promote consistency in routine processes. They may also reduce certain forms of arbitrary human variation. This possibility is particularly relevant where judicial discretion has historically been vulnerable to political pressure, unequal application, or administrative interference. A critical analysis of algorithmic governance must therefore avoid assuming that human judgement is necessarily neutral or that technological

⁹ Mohammad Khabbab Taki, "Artificial Intelligence in Bangladesh's Legal System: Pathways to Smart and Efficient Justice," *Nusantara: Journal of Law Studies* 5, no. 1 (March 14, 2026): 252–68, <https://doi.org/10.66325/nusantaralaw.v5i1.158>.

mediation is necessarily harmful.¹⁰ The relevant question is not whether algorithms are inherently superior or inferior to judges, but under what conditions technological assistance changes the distribution of epistemic and decisional authority within adjudication.

The central concern emerges when algorithmic assistance becomes algorithmic authority. Traditional adjudication requires judges to evaluate evidence, interpret legal norms, weigh competing principles, assess credibility, and respond to the particular circumstances of a case. These functions involve discretion, but discretion is not synonymous with arbitrariness; when constrained by law and accompanied by reason-giving, it is part of judicial responsibility. Algorithmic systems, by contrast, may generate recommendations through correlations, classifications, risk scores, or predictive models whose assumptions are difficult to inspect. Where such outputs materially influence judicial decisions, part of the analytical process may become embedded within technical infrastructures designed and maintained by actors outside conventional judicial structures. The formal decision may remain judicial, while elements of the reasoning that shape it become technologically mediated.

This is where the concept of the algorithmic precision paradox becomes analytically significant. The paradox refers to the possibility that improvements in computational accuracy, consistency, and efficiency may simultaneously produce losses in transparency, contextual discretion, or public confidence in judicial reasoning. It should not be understood as an assertion that algorithmic precision necessarily undermines justice.¹¹ Rather, it identifies a structural tension between computational forms of reliability and the justificatory requirements of adjudication. A system may generate a highly consistent output while leaving unresolved whether the underlying data are normatively appropriate, whether the model reflects legally permissible considerations, or whether affected parties can meaningfully challenge the basis of its recommendation.

Opacity constitutes the principal mechanism connecting the article's four concerns. First, technically complex systems may make it difficult for judges, lawyers, litigants, and the public to understand how a recommendation was generated. Secondly, reduced explanatory visibility can constrain meaningful judicial discretion if judges defer to outputs that they cannot adequately interrogate. Thirdly, where models rely on historical data, apparently neutral predictions may reproduce patterns of institutional or social inequality embedded in those data. Finally, if the computational basis of a recommendation cannot be translated into publicly intelligible legal reasons, the communicative function of the judgment may be weakened. Opacity thus links technological complexity to constrained discretion, potential bias, and weakened public reasoning rather than treating these as four unrelated risks.

The implications are especially significant in post-authoritarian or institutionally transitional settings. Judicial legitimacy in such contexts depends on demonstrating that public power is exercised through law, reason, and accountable institutional procedures rather than through opaque exercises of authority. The introduction of algorithmic systems may therefore create a legitimacy problem even where their outputs are statistically accurate. A

¹⁰ Abubakar Muhammad Jibril, "Watching Black Youth : Algorithmic Surveillance and the Shrinking Civic Space in Indonesia and Nigeria," *Human Rights in the Global South (HRGS)* 1, no. July (2026): 1–26, <https://doi.org/10.56784/hrgs.v5i1.165>.

¹¹ S A Parente, "The Contribution of Artificial Intelligence and Computer Algorithms to the Investigation Activities of the Financial Administration and to the Jus Dicere Function of the Tax Judge: What Prospects for the Suppression of Tax Evasion?," *Italian Law Journal* 9, no. 2 (2023): 557–78, <https://www.scopus.com/pages/publications/85193317110?origin=resultslist>.

technologically generated recommendation can assist a judge, but it cannot by itself supply the constitutional justification for the exercise of judicial power. The question is consequently one of institutional attribution: who bears responsibility for the legal judgement when a judicial decision is materially shaped by a computational process whose assumptions cannot be adequately examined by those subject to it?

