

Artificial Intelligence and the Legal System in Bangladesh: Challenges, Opportunities, and the Way Forward

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ABSTRACT

Artificial intelligence (AI) is rapidly transforming legal systems by influencing judicial administration, legal practice, public governance, and regulatory decision making. Despite accelerating AI adoption under Bangladesh's digital transformation agenda, the country lacks a comprehensive legal framework capable of addressing AI specific risks. This article critically examines the adequacy of Bangladesh's existing legal regime, including constitutional provisions, cyber security legislation, evidence law, data protection, consumer protection, and intellectual property rules, in regulating AI driven technologies. Employing a doctrinal and comparative legal methodology, the study analyses domestic legislation alongside international governance models developed by the European Union, the United States, the United Kingdom, Singapore, and India. It identifies significant regulatory deficiencies relating to accountability, transparency, algorithmic bias, privacy, cybersecurity, liability, and human rights protection. The article argues that fragmented legal responses are insufficient for governing increasingly autonomous AI systems. It proposes a risk based, rights oriented, and institutionally coordinated AI governance framework tailored to Bangladesh, integrating dedicated legislation, independent oversight, robust data protection, judicial capacity building, ethical standards, and regulatory innovation to ensure responsible AI development.

Keywords: Artificial Intelligence, Bangladesh, AI Governance, Legal Regulation, Data Protection, Human Rights, Algorithmic Accountability, Comparative Law, Risk Based Regulation

INTRODUCTION

Background of the Study

The Fourth Industrial Revolution connects digital, physical and intelligent systems in ways that disrupt societies and the way we work, communicate and govern technology. This dramatic transformation is driven by artificial intelligence, which provides the machinery to automate processes that previously required human capabilities (e.g., prediction, classification, reasoning and language processing; Russell and Norvig). This can be easily seen in the legal practice where tools that use Ai to perform tasks of review, research, analysis and support services are used more frequently to which Richard Susskind emphasizes on his works about how technology is changing the way service delivery in law.

This expansion in the global adoption of AI is further fueled by policy frameworks that seek to balance protection of rights with enabling innovation. UNESCO Recommendation on the Ethics of Artificial Intelligence identifies human dignity, fairness, transparency and accountability, privacy and data protection, as well as human oversight as core principles for responsible AI governance (UNESCO), whereas the OECD AI Principles underscore that AI should be designed in a way that respects human rights and democratic values while being trustworthy (OECD). Digital transformation in Bangladesh, through investigations like Smart Bangladesh Vision 2041 and UNDP-supported investigations on computerized development, reflect the nationwide change to data-driven governance, computerized open organization, and technology-led financial improvement (UNDP Bangladesh; "Smart Bangladesh' by 2041"). The growing prevalence of AI in public and private decision making across the

globe calls for a national-level discussion to develop regulatory responses (UNESCO; OECD) aimed at mitigating unethical risk, legal uncertainty, accountability gaps, and data protection concerns related to the deployment of AI systems Bangladeshi context.

Statement of the Problem

With AI systems starting to impact governance, education, commerce and legal services in Bangladesh a comprehensive AI law is yet to be developed. The existing ICT laws have been intended for more general digital challenges and cannot address AI-specific challenges such as algorithmic bias, algorithmic opacity, automated decision-making and the allocation of liability for harm. Data privacy, on the other hand, remains an ongoing risk dilemma because existing legal protections are disjointed and fail to provide comprehensive regulation of how data used for AI is shared — or not. Then, there are also questions about if courts and regulators can assess AI-generated evidence or contest the results of automated decisions. International development reports and other discussions at UN policy levels throughout recent years have regularly warned that uncontrolled digital expansion without legal checks can undermine trust and exacerbate inequality (UNDP Bangladesh; UNESCO).

Research Questions

This study seeks to answer the legal implications of using AI in Bangladesh, whether the existing legal framework is adequate to address those issues, what reform is required for regulating AI, and how can Bangladesh learn from other foreign and international models of controlling its usage of AI.

Research Objectives

The overarching goal of this research is to anchor the need for AI regulation in Bangladesh within the wider context of legal reform and digital transformation. Such objectives include defining legal issues related to AI, assessing the suitability of existing laws governing such issues, analyzing international norms relevant for AI and suggesting effective reforms in Bangladesh.

Scope and Limitations

The analysis is directed, in a more detailed and focused manner, at Bangladesh while comparing it to select global material for insightful regulatory lessons. This study employs a doctrinal legal method based on secondary sources, such as statutes, policy documents, books, journal articles and reports. It does not include empirical survey or field research so falls short of stakeholder interviews or statistical findings making the analysis limited to legal and policy interpretation (McConville and Chui; Dobinson and Johns).

RESEARCH METHODOLOGY

This study utilizes doctrinal and comparative legal research methods which are suitable for analyzing law, institutional framework and policy principles pertaining to AI governance. This paper compares a number of major international AI governance models to evaluate their relevance and applicability in Bangladesh's legal and institutional context. This research is qualitative and relies on primary legal sources (e.g. constitutions, legislation, regulations, judicial decisions and international legal instruments) and secondary legal sources (e.g. books, journal articles, policy papers reports or official publications). This type of research might be best for a doctrinal analysis to interpret law, identify regulatory gaps, and develop proposals for legal and policy reforms rather than on testing hypotheses via empirical methods (McConville & Chui; Dobinson & Johns)

This study does not offer empirical data such as interviews, surveys, or questionnaires since its main goal is to analyze the law more than empirically investigate. However, this study will be complemented by future empirical research investigating policymakers, judges, practitioners, AI developers and industry stakeholders and the public opinions on implementing and governing an AI in Bangladesh.

LITERATURE REVIEW

AI governance literature shows a transition from technical optimism to legal and ethical caution. Russell and Norvig give the theoretical background on how these AI systems function as well as Susskind which addresses how technology, such as automation, is affecting the practice of law (Russell and Norvig; Susskind). UNESCO and the OECD have emerged as key points of reference at the policy level, because both define principles around which consensus regarding trustworthy, human-centered AI can form (UNESCO; OECD). Another focus of recent legal scholarship has been the question of transparency, accountability, privacy, and regulatory adaptation in the era of algorithmic decision-making. Examples from prominent journals include articles examining automatic capital punishment and defense technology designed to reduce discrimination between different groups.

Significance

It adds to the academic discussion on regulation of AI, informs policy affecting Bangladesh, and paves the way for regulating laws in due course. It is also valuable for policymakers, regulators and scholars who are looking to place checks on innovation while prioritizing rights protection and sustainable

CONCEPTUAL FRAMEWORK

Meaning and Evolution of AI

Artificial intelligence (AI) is the scientific path to systems that do processes normally associated with human intelligence, things like reasoning, learning, perception and language. According to Russell and Norvig, in *Artificial Intelligence: A Modern Approach*, AI is the science of designing intelligent agents that perceive their environment and act rationally to achieve specific goals (Russell and Norvig). One would usually start this chapter by mentioning that the field itself is rooted in Alan Turing's question if machines can think, a question which he tackled through his thought experiment about an imitation game better known as the Turing Test (Turing). AI is a scientific discipline (that is still being defined) that John McCarthy described as the science and engineering of making intelligent machines.

We have seen AI evolving from early rule-based systems to today, with a combination of machine learning and generative models. According to the OECD, AI is defined as a machine system that can make predictions, recommendations or decisions influencing real or virtual environments (OECD). With the rise of generative AI today, AI has pushed its mission even further by creating brand new text, code, images and other content; while legal AI essentially had cemented its status as a trained platform during document review, legal research and contract analysis. This evolution represents a paradigm shift away from automation of narrow tasks, toward systems that are able to assist at the level of high-profit complexity in knowledge work domains such as legal services (Susskind).

Types of AI

Artificial intelligence can be broken down into three categories: artificial narrow intelligence (ANI), artificial general intelligence (AGI); and artificial superintelligence (ASI). ANI is aimed at specific efforts and is the AI that currently exists, whereas AGI indicates hypothetical systems with human-level general intelligence ability, and ASI refers to any foresight or development of intellect much beyond present humanoid abilities across a domain (Russell and Norvig).

To understand AI, one of the most important areas to study is machine learning where systems learn from data instead of relying solely on hard coded rules. Deep learning is a branch of artificial intelligence that is composed of deep neural networks and has been found to be effective for the recognition of speech (e.g. Generative AI typically leverages a foundation of machine learning and deep learning techniques, which have come to occupy

the central core of contemporary AI applications used in legal and regulatory contexts (OECD; Russell & Norvig).