The appropriate response is not technological rejection but institutional design.¹² Algorithmic systems may be compatible with judicial legitimacy where they remain subordinate to judicial reasoning, their relevant operations are sufficiently transparent to permit scrutiny, affected parties have meaningful opportunities to contest their use, and judges retain genuine authority to depart from computational recommendations.¹³ This requires distinguishing assistance from substitution. The former can enhance judicial capacity; the latter risks relocating decisional authority from publicly accountable adjudication to technical infrastructures. Such a distinction also responds to the strongest case for algorithmic decision-support: where human discretion has produced inconsistency or enabled institutional interference, computational assistance may strengthen rather than weaken procedural regularity. Its legitimacy therefore depends not on eliminating human judgement, but on ensuring that technological outputs remain subject to legally accountable human evaluation.¹⁴

Accordingly, algorithmic rationality should be understood as an institutional question rather than merely a technological one. The issue is not simply whether courts can process information more efficiently, but whether computational systems preserve the conditions under which judicial decisions remain reasoned, contestable, and attributable to legally responsible judges. Examining Bangladesh's digitalisation trajectory through this framework makes it possible to assess the prospective pathway from administrative digital infrastructure to algorithmic decision-support without conflating existing reforms with algorithmic adjudication. The algorithmic precision paradox consequently provides a conceptual bridge between technological capability and judicial legitimacy, directing attention to the institutional safeguards required before computational precision is permitted to influence the exercise of judicial authority.

2.2. The Algorithmic Precision Paradox and the Limits of Technocratic Justice

The growing incorporation of algorithmic and data-driven technologies into judicial administration raises a question extending beyond efficiency: how might computational rationality alter the epistemic and institutional foundations of judicial authority? Courts do not merely produce outcomes by mechanically applying rules. Their legitimacy also rests on interpretive judgement, normative reasoning, and the capacity to relate legal principles to contested facts and individual circumstances. Judicial reasoning is therefore a public practice of justification: judges must explain not only what they decide, but why the decision follows from law. Algorithmic systems introduce a different mode of rationality, grounded in statistical

¹² Abubakar Muhammad Jibril and Hoda Gueddi, "Children's Digital Privacy in the Age of AI: A Rights-Based Legal Approach to Data Protection in Nigeria," *International Journal of Management Research and Business Analytics* 2, no. 1 (2026): 40–48.

¹³ Ramalina Ranaivo Mikea Manitra, "'Am I Being Silenced by a Machine?' AI-Driven Content Moderation and The Chilling Effect on Freedom of Expression," *Alauddin Law Development Journal* 7, no. 2 (August 16, 2025): 109–25, <https://doi.org/10.24252/aldev.v7i2.57618>.

¹⁴ Tundjung Herning Sitabuana et al., "The Urgency of Artificial Intelligence Code of Ethics," *Indonesia Law Review* 14, no. 3 (December 31, 2024): 101–23, <https://doi.org/10.15742/ilrev.v14n3.6>.

modelling, pattern recognition, quantification, and predictive inference. Their use may influence what counts as relevant information, how alternatives are assessed, and how judicial conclusions are reached and explained.

The distinction between judicial digitalisation and algorithmic adjudication is crucial. Bangladesh has pursued digital reforms, including case-management systems, virtual proceedings, electronic filing, and judicial data-management initiatives. These developments are principally administrative; the materials considered here do not establish that Bangladeshi courts currently use algorithmic decision-support to determine cases. Bangladesh is therefore not presented as an empirical example of established algorithmic adjudication. Rather, its digitalisation trajectory provides an institutional setting for considering how existing infrastructures might create conditions for future algorithmic applications. This prospective framing avoids treating possible risks as observed outcomes while retaining the value of examining the context in which such technologies could be introduced.

Algorithmic decision-support may offer real benefits. Data-driven tools can assist with organising information, identifying procedural bottlenecks, managing caseloads, and promoting consistency. In appropriate circumstances, they may also reduce arbitrary variation in human decision-making. This possibility matters in judicial systems where discretion can be affected by political pressure, unequal treatment, or institutional interference.¹⁵ Human judgement should not be romanticised as invariably impartial, just as computational systems should not be presumed neutral merely because their outputs are numerical. The relevant question is not whether human or algorithmic reasoning is inherently preferable, but how their interaction distributes authority, responsibility, and opportunities for challenge.