Law-Related AI Technologies

There are a handful of AI technologies that are particularly relevant to the practice of law. Matric in natural language processing gives machines the ability to analyze and generate human languages, which is crucial for civil research contract analysis document classification. Instead wider data for LLMs — Natural language processing would go to stifle from NLP level where LLM can hold him now by fluent text generating ability and legal sources summaries & templates drafting and question answering. Predictive and legal analytics help attorneys identify, anticipate patterns, and retrieve information about past litigation outcomes, judicial behavior, and compliance risk; Optical character recognition (OCR) translates scanned legal documents into text readable by computers. Chatbots and document automation systems help in client intake, automate general legal communication and drafting in a structured way worked to make the workflow of lawyers less time-consuming and cost-effective by automating these simple processes (Susskind).

Such technologies fall under Susskind's umbrella of the "repurposing" of legal services, arguing that much former legal work is being replaced with digital systems, self-service tools and technology-powered assistance (Susskind). In academic and policy circles, such tools are easy to praise for paving the highway towards efficiency, but also prone to criticism on accuracy, bias and accountability. With AI tools in the legal profession, the challenge is responsibility and system embedding rather than technology performance.

Governance and Ethical Principles for AI

AI governance is based on principles that are designed to ensure the deployment and development of technology follows human values and legal obligations. The Recommendation on the Ethics of Artificial Intelligence by UNESCO thus focuses on fairness, transparency and accountability, privacy, human oversight and respect for human rights ("Recommendation on the Ethics of Artificial Intelligence"). One of the shared principles between the OECD AI Principles, which promote trustworthy and development-friendly innovation in a manner that is consistent with values underpinning rule-of-law, and the NIST AI Risk Management Framework, which operationalizes these ideals through a common structure for managing AI risk through its design/design-deployment-monitoring lifecycle (collectively: "AI principles"; "AI Risk Management Framework").

This governance turn is also reflected in the EU AI Act (or in a nutshell, the "AI Act") that classifies systems according to risk and establishes regulations on high-risk systems, especially those affecting fundamental rights. These frameworks highlight that the regulation of AI is no longer just about promoting innovation, but also about measures to mitigate risk, enhance explainability and maintain public trust. As for legal systems, the ethical heart of AI governance is about keeping automated tools bound to human accountability, and above it, to law.

AI and Rule of Law

The legal values challenged by AI poses existential challenges to the rule of law because due process, equality before the law, judicial independence and impartiality, access to justice and protection of human rights are essential features of every legal system. In the absence of sufficient oversight, AI systems as tools may reproduce biases where they are increasingly utilized to guide decision-making, rendering processes less transparent or procedural fairness weaker. Through its ongoing work on human rights & AI, the Council of Europe has stressed that AI deployment should stay within the bounds of democratic governance and legal safeguards—especially when it concerns state power or public institutions ("Human Rights & Artificial Intelligence").

The Venice Commission has also emphasized the significance of constitutional values, judicial independence and human control in systems that influence legal decision-making. This is particularly relevant for practice, because the way legal information is filtered, the priority given to cases, and the evaluation of rights claims can

all be affected by AI tools. Any legal system that embraces AI without sufficient safeguards will endanger access to justice and judicial authority alike.

Existing Legal Framework in Bangladesh

Constitutional Framework

Though we know we have no mention of artificial intelligence in the Constitution but still the said basic rights are the prime basis for rights-based regulation of AI having regard to our constitutional framework available. Article 27 provides for equality before law, Article 31 protects the right to protection of law, Article 32 provides for life and personal liberty, Article 35 lays down rights in respect of conviction for offences and Article 43 recognizes the privacy of correspondence and other means of communication (Constitution of the People's Republic of Bangladesh, arts. 27, 31, 32, 35, 43). These provisions are important because AI systems impacting surveillance, profiling, credit scoring, employment, policing or content moderation may have an undue effect on our rights to equality, due process and privacy.

In a number of public-interest and rights orientated decisions, the Supreme Court of Bangladesh has interpreted constitutional rights broadly to support the same approach for AI and has argued AI governance should be consistent with fundamental rights & judicial review. In practical terms, any AI regulation in Bangladesh will have to comply with the constitutional guarantees against discrimination, exercise of lawful procedure and deprivation (or suspected deprivation) of personal liberty. This does not mean AI systems employed by the state can replace human accountability or insulate themselves against constitutional examination. This means that, rather than a full regulatory code for AI, the constitutional framework provides a solid basis for indirect AI regulation.

ICT Laws

Bangladesh ICT law regime developed for digital legislation but is too narrow for AI governance. The previous legal regime in this field comprised laws like the Information and Communication Technology Act that focused on computer-related crimes and electronic contracting, while later, since 2018, the Digital Security Act widened state reach to offences related to free speech online. But these laws were drafted long before deep learning systems—long before algorithmic bias, explainability, automated decision-making or AI-generated harm—became common terms.

However, the legal scenario changed again with the promulgation of Cyber Security Act 2026 to repeal Cyber Security Act 2023 (CyberSecurityAct2023; Bangladesh Gazette). Here, we see how this evolving statutory landscape indicates that the local digital regulation still is still a-work-in-progress, and under construction as regards a stable, comprehensive AI governance framework in Bangladesh. In the realm of AI, laws remain more responsive than preventative and regulatory provisions deal mainly with cyber offences rather than ethical or rights-based regulation of AI systems.

Cyber Security Laws

Cybersecurity law applies to AI because some uses of AI tools are cybercrime (cyber-sexual crime, disinformation and identity fraud; automated hacking); examples of malicious applications include deepfakes or, ... The Cyber Security Act 2026 aims to provide a legal framework for the identification, prevention, suppression and prosecution of offences committed in or through cyberspace but has prompted concerns over safeguards, raising fears that it could chill fundamental rights. Official reports, and subsequent government implementation, confirms that the Cyber Security Act 2026 has replaced some provisions of this law, indicating ongoing concerns over misuse and over breadth in regulating digital offences (Cyber Security Act 2026; Bangladesh Gazette).

Cybersecurity law is necessary, but not sufficient for AI regulation. It tackles the abuse of systems and online offenses, but it is far from a comprehensive regulation on how AI models are designed, trained, deployed or audited. Consequently, harms resulting from AI that do not neatly fit within traditional categories of cybercrime may remain legally inadequately dealt with. These facts call for development of an AI Regulation which gives additional support to Cyber Security Law rather than allowing the latter to function as a replacement.

Evidence Law and AI

Another primary concern in the legal system of Bangladesh is admissibility of evidence, electronic and AI-related. Through an amendment to the Evidence Act, 1872, s. 65B now specifically allows for admissibility of digital records with a certificate (for all purposes other than proof of facts stated therein) and reliability requirements. Why this matters: Courts are seeing more and more evidence like emails, metadata, CCTV footage, platform data and other digital material. But AI-created proof creates more difficult difficulties like certification, traceability and the potential of artificial content.

For example, if AI produces text, images or audio, courts will still need to assess the reliability of the evidence, who produced that content and how it was generated, and whether a party can be securely challenged by the other side. This latent evidence framework is a starting point which elucidates the key concepts but does not yet fully integrate more nuanced machine-generated evidence as well as mechanistic automated inference. Literature on digital evidence in comparative legal scholarship argue that legislation and subsequent interpretation by the judiciary have to keep pace with changing times to safeguard fairness and reliability of adjudication mediated by digital means (SSRNs on digital evidence; Evidence Act, 1872).

Protection of data / Privacy

There is currently no system in Bangladesh for a comprehensive, sophisticated personal data protection regime comparable to the GDPR. That is a significant difference, as AI systems are reliant on large-scale data collection, profiling and cross-border processing. Article 43: Constitutional Right to Privacy while protecting entrepreneurs Copyright, automated profiling and cross-border freedoms — Discussion Having provided some protection of the right to privacy in Article 43 (Constitution of the People's Republic of Bangladesh, art. 43).

UNCTAD has mentioned that weak or lack luster data protection rules can impose a level of uncertainty on individuals, businesses and governments (at least where international data flows are concerned). This is significant for Bangladesh, as AI development and digital service rely heavily on cloud storage, foreign platforms and international data transfer. How your personal information is being gathered, processed or shared by AI-empowered systems will be less scriptural without a transparent privacy law — and the users might have no clue. A specialized data protection statute would thus be pivotal to AI governance.