The central concern arises when assistance acquires the practical force of authority. Judicial adjudication requires judges to interpret legal norms, evaluate evidence, weigh competing principles, assess credibility, and respond to circumstances that may not be adequately represented by standardised variables. Discretion, when bounded by law and accompanied by reason-giving, is not equivalent to arbitrariness; it is part of judicial responsibility. Algorithmic systems, by contrast, may generate classifications, risk scores, or recommendations through models whose assumptions, training data, and weighting criteria are difficult to inspect.¹⁶ When such outputs materially shape decisions, analytical authority may become embedded in technical infrastructures developed or maintained by actors outside the judiciary. A judgment may remain formally attributable to a judge even as its reasoning is partly shaped by processes that are not readily visible to litigants or the public.

This tension is captured by the concept of the algorithmic precision paradox: the process through which gains in computational accuracy, consistency, or efficiency may simultaneously generate losses in transparency, contextual judicial discretion, or public trust in legal reasoning. The paradox does not assume that precision is undesirable or that algorithmic tools necessarily undermine justice. It identifies a structural tension between technical reliability and the normative requirements of adjudication. A model may produce consistent predictions while leaving unresolved whether its data are representative, its

¹⁵ Mamok Andri Senubekti et al., "Factors Influencing the Adoption and Usage of Case-Based Reasoning Systems by Judicial Professionals in Criminal Cases: A Systematic Literature Review," in *AIP Conference Proceedings*, 2026, 060008, <https://doi.org/10.1063/5.0322114>.

¹⁶ Federico Adan Domènech, "Algoritmos En El Proceso Civil: Oportunidad de Modernización o Riesgo de Desnaturalización," *IDP. Revista de Internet, Derecho y Política*, no. 44 (December 23, 2025): 1–16, <https://doi.org/10.7238/idp.v0i44.9800399>.

variables legally relevant, or its recommendations compatible with fairness and proportionality. Statistical precision cannot, by itself, establish the legitimacy of a judicial outcome.

Opacity is the principal mechanism connecting the risks examined here. First, technical complexity may prevent judges, lawyers, litigants, and the public from understanding how an algorithmic recommendation was produced. Secondly, where the basis of an output cannot be interrogated, judges may find it difficult or institutionally costly to depart from it, constraining meaningful discretion. Thirdly, models trained on historical data may reproduce patterns of inequality or institutional bias embedded in those data, while presenting their outputs as objective. Finally, if the computational contribution cannot be translated into intelligible legal reasons, the judgment's public justificatory function may be weakened. These risks are therefore related rather than discrete: opacity can constrain judicial evaluation, make discriminatory assumptions harder to contest, and diminish the transparency through which courts explain and legitimate their decisions.

The relationship between algorithmic governance and judicial legitimacy is especially consequential in post-authoritarian or institutionally transitional settings. Courts in such contexts may be expected to demonstrate independence, fairness, and accountability while rebuilding confidence in public institutions. Their legitimacy depends not only on formal constitutional authority but also on showing that state power is exercised through reasons that can be scrutinised and contested. An opaque algorithmic recommendation may complicate this task even where it is statistically accurate. The issue is one of institutional attribution: when a judge relies materially on a computational output, who is responsible for the legal judgement, and can the affected party meaningfully challenge the considerations that shaped it? These questions are particularly salient where judicial independence and public confidence remain central institutional concerns.

This analysis does not require rejecting technological innovation. Algorithmic assistance may improve administrative capacity and, under suitable conditions, reduce inconsistency or opportunities for arbitrary intervention. The decisive distinction is between assistance and substitution. Assistance supplies information or recommendations that judges can evaluate, explain, accept, or reject. Substitution occurs where outputs acquire determinative force or are followed without meaningful independent scrutiny. The former may support adjudication; the latter risks relocating practical authority to technical systems without corresponding legal accountability. Preserving interpretive reasoning does not mean preserving every existing exercise of discretion. It means ensuring that judicial discretion remains legally structured, reviewable, and responsive to the circumstances of each case, while computational outputs remain open to challenge. A legitimacy-oriented approach consequently requires safeguards tailored to the risks identified. Transparency must extend beyond announcing that a tool is used: courts should disclose its purpose, role, relevant limitations, and the nature of its influence on proceedings. Independent technical and legal audits can examine data quality, model performance, and discriminatory effects. Judges require training to assess algorithmic recommendations critically and to provide reasons when accepting or rejecting them. Litigants should have meaningful opportunities to know when an algorithmic tool has materially influenced their case and to contest its relevance or reliability. Above all, judicial reasons must remain the judge's own legal justification, not a restatement of an unexplained computational output. These measures connect oversight to opacity, training to constrained discretion, bias assessment to discriminatory risk, and reason-giving to public intelligibility.