Consumer Protection

AI-powered products and services can also deceive consumers with misleading recommendations, invisible automation (due to device tracking), predatory pricing, or behavioral manipulation in chatbots. The Consumer Rights Protection Act of Bangladesh gives an imperfect general legal basis for consumer protection — not tailored to AI-enabled transactions, algorithmic targeting or autonomous digital services. Where AI products are defective or otherwise harmful, consumer law may help but we argue it is insufficient to deal with opacity, risk allocation and algorithmic manipulation.

Another area that international consumer policy notes is that accountability standards for digital and automated services need to be better defined. Consumer protection in the AI context needs to entail duties of disclosure, fairness and redress. For Bangladesh, this is very crucial as the influence of AI on E-commerce and service delivery platforms, financial products, and online marketplaces is set to increase. Consumer law can help ensure AI accountability, but only as part of a wider regulatory framework.

Intellectual Property Rights

Works created using artificial intelligence lead to difficult questions about copyright, authorship, ownership and patent inventor ship. Copyright Act of Bangladesh and the larger IP framework that has yet to offer clear guidance about AI-generated content, particularly those which are substantially or wholly produced by these systems. Whether AI can be recognized as an author of a work or whether machine assisted inventions can be patented remains uncertain. The ongoing discussions about the treatment of AI-generated outputs within existing IP systems (WIPO; TRIPS) suggests that states are still actively questioning how to accommodate such works under traditional regimes.

The biggest problem is that the present law makes an assumption of human authorship and human inventor ship. This assumption is challenged with AI not generating outputs under direct human artistic control in the conventional sense. Bangladesh must address ownership and protect innovation, while avoiding unjust monopolies on machine-generated outputs. Like trademarks, without reform copyright and patents may become more difficult to settle.

Sector Specific Regulations

With the advent of AI, this will impact even more sector-specific areas such as banking, where current rules are not only fragmented but also institution based and far from being specific to AI systems. Whereas Bangladesh Bank and sector regulators govern digital finance, data (handling, sharing and processing), security measures etc., these rules fail to capture some of the most crucial aspects- AI based risk models, automated approvals or even algorithmic decision systems. You have your BTRC and ministry-level regulations, particularly in place within telecommunications and digital services where platforms, connectivity, etc. are involved.

The main limitation is that sectoral regulations can guide operational governance but are unsuitable for general AI regulation. Various technical standards will need to be instituted across different sectors, but all should follow the same tenets of transparency, accountability and rights protection. Such sectoral rules could be coordinated through a national AI framework to prevent regulatory fragmentation.

State of AI Adoption in Bangladesh

While AI is rapidly moving into public and private sectors in Bangladesh, its adoption level greatly differs across industries. AI has started to transform governance, judicial administration, financial services, healthcare, education and business processes fueled by the thrust of government digital transformation initiatives, growing internet accessibility as well as increasing digital infrastructure and availability of cloud based technologies. Bangladesh may still be in the early stages of AI adoption relative to most developed economies, but an array of recent initiatives is indicative of a national prioritization toward integrating AI into national development strategies.

This vision of a digital Bangladesh has made the Government of the people of Bangladesh a key stakeholder in the adoption and implementation of AI. Among the most important ones is the joint ICT Division-Cabinet Division programme on Aspire to Innovate (a2i), with technical assistance until 2021 from UNDP. A2i is ensuring Digital Public Services through data driven & automated governance and citizen centric service delivery since its inception. While most of its efforts started with digitization as opposed to AI, more recent policy directions have highlighted the inclusion of artificial intelligence in a range of domains including public administration, smart governance and public service innovation (Aspire to Innovate [a2i], 2023; ICT Division, 2023).

AI adoption has also been reinforced as a priority area for national development through broader government initiatives like the Smart Bangladesh Vision 2041. Vision recognizes Four Strategic Pillars and enables essential technologies inclusive of AI, big data, cloud compute and IoT to be a critical enabler for sustainable economic growth and efficient governance. The national policy documents attached promote the responsible development

and use of AI as being interwoven with a focus on digital skills, innovation, cybersecurity, and ethical governance (ICT Division 2023).

Especially after COVID 19, the court & judiciary sector has seen a lot of digital transformation too. Many digital initiatives have been implemented to enhance judicial efficiency by the Supreme Court of Bangladesh and the subordinate judiciary. Most judicial proceedings today allow electronic filing (e Filing) systems, where lawyers and litigants can electronically file their petitions. In the same way, Digital Cause Lists empower Courts to upload daily cause list on their Website, improving court transparency and eliminating administrative bottlenecks. Furthermore, digital Case Management Systems (CMS) assist with case tracking, managing documents and administrating the judiciary. While these deployments are mainly about digitization rather than independent AI decision making, they lay down a digital backbone for future AI assisted judicial services like smart legal research, automated document classification, predictive case management and the optimization of workloads (Supreme Court of Bangladesh. & UNDP Bangladesh, 2023).

The financial and banking sector of Bangladesh became one of the early adopters of AI-driven technology. Get ahead of commodities and also prepare for the future with MRA Commercial banks are now using machine learning algorithms even for fraud detection like monitoring suspicious transactions, detecting unusual account activities, and enhancing anti money laundering compliance. AI based monitoring systems empower financial institutions to analyze huge data volumes of transactional data which is expensive, time-consuming and less efficient through traditional rule based systems. Besides, most banks have deployed AI powered chatbots for twenty-four hours' customer support, responsive queries to common questions, account difficulties and general additionally helped at some point in increasing patron engagement as properly as minimizing operational costs. These applications underscore the increasing role of AI in bolstering financial security and enhancing customer service (Bangladesh Bank, 2023; World Bank, 2023).

AI technologies have similarly started to make their way into the healthcare sector, although the extent is fairly limited at this time. Artificial intelligence (AI) based diagnostic tools are being increasingly studied for imaging, disease detection and clinical decision making. Among the available AI applications, many have been most promising in: radiological image analysis, diabetic retinopathy detection, chest X ray (CXR) tuberculosis identification and as a diagnostic decision support tool for physicians. According to the National Digital Health Strategy, Bangladesh also acknowledges that digital technologies (including AI) can improve its healthcare delivery, health information system and promote access to quality health care particularly for the underserved population of the country 19.

There has been a surge in AI adoption within education as generative AI systems like ChatGPT gained global popularity. AI based tools are being used by university students, researchers, teachers and professionals for academic writing but also for language improvement, research assistance, programming assignment assistance, lesson plans and personalized learning. Some education institutes are slowly starting to explore AI powered learning systems that offer customized but individual student focused learning. However, this quick uptake also created worry about academic integrity and plagiarism as well as assessment approaches in higher education and responsible AI usage. Thus, universities are already starting to talk about institutional policies on how to use AI ethically but also encouraging students to consider AI as a tool for learning support and not and replacement of their critical thought (UNESCO, 2023).

The opportunities for AI adoption have also grown in the private sector in Bangladesh. Companies rely more and more on virtual assistants, automatic response systems and smart customer relationship management lickers to incorporate artificial intelligence into user service. They enhance response times, reduce operational costs and improve customer satisfaction. HR departments are also using AI assisted recruitment tools for automated resume screening, candidate identification and scheduling of interviews to reduce recruitment bias through standardized evaluation processes. While human supervision should always remain a vital part of the process, AI assisted recruitment has optimized some aspect of organizational function in a multitude of sectors (International Labour Organization, 2024).

Another proof of commercialization of AI will be seen in Bangladesh's surging FinTech sector. The Financial Technology sector adopted AI to an extent that is only seen in proven providers of mobile financial services and digital payment platforms, applying it to credit scoring, transaction monitoring, customer behavior analysis, fraud prevention and personalized financial services. AI powered analytics allow financial institutions to evaluate an individual's credit worthiness through alternative data sources, increasing financial accessibility for individuals with limited traditional banking records. These innovations ultimately also facilitate a wider digital economy development goal in Bangladesh and improve access to secure and efficient financial services (World bank, 2023)

While all this is encouraging, a large number of challenges remain in implementing AI in Bangladesh. Such challenges could be scarcity of quality data sets, lack of human expertise in the area of AI, insufficient computing infrastructure; cybersecurity challenges; fragmented regulatory frameworks; algorithmic bias and privacy-related ethical concerns, variable digital literacy levels among citizens. Thus, although these trends make Bangladesh ready for digital transformation, full realization of AI will require stronger governance frameworks and capacity, research endeavors, as well as coordination between the government-academic-business trinity.