The algorithmic precision paradox therefore reframes judicial modernisation as an institutional and normative challenge, not simply a technical upgrade. Bangladesh’s administrative digitalisation offers a prospective context for considering this challenge, but does not establish that algorithmic adjudication is already occurring. The central concern is whether future computational tools will remain subordinate to legally accountable judicial judgement. Where transparency, contestability, independent scrutiny, and meaningful judicial control are secured, algorithmic assistance may complement adjudication. Where these conditions are absent, computational precision may obscure rather than strengthen the foundations of legitimate judicial authority.

2.3. Institutional Legitimacy and the Governance of Algorithmic Adjudication

The implications of the algorithmic precision paradox extend well beyond the outcome of individual judicial decisions. At a deeper level, the integration of algorithmic tools into legal processes raises fundamental questions about institutional legitimacy and the nature of judicial authority. Courts do not derive their authority solely from constitutional provisions or statutory mandates; their authority is also sustained by public confidence in the fairness, transparency, and accountability of judicial processes. The legitimacy of judicial institutions depends on the perception that legal decisions are produced through reasoned deliberation and that the exercise of judicial power remains open to scrutiny. When algorithmic systems are introduced into adjudicative environments, this relationship between authority and public justification becomes more complex.

The mediation of legal reasoning through technical infrastructures can obscure the foundations upon which judicial decisions are based, thereby reshaping the communicative role that courts traditionally play within constitutional systems.

Judicial reasoning historically performs a crucial institutional function. Written judgments do not merely record the outcomes of disputes; they provide explanations that demonstrate how legal norms have been interpreted and applied.¹⁷ Through this process, courts articulate the principles that justify their authority and enable litigants and the broader public to understand the reasoning behind legal outcomes. The practice of reason-giving therefore operates as a central mechanism through which the rule of law is sustained. It ensures that judicial power is exercised in a manner that is transparent and subject to contestation. When courts explain their reasoning, they also invite scrutiny, enabling legal arguments to be debated, challenged, and refined over time.¹⁸ Algorithmic systems complicate this communicative dimension of adjudication by introducing layers of technical mediation that may not easily translate into conventional forms of legal explanation.¹⁹ Many computational systems operate through complex models that process large datasets and generate outputs based on statistical correlations or predictive analysis. While such systems may assist courts in organising information or identifying patterns within legal data, the reasoning embedded

¹⁷ Lon L Fuller and Kenneth I Winston, “The Forms and Limits of Adjudication,” *Source: Harvard Law Review* 92, no. 2 (1978): 353–409.

¹⁸ Abubakar Muhammad jibril, “Exposing Constitutional Violations: Vigilante Violence Against Northerners in Southern Nigeria,” *Constitutionale* 7, no. 1 (February 26, 2026): 1–16, <https://doi.org/10.25041/constitutionale.v7i1.4976>.

¹⁹ Daniel Varona and Juan Luis Suarez, “Social Context of the Issue of Discriminatory Algorithmic Decision-Making Systems,” *AI & SOCIETY* 39, no. 6 (December 2024): 2799–2811, <https://doi.org/10.1007/s00146-023-01741-x>.

within algorithmic processes may not be readily accessible to litigants or even to judges themselves. When a judicial decision relies in part on algorithmic assessments, the pathway through which that decision has been shaped may remain opaque. This opacity poses significant challenges for the institutional legitimacy of courts, particularly in contexts where transparency and accountability are essential to maintaining public trust. The difficulty of explaining algorithmic reasoning highlights a broader transformation in how legal authority is articulated. Judicial reasoning traditionally relies on language that can be evaluated through legal argumentation.²⁰ Judges refer to statutes, precedents, and constitutional principles, constructing interpretations that can be examined and critiqued by lawyers, scholars, and other courts.²¹ Algorithmic outputs, by contrast, often derive their authority from technical performance rather than normative justification.²² Their credibility may be associated with claims of statistical reliability or computational accuracy rather than with the articulation of legal principles. When such outputs influence judicial decisions, the foundations of legal authority may gradually shift from discursive reasoning to technical validation.