In sum, Bangladesh is in a crucial transition phase with respect to current AI adoption. Together, government initiatives, judicial reform, financial services technology innovation, healthcare digitalization of global economic resources management systems, educational transformation and leading private sector investments in AI technologies demonstrate an increasing level of confidence in the contributions that these two convergent disciplines will play to address fundamental human challenges. Nonetheless, long-term outcomes may hinge on balancing robust governance mechanisms that foster innovation and the protection of fundamental rights with transparency, accountability and public trust.

AI In the Bangladeshi Legal System

AI in Legal Research

Legal research, for instance, is being changed by artificial intelligence that can locate cases, statutes, regulations and secondary sources faster than ever. ChatGPT, Westlaw AI and Lexis AI that can summarize vast volumes of text, spot trends and help facilitate issue spotting (outputs still need checking for correctness and authority). Where AI is really useful in legal (as opposed to what they call this thing) practice is with volume, not replacing a legal judgment. According to Susskind, technology is reshaping the legal field where research, document review and knowledge retrieval are used (Susskind).

AI-assisted research is helpful for Bangladesh in more ways than one as lawyers rarely have access to legal materials where databases are fragmented and where fast tracking of swollen judgments and statutory texts for filtering out comparable cases is necessary. Then there is the fact that generative AI can and will create inaccurate or bogus legal citations, so law schools and firms must train those using this technology to confirm every piece of authority before relying upon it. This means AI may become a helper that helps with productivity but is never going to replace doctrinal analysis or professional responsibility.

AI in Legal Education

In addition to transforming research, drafting and legal reasoning education for students. UNESCO has also stressed the importance of a human-centered, rights-based approach to AI in education, putting forth that learners (at all ages) should be helped to be able to understand both opportunities and threats offered by AI ("AI and education: Protecting the rights of learners"; "Guidance for generative AI in education and research"). This means that for law schools, AI literacy is turning into a necessary component of legal competence as opposed to an optional technical skill.

Legal Education in Bangladesh can focus on case search, writing practice, moot court training and comparative research through AI; however, this education must also instill a sense of ethical use, citation discipline and source

validation. To enable future lawyers to know how to deal with automated tools without relying too much on them, AI governance, data protection, digital evidence and professional responsibility should all be included in a modern curriculum. Inattention to AI in legal education could produce graduates who will be technically ill-prepared for modern practice.

AI in Law Firms

Law firms were among the earliest adopters of legal AI because there is efficiency to be gained in document review, due diligence, billing and risk analysis. Susskind observes that legal services are being decoupled and fortified by technology; many tasks once performed by flavor-of-the-day lawyers are moving from individualized labor to workflows powered by software (Susskind). Legal work that's increasingly becoming automated, data-driven and AI-influenced is also the subject of growing concern within the legal profession itself as International Bar Association materials reveal (International Bar Association).

Law firms can take advantage of AI to perform repetitive work in Bangladesh such as contract comparison, metadata extraction, and precedent search. But the implementation of AI billing and risk assessment raises questions as to transparency and accountability, including whether a client is informed when a machine materially assists the service. AI is supposed to save time and money, but it also raises quality-control dilemmas when a wrong output could alter litigation strategy or client advice. So firms require internal audit, confidentiality and human oversight.

AI in Courts

Digital systems for case management, e-filing, scheduling and analytics are being adopted in some courts around the world - but AI is still only needs to be used as a controlled support (not a replacement judge) at least for now. The European Committee on Legal Co-operation (CEPEJ) has noted that in many parts of Europe, the discussion on AI tools as "potential assistants to judges" is no longer just a theoretical one but rather an empirical fact [CEPEJ]. World Bank work on digital justice makes a similar case, arguing that closed and well-designed digital systems can enhance efficiency, reduce post-case backlog, and help to manage the proper administration of courts if they are instituted properly for judicial assistance to access to justice and procedural fairness (World Bank). All eyes will point to the innovations of Singapore's judiciary often commended for effectively implementing electronic filing and court management in its digital court modernization, showing efficiencies possible with digitization but without relinquishing power from human adjudication.

And for Bangladesh, this could mean court modernization with native features: AI supported case scheduling and document indexing, analytics on cases, and easy e-filing support. Nonetheless, judicial AI needs to be restricted to being an advice handling tool at best since adjudication is a process of legal reasoning complimented by finding credibility, and exercising constitutional judgements can never not involve human intervention as software cannot take that over Dr. If AI is introduced to courts, transparency, appeal ability and protection against hidden bias will be the highest priorities. So judicial AI is at least as much about governance as it is about engineering.

AI in Law Enforcement

Law enforcement agencies utilize AI with facial recognition and crime mapping, digital forensics, and predictive analytics. While INTERPOL's automated facial recognition work demonstrates the potential of computerized biometric systems to support identification of persons-of-interest, it also exemplifies the need for controlled application and human oversight (INTERPOL). The UN Office on Drugs and Crime has issued a similar warning about how criminal actors might take advantage of AI, while law enforcement must apply AI responsibly "to prevent eroding public trust in policing or undermining human rights standards" (UNODC).

Implementations of digital forensics, fraud detection and even crime analysis using AI are in dire need in Bangladesh - most importantly when it involves cybercrime investigation. However, facial recognition and

predictive policing expose an alarming risk of misidentification, surveillance state, and discrimination. This means restricting police use of AI in the first place, and defining specific restrictions on how long biometric data may be collected and held and how that data may cross agencies. In the absence of such protections, AI applied to law enforcement may undermine public confidence instead of bolstering it.

AI in Public Management

The reality is the importance of AI in public administration is also growing where governments seek quicker services, better data employment, and more robust regulations. Contributions from the OECD discussion about how AI has been deployed within the public sector focused on the importance of adopting trustworthy AI, transparency, and serving public value (OECD), whereas UNDP materials emphasize that when used responsibly (in terms of ethical principles) AI has the potential to improve service delivery and governance: for example, through generating economic opportunities or strengthening resilience against crises (UNDP Bangladesh). The ICT Division, Bangladesh has set the Smart Bangladesh agenda, indicating an expected policy direction for digital government and smart public institutions characterized by technology use in service automation.

In terms of assistance in legal drafting, document classification, grievance processing, and public service personalization; legislative activity is seen as the pathway on how AI would change the legal industry. This could help to expedite administration for Bangladesh keeping clerical bottlenecks to a minimal. However, while AI in the public sector relates directly to entitlements and due process rights of individuals, it should be governed with care. If agencies use AI to help screen applications, pinpoint areas of potential risk, or determine which enforcement actions take precedence they need sufficient review mechanisms and explainable criteria. Thus smart governance must really mean accountable governance, not simply automated governance.

Legal Challenges

Protection of private information and data

Privacy presents one of the most significant legal challenges resulting from AI because modern AI systems rely on large volumes of personal data for training, inference, profiling and continuous improvement. Among them, the GDPR constitutes definitely the most important and widest-ranging model in data-protection law with its principles of lawful processing, purpose limitation, data minimization, accuracy (or quality), storage limitation, integrity and accountability (Regulation (EU) 2016/679). The ethics framework for AI governance elaborates on privacy and data protection as fundamental actors protecting human rights and a core necessary safeguard for human dignity (“Recommendation on the Ethics of Artificial Intelligence | UNESCO”). In the case of Bangladesh, there is an absence of a well-developed and comprehensive data protection statute which would mean that AI systems might work in a legal space with weak regulations on consent, cross-border transfers, retention and automated profiling.

Since a large number of AI services rely on cloud infrastructure and third-party vendors beyond Bangladesh, it also poses a pragmatic threat to both the public and private sectors. If you do not know the legal basis for collection and use, you will have no idea how your data is processed or what to challenge about its misuse. Privacy is more than just a technical problem in AI governance; it is an issue of constitutional and administrative law because data processing can have direct consequences on our liberties, reputations and equality.

Algorithmic Bias

When an AI model is trained on biased data or built on assumptions that are not appropriate, it can replicate and amplify discrimination. This is a safe hazard when it comes to hiring, lending, policing, health triage and judicial aid instruments as misrepresented outputs can hurt weak teams. OECD principles that AI systems should: be fair, transparent and human centric, and NIST as one of core governance factors identified harmful bias which needs to measure and mitigate (AI principles; Artificial Intelligence Risk Management Framework).

In data sets with missing fields and social imbalance, MIT scholarship and wider technical literature consistently show that machine learning systems learn not to counteract historical inequality but to reproduce it instead. From the legal perspective, some algorithmic biases may breach equality norms and lead to indirect discrimination despite the system itself appearing neutral on its face. Thus Bangladesh shall require tools for fairness testing, impact assessment and audit before AI is applied to sensitive public or private decisions. A “fair AI” system cannot just be assessed in terms of performance, but also has to be checked for distributive consequences.

Accountability and Liability

One of the largest issues we will face in AI law is assigning responsibility for harm caused by an AI system: who should be liable? Civil liability could arise when a developer, deployer, user or public authority design or use an AI system with negligence, and criminal liability may come into play regarding willful misuse—like deepfake fraud and automated cybercrime. This governance scheme, in which responsibilities are imposed on providers and deployers and risks are tiered, is reflected in the EU AI Act but leaves some challenging questions about how existing liability principles apply to disputes involving AI (“AI Act”).

Legal journals have also emphasized that this is not an excuse for any liability to vanish just because it was a machine. Where harm is done by an AI system, responsibility must be located within and across real-life human and institutional actors who made decisions about the selection, training of the systems in the deployed context or then failed to question its use. This is especially significant for Bangladesh because the courts will be required to determine whether tort, contract, consumer, and administrative law principles are sufficient in the traditional sense. Allegations that a decision was “made by the algorithm” will not allow government agencies to escape accountability.

Transparency and Explainability

A serious problem for law arises when the impacts of something a reviewing body, or both struggle to comprehend why a system yielding results. NIST designates explainability and interpretability as trustworthiness properties, while the EU AI Act mandates transparency for high-risk systems to be transparent enough for deployers (the party deploying the system) to understand output and limitations (“Artificial Intelligence Risk Management Framework”; “AI Act”). Transparency is crucial in legal contexts; as due process requires a genuine opportunity to contest a ruling made against you.

It is therefore core to judicial review, administrative fairness and entitled rights of appeal for AI. If a public agency uses AI to rank applications, prioritize enforcement or assess risk, it should also be able to explain how the result is affected by the dominant factors behind the case. While full transparency may not always be possible from a technical perspective, meaningful disclosure of inputs, limits and decision logic is necessary. If absent, courts and regulators may have difficulty determining whether an automated system operated lawfully.

Cybersecurity Risks

AI itself is a risk of big cybersecurity’s it can be used for generating deepfakes, automating the phishing process, boost fraud and aid identity theft. INTERPOL suggested that facial recognition and biometric technologies need sufficient controls, while ENISA materials highlighted the effects of AI-driven attacks, including adversarial manipulation (INTERPOL; ENISA). Data poisoning, prompt injection, model extraction and adversarial examples: AI systems can also be attacked this way.

These risks are relevant in Bangladesh, as digital public services and financial systems rapidly rely on online identity and automated verification. Deepfake fraud might undermine elections, markets, law enforcement investigations and personal reputation. In other words, cybersecurity law needs to supersede traditional computer intrusion crimes with synthetic media, biometric spoofing and AI-assisted deception. To that end, such security regulation should be tied to clarity of the data practices of the servicer itself, the notice given users therein, and the extent to which that practice is technically feasible.

Intellectual Property

AI raises unsolved intellectual-property issues over training data, ownership, copyright, and originality. WIPO acknowledges that the data on which AI is trained is at the center of its performance, and also has to ask how IP systems will address issues arising as machine learning interacts with copyright and inventor ship(‘Artificial Intelligence and Intellectual Property’). Besides, the TRIPS Agreement and other treaties like the WIPO Copyright Treaty illustrate how traditional IP frameworks were constructed around human authorship and creativity, which is not easily compatible with outputs generated by an AI (WIPO; TRIPS).

The challenge is whether or not a work created by AI can be copyrighted, and, if it can even be copyright, who owns the output? Patents that materially contribute to the inventive step with a machine present similar questions. Ensure certainty in Bangladesh of what is owned by either a human creator, developer, deployer and/or employer. As the law is not clear, disputes regarding works created by AI systems may escalate without reform.

Employment and Professional Ethics

AI has changed some parts of routine work that in the past were done by professionals, including parts of drafting, legal research, reviewing documents and billing. As indicated by the International Bar Association and the American Bar Association, lawyers must carefully supervise technology use and maintain confidentiality, competence and independent judgment (International Show Affiliation; American Bar Association). The ethical questions judges and court staff must grapple with when using AI tools to assist them in scheduling, summarization, or case management.

The main professional problem is the fear that AI, if used irresponsibly, will reduce human agency while increasing efficiency. While lawyers cannot delegate the exercise of judgment, judges cannot delegate adjudication. Professional bodies therefore need to provide guidance on the use of AI, the implications for conflicts of interest, client notice and quality control in Bangladesh. This means that legal ethics needs to keep up with the times if automation is not going to suffocate professionalism.

Human Rights

AI can interfere with the rights to freedom of expression, privacy, equality and fair trial — all protected in the Universal Declaration of Human Rights (UDHR) and International Covenant on Civil and Political Rights (ICCPR). The UN Human Rights Committee has also consistently stated that any restriction of rights must be lawful, necessary, and proportionate - a feed into the use of AI in surveillance, content moderation or predictive policing (ICCPR; UDHR). Automating speech that chills, enables hidden discrimination and undermines procedural fairness (unless safeguards are deployed).

The human-rights dimension is crucial for Bangladesh because this will be the area where AI can grow in elements such as government, policing, media and platform governance. According to the rule of law principle, AI systems that affect rights must be reviewable, contestable and accountable. Human rights law thus establishes the base standards for AI regulation. Instead of only efficiency, a lawful AI regime must safeguard dignity.

Comparative Legal Analysis

European Union AI Act

The EU AI Act is the most advanced and wide-ranging legal framework regarding artificial intelligence in effect within the European Union. Its central feature is what has been described as a risk-based approach: AI systems are categorized by their risk profile, with the greatest duties resting on high-risk systems that can impact health, safety or fundamental rights (European Commission, "AI Act", EU AI Act, art. 6). The appeal of this model is that it does not outright ban all AI, but instead places stricter regulations where the potential threat is higher.

For providers and deployers, compliance comprises risk management, data governance, human oversight, transparency, technical documentation and post-market monitoring. The framework also establishes concrete rules about transparency obligations and prohibited practices, making enforcement more codified than in both many jurisdictions. What the EU model means for Bangladesh The importance of EU model to Bangladesh lies in how this can be used by Bangladesh to regulate AI through multi-layered obligations instead of a single ambiguous prohibition regime. It provides a robust definition of high-risk uses, thus suitable for public services, employment, finance and law enforcement.

United States

Rather than passing one federal AI statute, the United States has a more fragmented approach based on executive action, rules for sectors such as health care or transportation, and risk management standards. Executive Order 14110 called for the responsible, safe, secure, and trustworthy development and use of AI; NIST's AI Risk Management Framework is a non-binding but influential risk governance framework that centers on trustworthiness and accountability, security and explainability (White House; NIST).

This model is malleable and innovation-friendly, but it also introduces legal uncertainty as federal responsibilities are diffused among agencies and sectors. A key respect in which the U.S. approach is useful for Bangladesh is that it demonstrates a way to incrementally develop AI policy as standards, guidance, and institutional coordination precede an actual statute. Bangladesh does not need to splinter into eleven different parties, and Bangladesh outcomes will be stronger with a more crystalline legislative core than that of the U.S. today holds.

United Kingdom

The UK adopted a pro-innovation strategy with respect to AI regulation. Its white paper from 2023 puts forward cross-sector principles including safety, transparency, fairness, accountability and contestability but leaves the implementation up to current regulators rather than one single law on AI (UK Government, AI regulation: a pro-innovation approach). It is a context and level of detail that will allow different regulators to apply the same basic principles in various contexts.

The rationale for a UK model makes a lot of sense – no over regulation too early and it allows experimentation. But it is perhaps less well fitted for countries that require greater central coordination and more clearly delineated legal protections. The UK offers crucial lessons in prioritising regulatory principles which Bangladesh could, but must supplement with precise statutory duties—most notably for government use of AI and high-risk deployment in the private sector.