This transformation has important implications for how litigants experience the adjudicative process. Courts serve not only as institutions for resolving disputes but also as forums in which individuals can challenge decisions that affect their rights and interests. The ability to understand and contest judicial reasoning is therefore central to the fairness of legal procedures. If algorithmic systems shape legal outcomes in ways that are not easily explainable, litigants may find it difficult to engage meaningfully with the reasoning that underlies judicial decisions. The perception that decisions are influenced by inaccessible technical systems can weaken the sense that courts provide a space for reasoned deliberation and equitable adjudication. The challenge of maintaining institutional legitimacy becomes particularly significant in societies undergoing political or institutional transition. In post-authoritarian contexts, judicial institutions often face the task of rebuilding credibility after periods characterised by executive dominance or weakened checks and balances. Courts are expected to demonstrate independence and to signal a commitment to the principles of the rule of law.²³ In such environments, the visibility of judicial judgement carries symbolic importance. The reasoning expressed in judicial decisions serves as evidence that legal authority is exercised through principled deliberation rather than through arbitrary power.

Within Bangladesh's post-authoritarian judicial landscape, questions of institutional credibility remain closely connected to the broader process of democratic consolidation. Judicial institutions must navigate a complex environment shaped by political contestation, institutional reform, and public expectations regarding fairness and accountability. Efforts to modernise the administration of justice have increasingly included the adoption of digital technologies and data-driven systems designed to improve efficiency and coordination within the courts. These administrative reforms including case management digitalisation, virtual proceedings, and electronic filing do not themselves constitute algorithmic adjudication; however, they establish the institutional infrastructure within which algorithmic decision-

²⁰ Reuben Binns, "Human Judgment in Algorithmic Loops: Individual Justice and Automated Decision-Making," *Regulation & Governance* 16, no. 1 (January 2022): 197–211, <https://doi.org/10.1111/rego.12358>.

²¹ Silvia Barona Vilar, "THE DILEMMA OF REASONING, MOTIVATION AND ALGORITHMIC JUDICIAL DECISION-MAKING (IA): THE POSSIBILITY OF THE IMPOSSIBLE?," *Teoría & Derecho. Revista de Pensamiento Jurídico*, no. 37 (December 2024): 150–75, <https://doi.org/10.36151/TD.2024.109>.

²² Ibid

²³ Ramalina Ranaivo Mikea Manitra and Adya Paramita Prabandari, "Judicial Independence Under Political Pressure: The High Constitutional Court and Electoral Justice in Madagascar (2009–2023)," *Constitutional Review* 11, no. 2 (December 31, 2025): 393–421, <https://doi.org/10.31078/consrev1125>.

support could be progressively introduced. It is precisely this trajectory that renders Bangladesh a pertinent institutional context for examining the normative implications analysed in this article.²⁴ While such administrative reforms may contribute to addressing case backlogs and procedural delays, the progressive expansion of digital infrastructure also raises important prospective questions about how further technological innovation including the potential introduction of algorithmic decision-support interacts with the normative foundations of adjudication. The central issue is not simply whether algorithmic systems can improve administrative efficiency, but whether their use can be reconciled with the principles that sustain judicial legitimacy. Courts must ensure that technological innovation does not undermine the transparency and accountability that are essential to the rule of law. The governance of algorithmic adjudication therefore becomes a matter of institutional design rather than purely technical implementation. Decisions regarding how algorithms are developed, implemented, and supervised within judicial systems carry significant implications for the preservation of judicial authority.

One critical aspect of governance concerns the transparency of algorithmic infrastructures. If computational systems are used to support judicial decision-making, the logic underlying those systems must be accessible to meaningful scrutiny. Transparency does not necessarily require the public disclosure of every technical detail, but it does require mechanisms that allow judges, litigants, and oversight bodies to understand the factors influencing algorithmic outputs. Without such mechanisms, algorithmic systems risk functioning as “black boxes” whose internal processes remain hidden from those affected by their outcomes. In legal contexts, such opacity is particularly problematic because it undermines the ability of individuals to challenge decisions that affect their rights. Another important dimension of governance involves the preservation of judicial discretion. Courts perform a normative role that cannot be fully replicated by computational models. Judges must evaluate evidence, interpret legal principles, and consider the broader context in which disputes arise. Algorithmic systems may assist in organising information or identifying patterns, but they cannot replace the ethical and interpretive judgement required in adjudication. If algorithmic tools are allowed to shape judicial outcomes in ways that constrain human judgement, the character of adjudication may gradually shift from deliberative reasoning to procedural automation. Ensuring that judges retain meaningful authority over decision-making processes is therefore essential to maintaining the normative foundations of justice.