Singapore

Singapore is a leading benchmark of practical and balanced AI governance model. In collaboration with the IMDA and the AI Verify Foundation, it has developed Model AI Governance Framework together with support tools like AI Verify to assist organizations apply fairness, transparency, and explainability in practice (IMDA; AI Verify Foundation). Its framework emphasizes nine dimensions, while also keeping trust and accountability in check to promote innovation.

To understand Singapore's model is particularly useful as it combines big ideas with executional tools. That also means that it is more operational than some purely aspirational frameworks. This is valuable for Bangladesh because regulatory design must reach beyond abstract values to strike practical, institutional balance between compliance tools and testing standards. Singapore, however, has shown that a small to medium-sized state can successfully develop an effective AI governance by coordinating government and industry with technical experts.

India

The architecture of India's upcoming AI policy is framed by the IndiaAI Mission and the recently announced Digital Personal Data Protection Act, 2023. The IndiaAI Mission aspires to create an AI ecosystem end-to-end, provide compute accessibility at scale, enhance innovation strength and enable national capacity and the DPDP Act provides an umbrella information-emboldening structure for responsible deployment of AI (Government of India; IndiaAI; DPDP Act 2023). Previously, NITI Aayog's National Strategy for Artificial Intelligence also emphasized India's need to balance innovation with sectoral regulation, data protection and inclusion (NITI Aayog).

As a regional comparator under similar development pressures with large populations and constraints on digital bandwidth, Bangladesh can glean a great deal from India's approach. India shows us how to connect AI regulation with digital public infrastructure, data governance, and innovation policy. This integrated perspective can be borrowed by Bangladesh while sidestepping regulatory lags and implementation gaps.

Lessons for Bangladesh

These jurisdictions provide numerous lessons for Bangladesh. Here are the key pieces, beginning with the risk-based AI law modelled on what the EU has proposed but with national legislation for high-risk uses in public administration, finance, law enforcement and courts. Second, it needs to create institutional coordination like the U.S. and UK systems but one that is stronger in statutory authority and regulatory centrality. Third, it should move Singapore to develop pragmatic compliance tools, auditing mechanisms and testing standards rather than merely abstract legal principles.

Lastly, Bangladesh must marry its AI regulation with its data protection under the DPDP Act that India is trying to do. Fifth, the capacity problem: Laws without trained regulatory agencies and judges and lawyers and technocrats will do little good unless folks are trained to execute them properly. Last but not least, Bangladesh needs to bind AI governance with constitutional rights, public accountability and protection of human rights. The best comparative lesson: good AI regulation needs not just legal rules, but also institutional readiness and administrative capacity.

The International AI Governance Models and Their Applicability to Bangladesh

Bangladesh has taken its initial steps towards building a holistic AI regulatory framework. As a result, exploring existing international governance models for AI provides policymakers with critical lessons. On the other hand, none of these models can be copied and pasted with respect to Bangladesh owing to a wide variance between the two countries in terms of institutional capacity, technological infrastructure, regulatory maturity, economic resources and digital literacy. Instead, Bangladesh ought to selectively adopt those elements of its legal system, administrative capacity and specific developmental objectives.

The European Union (EU): A Case of Selective Adoption Rather than Direct Transplantation

With the passing of AI Act, the European Union (EUnion) has created a global first for AI legal frameworks. The act is an example of a comprehensive setting of principles around high-risk versus low risk and associated legal regulation - it categorizes types of AI as high to low risk instead of creating blanket binary categories like allow or deny, ban or permissive. The classification includes unacceptable, high, limited, and minimal risk systems with strict obligations regarding transparency, human oversight, accountability, conformity assessment and post market monitoring (European Union 2024).

By October 2023, Bangladesh can employ many facets of the EU model. In the first instance, risk based classification is a pragmatic way of regulating AI on the basis of risk rather than treating all AI systems in precisely an identical manner. Second, the EU's focus on transparency, human oversight, explainability and accountability is in line with Bangladesh's constitutional mandates of due process, as well as respect for

fundamental rights. Third, at least in high risk AI systems, mandatory impact assessments could enhance accountability by public sector organizations for their use of these technologies — particularly policing, financial services coverage radio collection health and judicial administration.

But Bangladesh cannot very well mimic many of the characteristics of the EU AI Act all at once. The Act mandates complex regulatory agencies, certified third-party testing labs, high technical know-how, and large compliance costs. Bangladesh does not have the institutional capacity, AI auditors, technical regulators and testing laboratories needed to deploy such an extensive regulatory regime. In addition, such imposition of intricate compliance is likely to dissuade innovation and investment in nascent domestic enterprises. Thus, it is recommended that the EU's principles be implemented through a simpler, phased approach to regulation as per domestic institutional realities in Bangladesh.

USA: A governance driven by innovation

The US, by contrast to the European Union, typically takes a sector-by-sector and innovation-friendly approach to AI regulation. In place of a single, top-down AI law, regulation is based on existing bodies of law related to consumer protection, privacy, civil rights, competition, healthcare and financial regulation along with executive orders and agency guidance (National Institute of Standards and Technology [NIST], 2023; White House, 2023).

The aforementioned strategy has many benefits with respect to Bangladesh. Such a model encourages technical innovation while some compromise is created for avoiding heavy legal hurdles on startups/ private institutions. Such regulatory flexibility may be especially helpful for Bangladesh, where the digital economy and FinTech sectors are expanding very rapidly. Additionally, the NIST AI Risk Management Framework offers more concrete recommendations related to governance of AI that organizations may choose to adopt before such regulation is required.

Nonetheless, the US model does not fit Bangladesh entirely. The way America does it relies a great deal on established institutions, energetic court enforcement, advanced private sector compliance and sufficiently developed competition in the marketplace. Even in terms of technology, the state is far behind Bangladesh, which has lower regulatory capacity and weaker consumer protection systems. The absence of comprehensive baseline legislation can lead to excessive regulatory discretion resulting in uncertainty, unequal application and ineffective solutions for ensuring individual rights. Therefore, the Bangladesh authorities should pair innovation conducive policies with unambiguous enshrined protections.

United Kingdom: Context based regulation and its limitations

The United Kingdom, taking a principles based approach, has opted against creating a dedicated AI regulator. In contrast, prevailing sectoral regulators enforce broad principles such as safety, transparency, fairness, accountability, contestability and governance relevant to their respective domains (UK Government 2023).

This is a more efficient model as it eliminates regulatory duplicity however it will not be suitable for Bangladesh. Good Implementation Groups of competent and autonomous regulators with technical knowledge but sufficient institutional coordination should implement. The regulatory structure of Bangladesh is still fragmented, with multiple government agencies holding overlapping mandates and limited technical competency. Furthermore, the UK model presumes a developed legal culture with consistent and enforceable regulation and high institutional trust which is not yet available in Bangladesh. Thus, if the UK model were simply implemented without meaningful institutional reform, even more erratic implementation and regulatory uncertainty may be expected.

Singapore: Differences in Infrastructure and Institutions

Through its Model AI Governance Framework, AI Verify testing framework, leading-level public sector digitization, and the very deep government-academy- industry collaboration (Infocomm Media Development

Authority [IMDA], 2020), Singapore has become a global ruler of AI governance.

Many features of Singapore model are very relevant for Bangladesh. They range from voluntary ethical frameworks, and operational governance tools to capacity building issues, public private partnerships and responsible deployment of AI. Singapore shows us that AI governance, while avoiding overregulation, must also include transparency and accountability.

However, large differences in infrastructure prevent direct replication. Singapore has world class digital infrastructure, broadband access, cloud computing services, extensive government digitization, quality national datasets and large investments in AI research. The Challenges that Bangladesh faces include inadequate digital infrastructure, computing resources, insufficient research findings, a lack of high quality data, cybersecurity risks, and deficit of AI professionals. As a result, Bangladesh ought to gradually adopt Singapore principles for governance but based on the overall capacity institutionally and in terms of technology.

India: The Most Relevant Model for Bangladesh

Of the international examples used, India is easily the most relevant to Bangladesh. There are many similarities, such as socio economic conditions, population size, digital economy development level human capital between both countries common law tradition administrative structure resource constraints. India avoiding highly restrictive regulation, India's AI governance strategy focuses on responsible innovation, digital public infrastructure, skill-building etc. (NITI Aayog 2018; Ministry of Electronics and Information Technology 2023).

India shows how much better public administration, agriculture, healthcare, education and judicial services can be with AI within the realities of a developing country. India investment in digital public infrastructure, establishment of AI capacity, create government aided innovation ecosystems and phased development of regulatory environment are areas where Bangladesh can specifically draw lessons.

Besides, both countries are also facing similar governance challenges including digital divide, shortage of AI specialists, privacy issues and cybersecurity risks as well as regulatory capacity. Thus, lessons from India's experience are more transferable than those in the already established jurisdictions. However, Bangladesh should not imitate India in this regulatory dimension either. In contrast, policy makers should modify relevant practices to fit within Bangladesh's constitutional framework, institutional capacity and development priority.

In general, Bangladesh need to go for hybrid AI governance model mixed with in my opinion 4 best practices EU's risk based regulation, US (innovation) friendly approach, UK's regulatory principles, Singaporean practically agnostic governance tools and experience of a developing country like India. A regulatory framework that can offer a level playing field would allow Bangladesh to foster technological advancement while preserving transparency, accountability, human rights safeguards and sustainable AI development.

Opportunities And the Way Forward

Need for AI Law

Bangladesh thus requires a separate AI law, as existing ICT and cyber laws do not adequately address the risks posed by contemporary AI systems. This indicates that a risk-based legal paradigm can regulate high-risk AI without stifling innovation (see the EU AI Act) whereas UNESCO and OECD both stress that AI governance should respect human rights, transparency, fairness, and accountability ("AI Act," "Recommendation on the Ethics of Artificial Intelligence," "AI principles"). In the absence of a specific legal framework, Bangladesh may be flooded with undesired and uncontrolled application of AI in public administration, policing, employment, finance and legal services.

And a national AI law would provide standards about legal liability, data management responsibilities, transparency requirements and compliance obligations. It would give businesses and public authorities the

certainty they need, whilst protecting people against damage. In this regard, AI laws are not an impediment to growth; rather it is a precondition for reliable digital progress.

Institutional Framework

Bangladesh should develop a solid institutional framework for AI governance, such as the establishment of a National Authority on Artificial Intelligence or an AI commission. The recommendation by UNESCO calls upon states to establish institutional and legal frameworks that can steer AI for the public good, while the EU model demonstrates the benefit of clearly designated bodies in supervising and enforcing compliance with these principles (Recommendations on the Ethics of Artificial Intelligence; European Commission, “AI Act”).

It could find a single authority to harmonize standards across ministries, issue advisory statements, closely monitor risky rollouts and oversee complaints. It should be made up of people with legal, technical, ethical and public-policy skills — not just a bureaucratic office. An unambiguous institutional framework would reduce fragmentation and prevent the governance of AI from being left entirely to highly sectoral agencies with asymmetric capacity.

Judicial Capacity Building

Because courts are going to see more and more disputes involving digital evidence, AI-generated material, automated decision-making, and algorithmic harm, judicial capacity is key. As it argues that AI and the rule of law demand judicial literacy, ethical awareness, and institutional preparedness (UNESCO Recommendation), guidance circulated by UNESCO on generative AI in education and research similarly buttresses capacitation at wider scales (“Guidance for generative AI in education; Guidance for generative AI in research”).

The training here encompasses AI literacy, data protection, digital evidence and explainability—all subjects that Bangladesh must invest in to bring about a change in its judiciary. Court modernization must include better digital case management and e-filing systems, although these tools should always be human-supervised. Judges need to understand how AI systems work, scrutinise their outputs and guarantee that due process is maintained.

AI Ethics Guidelines

Bangladesh must come up with AI ethics guidelines for public institutions, professional bodies and private firms either before or along with a regulation. The ethical baseline derived from the Recommendation by UNESCO and the OECD AI Principles is robustly based on principles of fairness, transparency, accountability, human oversight, privacy and social benefit (“Recommendation on the Ethics of Artificial Intelligence”, “AI principles”). These principles matter because they can be put to use straight away — even before legislatures pass comprehensive reforms.

AI should not be involved in consequential decisions without a risk assessment, documentation, human review and user notice, according to ethics guidelines. They should similarly educate civil servants, lawyers, judges and developers on the capabilities of AI. Ethics can provide a common standard in a developing regulatory environment as formal regulatory law is still being developed.

Regulatory Sandbox

Regulatory sandbox means Bangladesh can deploy artificial intelligent applications in a lab environment before rolling out on a larger scale. A variety of approaches to AI governance and the UK Financial Conduct Authority’s sandbox model provide examples where testing can support innovation within a controlled environment, helping preserve both supervision and consumer protection (IMDA; FCA). The sandbox model works because innovators are given a space to play and regulators can watch for risks, write conditions, and improve rules.

Bangladesh needs this framework in the fintech, legaltech, healthcare and public-service delivery sectors, among others. That is particularly germane in domains where new AI tools can help, but could do so nefariously. An

effective sandbox mitigates regulatory concern, enhances the learning process, and provides policymakers with the knowledge of how AI actually operates in practice before imposing overly-prescriptive rules.

Policy Recommendations

Bangladesh needs to establish an NLP process with law, ethics, innovation and educational development empowered by its strategic importance in compliance building efforts. Such a strategy ought to be coupled with reform of data protection, as AI governance is inseparable from the proper structure for personal data, consent and cross-border data transfer. It should also promote public awareness and encourage research collaboration, as well as cooperation among regulators, academia and industry. Both UNESCO and the OECD have advocated a whole-of-society approach to governing AI (“Recommendation on the Ethics of Artificial Intelligence”; “AI principles”).

It should also include technical standards, auditing and public-sector procurement rules for AI as part of a policy framework. No more time should be lost in Bangladesh before hurting people becomes catastrophic. A proactive strategy would feed the benefits of AI as well as roll back legal uncertainties and social risks for the country.

Proposed Legal Reform

First and foremost: introduce a specific AI Act that defines high risk uses as well as imposes obligations on developers and deployers while providing enforcement powers to an independent regulator. The law must provide rules on liability for negligence, unsafe deployment and damaging misuse, while also establishing safeguards for judicial review, due process and human oversight. AI regulation is best achieved through a balance of risk-based regulation, institutional support and enforceable obligations (EU AI Act; IMDA; OECD principles).

Be more specific about rules for different sectors, especially banking, health, education, and law enforcement in Bangladesh. By focusing on rights and where these rights are not sufficient, humans need to be in the loop this reform would result in a legal setting where systems can innovate but not at the cost of rights or balance. The long-run objective must be to develop an AI governance system that is consistent with constitutional values and democratic accountability.

Proposed AI Governance Framework for Bangladesh

Based on the comparative analysis of international AI governance models and the current level of AI adoption in Bangladesh, this study proposes a context specific AI governance framework that balances innovation with accountability, human rights protection, and regulatory efficiency. Rather than replicating foreign regulatory systems, Bangladesh should adopt a phased and risk based governance model tailored to its constitutional framework, institutional capacity, and socio economic realities. The proposed framework draws inspiration from internationally recognized principles reflected in the EU AI Act, the OECD AI Principles, UNESCO's Recommendation on the Ethics of Artificial Intelligence, the NIST AI Risk Management Framework, and Singapore's Model AI Governance Framework while adapting these principles to Bangladesh's domestic context (European Union, 2024; OECD, 2019; UNESCO, 2021; NIST, 2023; IMDA, 2020).

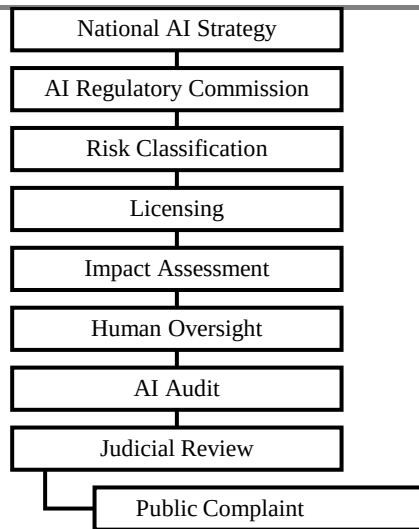


Figure 1. Proposed AI Governance Framework for Bangladesh

A National AI Strategy should be the driving principles behind the proposed framework driven by Government of Bangladesh. It should outline a long term roadmap of AI development, national strategic areas for AI competitions and research-innovation collaboration, digital sector and infrastructure enhancing strategy, public private partnership encouraging scheme as well as specify the guiding principles towards responsible and ethical AI. With a national strategy, it will also accelerate coordination among ministries and regulatory agencies, as well as promote collaboration between universities and industry; the national strategy should be aligned with government policies.