Institutional accountability also plays a crucial role in governing algorithmic adjudication. Courts must establish mechanisms that allow algorithmic systems to be evaluated, monitored, and, where necessary, challenged.²⁵ Oversight structures may include independent review processes, auditing procedures, and regulatory frameworks that ensure algorithmic systems operate in accordance with legal and ethical standards. Without such safeguards, technological systems may influence judicial practice in ways that remain largely invisible to institutional scrutiny. Effective governance requires recognising that algorithmic systems are not neutral tools but socio-technical infrastructures whose design and operation reflect assumptions and priorities. The governance of algorithmic adjudication must address the relationship between technological innovation and legal authority. Although algorithmic

²⁴ Supreme Court of Bangladesh, Practice Direction for the Conduct of Court Proceedings through Virtual Presence (Dhaka: Supreme Court of Bangladesh, 2020). This document serves as the regulatory cornerstone for the digital transformation of the judiciary, formalizing the transition from paper-based filings to virtual adjudication frameworks.

²⁵ European Commission for the Efficiency of Justice (CEPEJ), European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment (Strasbourg: Council of Europe, 2018), 12–18.

tools may enhance administrative efficiency and consistency, they must not displace the deliberative processes through which courts interpret the law and justify their decisions. Judicial legitimacy depends not merely on outcomes, but also on the capacity of courts to communicate the legal reasoning that supports them. Where algorithmic systems obscure this reasoning or substitute technical outputs for legally intelligible justification, they risk weakening the communicative function of adjudication and diminishing the accountability of judicial power.

In post-authoritarian contexts, preserving this communicative function is particularly significant. Courts seeking to consolidate public confidence must demonstrate that their authority is exercised through transparent, accountable, and rights-respecting processes. The uncritical adoption of algorithmic systems may create the perception that judicial outcomes are shaped by mechanisms beyond meaningful public understanding or scrutiny. Such opacity could undermine confidence in judicial institutions and complicate broader efforts to strengthen the rule of law. The concern, therefore, is not that algorithmic assistance necessarily erodes legitimacy, but that its deployment without adequate safeguards may weaken the transparency and public justification on which legitimate judicial authority rests. The central governance challenge is consequently not whether judicial institutions should embrace technological innovation, but how such innovation can be integrated without compromising the normative foundations of adjudication. This requires frameworks that preserve meaningful judicial discretion, ensure the explainability and contestability of algorithmic outputs, and subject their design and use to appropriate institutional oversight. Transparency, accountability, and human judicial judgement must operate as substantive safeguards rather than merely aspirational principles. Ultimately, algorithmic governance requires a renewed examination of how judicial authority is exercised, justified, and scrutinised. Digital tools may support administrative reform and assist judicial work, but they cannot replace the interpretive and deliberative reasoning through which legal decisions acquire legitimacy. For Bangladesh and other post-authoritarian contexts considering algorithmic decision-support, the priority should be to ensure that technological innovation remains subordinate to legally reasoned human judgement. Without such safeguards, courts risk preserving the formal appearance of justice while diminishing the transparent, reasoned processes that give judicial authority its legitimacy.

3. Conclusion

The increasing integration of algorithmic technologies into judicial administration presents both opportunities for institutional improvement and significant normative challenges. Although these tools promise greater efficiency, consistency, and data management, their expanding influence raises fundamental questions about legal reasoning and judicial legitimacy. This article has examined these tensions through the concept of the *algorithmic precision paradox*: the divergence between computational accuracy and the contextual, interpretive, and normative reasoning required for justice. The analysis demonstrates that algorithmic systems, when introduced without adequate safeguards, may reshape judicial decision-making by privileging quantification, prediction, and standardisation over contextual evaluation. Although algorithmic tools can help courts manage administrative burdens and potentially reduce arbitrary or inconsistent decisions, their outputs may also constrain meaningful judicial discretion and obscure the reasoning underlying legal outcomes. The central concern, therefore, is not technological precision itself, but the possibility that technical reliability may be mistaken for legal and normative legitimacy. These risks warrant particular attention in post-authoritarian contexts such as Bangladesh, where judicial

credibility and public confidence remain closely connected to the consolidation of the rule of law. Bangladesh's ongoing judicial digitalisation including case management systems, virtual proceedings, and electronic filing does not establish the existence of algorithmic adjudication. Rather, it provides a prospective institutional context for examining how algorithmic decision-support might be introduced and governed. Any such development must preserve the visibility of human judgement, the transparency of legal reasoning, and the ability of litigants to question decisions affecting their rights. Ultimately, responsible algorithmic governance requires transparent system design, meaningful judicial discretion, institutional oversight, and effective avenues for contestation. Technological innovation should complement, not displace, judicial reasoning. The legitimacy of adjudication depends not merely on accurate outcomes, but on decisions that can be explained, scrutinised, and justified through law. Preserving this deliberative function is essential to ensuring that algorithmic innovation strengthens, rather than undermines, the normative foundations of justice.

References

- Adan Domènech, Federico. "Algoritmos En El Proceso Civil: Oportunidad de Modernización o Riesgo de Desnaturalización." *IDP. Revista de Internet, Derecho y Política*, no. 44 (December 23, 2025): 1–16. <https://doi.org/10.7238/idp.v0i44.9800399>.
- Al-khawatreh, Abdulaziz, Mohammed Jamal Mufleh Al-Qudah, Mohammed Mufreh Al-Ruwaili, and Mousa Mansour Abu Abdon. "Digital Technologies and Their Role in Supporting Judicial Oversight in Administrative Courts." In *Studies in Systems, Decision and Control*, 227:875–89. Faculty of Law, Zarqa University, Zarqa, Jordan: Springer Science and Business Media Deutschland GmbH, 2026. https://doi.org/10.1007/978-3-031-95310-1_66.
- Bangladesh v. Asaduzzaman Siddiqui (16th Amendment Case), 70 DLR (AD) 40 (2018).
- Bangladesh. *The Constitution of the People's Republic of Bangladesh* (Act No. of 1972), adopted 4 November 1972, entered into force 16 December 1972, as amended. <https://bdlaws.minlaw.gov.bd/act-print-367.html>.
- Barona Vilar, Silvia. "THE DILEMMA OF REASONING, MOTIVATION AND ALGORITHMIC JUDICIAL DECISION-MAKING (IA): THE POSSIBILITY OF THE IMPOSSIBLE?" *Teoría & Derecho. Revista de Pensamiento Jurídico*, no. 37 (December 2024): 150–75. <https://doi.org/10.36151/TD.2024.109>.
- Binns, Reuben. "Human Judgment in Algorithmic Loops: Individual Justice and Automated Decision-Making." *Regulation & Governance* 16, no. 1 (January 2022): 197–211. <https://doi.org/10.1111/rego.12358>.
- Cruz, José Felipe Málaga, Candi Pastora Malaga Davila, Henry Antonio Gonzales Laguna, and Esteban Jose Gonzales Malaga. "INNOVATIVE MANAGEMENT IN THE LEGAL WORLD: KEYS TO MAKING THE RIGHT DECISIONS." *PETITA: JURNAL KAJIAN ILMU HUKUM DAN SYARIAH* 10, no. 2 (July 2025): 489–510. <https://doi.org/10.22373/petita.v10i2.834>.
- European Commission for the Efficiency of Justice (CEPEJ). *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment*. Strasbourg: Council of Europe, 2018.
- Farid, Cynthia. "Decolonizing Administrative Action." In *Judicial Review of Administrative Action Across the Common Law World*, 289–306. Cambridge University Press, 2021. <https://doi.org/10.1017/9781108674355.017>.
- Fuller, Lon L, and Kenneth I Winston. "The Forms and Limits of Adjudication." *Source: Harvard Law Review* 92, no. 2 (1978): 353–409.