The second component should be the constitution of an independent AI Regulatory Commission by way of parliamentary legislation. The Commission would act as the central supervisory body implementing proposed AI Act, including issuing technical standards and monitoring compliance by national authorities (responsible for overseeing sectoral regulators), accrediting AI auditors, coordinating with sectoral regulators in cases of non-compliance and investigating infringement. Two would be to create institutional independence that could gain regulatory credibility and shield political interference in AI oversight.

Third, a risk based classification system ought to comprise the foundation of Bangladesh's regulatory model. In line with international practice and in order to allow identification of a level of risk posed by AI systems and the degree to which an individual will be at risk of harm, uses of AI may be classified according to groups. But in high risk applications that include, for example AI used in criminal justice, law enforcement, healthcare and both physical and cyber critical infrastructure, financial services and recruitment they should be subject to greater regulatory oversight. Less risk applications should be subject to compliance obligations that are scaled down equally, helping foster innovation while ensuring the safety of the public.

Regulatory licensing should be mandatory for the highest-risk AI systems that are to be put into service. Licensing would check that a minimum level of legal, technical, cybersecurity and ethical standards are being met. This mechanism would not just increase public trust but also promote developers to think about ensuring safety and accountability at every stage of the AI life cycle.

Moreover, the framework should specifically mandate AI Impact Assessments prior to deployment of high risk AI systems. These impact assessments will have to consider the potential impact on privacy, equality and nondiscrimination, cybersecurity, transparency, human rights and public safety. An impact assessment would help regulators foresee risks that may materialize once the AI system is deployed, reducing the capacity for lawsuits and unwanted negative social outcomes.

One core protection of the framework is that sufficient human oversight remains in place. Contexts where fundamental rights are at stake during decision making by Human Agencies – AI should assist not replace!

Effective human oversight of decisions related to criminal liability, judicial proceedings, healthcare, immigration, employment and the administration of the public sector should remain in place, with effective competent decision makers able to review (and modify or reject) AI generated recommendations.

It would also propose a general framework for independent AI audits of high risk systems. Routine technical and legal audits would measure algorithmic effectiveness, equity, explainability, security against cybersecurity threats, bias mitigation and fulfilment of statutory roles. Independent auditing improve accountability and increase public trust in AI enabled decision making.

As Bangladesh has a constitutional obligation to uphold rule of law and an independent judiciary, judicial review should continue to be possible against AI supported administrative decisions that impact individual entitlements. Courts must also be granted the authority to examine whether AI systems were deployed in accordance with law, whether process fairness was adhered to and if sufficient human oversight took place. In order to maintain consistent outcomes, judges should undergo specific training involving legal issues related to AI.

Finally, a low threshold public reporting channel for suspected AI related harms, like discriminatory outcomes or false automated decisions, privacy violations and manipulation of AI technologies. The investigation of complaints shall be carried out by the AI Regulatory Commission which shall also have powers to issue remedial directions, administrative fines or refer serious violations for judicial determination. An access mechanism such as this would be a great way to further increase transparency, public participation and improve institutional accountability.

Component	Bangladesh Proposal
Regulator	National AI Commission
Law	Artificial Intelligence (AI) Act
Data Governance	Personal Data Protection Law
Ethics	National AI Ethics Guidelines
Enforcement	Independent Regulatory Oversight
Judiciary	AI Bench book and Judicial Capacity Building
Industry	Regulatory AI Sandbox for Innovation

Table 1. Proposed Institutional Framework for AI Governance in Bangladesh

The framework is generously balanced with a regulatory philosophy It is not about over-regulating emerging technologies nor allowing unregulated deployment of AI without legal frameworks. It rather encourages judicious innovations through risk based regulation, institutional accountability and transparency as well as ethical governance functionaries at ground-level and judicial review mechanisms in its wake. In this way, Bangladesh would be able to capitalize on AI for economic development, and the delivery of public services in a sustainably owned manner while ensuring constitutional rights are upheld and continued public confidence. Given that AI technologies will continue to evolve over time, a dynamic framework is important that can be periodically reviewed and updated through the legislative process as technological advancements are made elsewhere or examples of best practices emerge.

CONCLUSION

Major Findings

The study finds that at present Bangladesh does not have an AI specific legal and regulatory framework which can identify the opportunities created by, as well as manage the risks associated with growing use of artificial intelligence. While the constitutional guarantees, the Information and Communication Technology Act, the Cyber Security Act, rules of evidence and other sectoral laws offer only limited protection to key concerns related to AI governance including algorithmic transparency and accountability, human oversight and bias mitigation as well as liability allocation and fundamental rights protections. As a result, the present legal framework is still piecemeal and fails to manage advanced AI applications.

The comparative mapping also shows that different leading jurisdictions have taken different routes toward AI governance. Fact check: The AI Act represents the European Union's broad risk based regulatory framework for artificial intelligence, and is contrasted by a much broader governance approach oriented towards innovation in the United States that can be supported by sector specific regulation. The UK has a principles based regulatory model, while Singapore adopts practical governance tools and responsible innovation. India, due to its similarly aligned socio economic conditions and institutional context (European Union, 2024; OECD, 2019; UNESCO, 2021), provides highly relevant lessons for the development of an AI governance framework with which the desired balance should be kept in promoting innovation whilst also increasing public sector capacity and privacy rights protections (European Union, 2024).

To fill significant gaps discovered during the review, this study also analyzed existing AI adoption in Bangladesh for government, judiciary, banking healthcare education and the private sector. The data available suggest that the adoption of AI is accelerating steadily across Smart Bangladesh, digitized public services, AI enabled financial technologies, healthcare diagnostics, AI supported education and private sector automation. Yet, these developments continue to outstrip the adequacy of topical legal and regulatory frameworks, further necessitating global AI governance.

The research also assessed how applicable major international AI governance regimes are to Bangladesh. It argues that one uniform institutional footprint cannot simply be transplanted due to differing levels of institutional capacity, technological infrastructure, regulatory maturity and economic conditions between the nations. Bangladesh should not simply replicate developing countries that share similar administrative and socio economic features looking at the practices of the European Union's risk based regulation, US innovation centered governance, UK regulatory principles or Singaporean style functional governance rather best learning can be from India.

This research also develop an AI governance framework of Bangladesh focused on the balance between innovation and accountability, transparency, human rights protection, and judicial oversight. The proposed framework advocated for a National AI Strategy, the establishment of an independent AI Regulatory Commission, a risk based classification system, licensing of high risk AI systems, mandatory AI impact assessments (see above), robust and meaningful human oversight, independent auditing and review by judges as well as a public complaints mechanism. It suggests broader institutional measures to be implemented, including an AI Act, a Personal Data Protection Law, National AI Ethics Guidelines, judicial capacity building and industry regulatory sandboxes. Together, such recommendations serve as a roadmap towards developing a responsible, rights based and innovation friendly AI governance framework within the context of our existing legal and institutional regime.

In summary, the results show that while Bangladesh has made great strides in adopting AI technologies, sustainable and reliable development of AI will require extensive regulatory reform and capacity building and further alignment with global principles of responsible AI governance.

CONCLUSION

On the whole, the thesis suggests that we need urgent AI regulation in Bangladesh through several key initiatives. The country embarked the digital transformation journey long time back, but legal modernization has not matched pace with technological advancement. These tools could entail more harm than help in courts, government, law enforcement, business and professional practice if AI is not largely supervised. So, we need that regulatory model in between: one that promotes innovation while at the same time ensuring accountability, fairness and constitutional rights.

RECOMMENDATIONS

There must be a specific AI law for Bangladesh with the formation of an independent regulator, enhanced data protection laws along with adherence to provisions for AI ethics in both public and private use. It should also

budget for formal training, professionalization, and technical testing mechanisms that ensure judgement augmentation rather than blind trust in AI systems. Together, these reforms would position Bangladesh among best practices around the world and reflect domestic institutional realities (“Advancing AI Ethics in Bangladesh”; UNESCO; OECD).

Future Research

Future research Should Include empirical studies of how judges, lawyers and regulators actually practice with AI. It should also look into judicial AI, judicial data mining & AI in Bangladesh criminal justice system and constitutional rights of free will & automated decision making. This kind of work would focus the debate away from doctrine and toward evidence-based reform.

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