- Guevara Flórez, Lady Juliana, Luis Alfonso Botero Chica, and Víctor Julián Moreno Mosquera. "El Impacto de Las Tecnologías En El Proceso Judicial: Una Mirada a Partir de Los Conceptos de Juez Digital y Debido Proceso." *Novum Jus* 18, no. 3 (December 2024): 179–207. <https://doi.org/10.14718/NovumJus.2024.18.3.7>.
- Jibril, Abubakar Muhammad. "Watching Black Youth: Algorithmic Surveillance and the Shrinking Civic Space in Indonesia and Nigeria." *Human Rights in the Global South (HRGS)* 1, no. July (2026): 1–26. <https://doi.org/10.56784/hrgs.v5i1.165>.
- Jibril, Abubakar Muhammad, and Hoda Gueddi. "Children's Digital Privacy in the Age of AI: A Rights-Based Legal Approach to Data Protection in Nigeria." *International Journal of Management Research and Business Analytics* 2, no. 1 (2026): 40–48.
- Mohammad Khabbab Taki. "Artificial Intelligence in Bangladesh's Legal System: Pathways to Smart and Efficient Justice." *Nusantara: Journal of Law Studies* 5, no. 1 (March 14, 2026): 252–68. <https://doi.org/10.66325/nusantaralaw.v5i1.158>.
- Muhammad jibril, Abubakar. "Exposing Constitutional Violations: Vigilante Violence Against Northerners in Southern Nigeria." *Constitutionale* 7, no. 1 (February 26, 2026): 1–16. <https://doi.org/10.25041/constitutionale.v7i1.4976>.
- Málaga Cruz, José Felipe, Candi Pastora Malaga Davila, Henry Antonio Gonzales Laguna, and Esteban Jose Gonzales Malaga. "Innovative Management in the Legal World: Keys to Making the Right Decisions." *PETITA: Jurnal Kajian Ilmu Hukum dan Syariah* 10, no. 2 (July 2025): 489–510. <https://doi.org/10.22373/petita.v10i2.834>.
- Manitra, Ramalina Ranaivo Mikea. "“Am I Being Silenced by a Machine?” AI-Driven Content Moderation and The Chilling Effect on Freedom of Expression." *Alauddin Law Development Journal* 7, no. 2 (August 16, 2025): 109–25. <https://doi.org/10.24252/aldev.v7i2.57618>.
- Ministry of Law, Justice and Parliamentary Affairs. *e-Judiciary Project: Digitalisation of the Subordinate Judiciary of Bangladesh*. Dhaka: Justice and Parliamentary Affairs Division, 2020. Accessed March 16, 2026. <https://lawjusticediv.gov.bd/e-judiciary>.
- Parente, S A. "The Contribution of Artificial Intelligence and Computer Algorithms to the Investigation Activities of the Financial Administration and to the Jus Dicere Function of the Tax Judge: What Prospects for the Suppression of Tax Evasion?" *Italian Law Journal* 9, no. 2 (2023): 557–78. <https://www.scopus.com/pages/publications/85193317110?origin=resultslist>.
- Patreliuk, D, M Leonenko, Y Dekhtiarov, A B Hadzhiieva, and I Servetsky. "The Impact of Using Algorithmic Systems on the Criminal Trial: International Experience." *Pakistan Journal of Criminology* 16, no. 16.3 (June 2024): 1185–98. <https://doi.org/10.62271/pjc.16.3.1185.1198>.
- Ramalina Ranaivo Mikea Manitra, and Adya Paramita Prabandari. "Judicial Independence Under Political Pressure: The High Constitutional Court and Electoral Justice in Madagascar (2009–2023)." *Constitutional Review* 11, no. 2 (December 31, 2025): 393–421. <https://doi.org/10.31078/consrev1125>.
- Senubekti, Mamok Andri, Pujiyono, Foni Agus Setiawan, Mohammad Nur Fitriyadi, Darsiti, and Novita Anggraini. "Factors Influencing the Adoption and Usage of Case-Based Reasoning Systems by Judicial Professionals in Criminal Cases: A Systematic Literature Review." In *AIP Conference Proceedings*, 060008, 2026. <https://doi.org/10.1063/5.0322114>.
- Sitabuana, Tundjung Herning, Ramalina Ranaivo Mikea Manitra, Dixon Sanjaya, Ibra Fulenzi Amri, and Nethan. "The Urgency of Artificial Intelligence Code of Ethics." *Indonesia Law Review* 14, no. 3 (December 31, 2024): 101–23. <https://doi.org/10.15742/ilrev.v14n3.6>.

Supreme Court of Bangladesh. *Practice Direction for the Conduct of Court Proceedings through Virtual Presence*. Dhaka: Supreme Court of Bangladesh, 2020.

Varona, Daniel, and Juan Luis Suarez. “Social Context of the Issue of Discriminatory Algorithmic Decision-Making Systems.” *AI & SOCIETY* 39, no. 6 (December 2024): 2799–2811. <https://doi.org/10.1007/s00146-023-01741-x>.

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