

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS



Open Access, Refereed Journal Multi-Disciplinary
Peer Reviewed

www.ijlra.com

DISCLAIMER

No part of this publication may be reproduced, stored, transmitted, or distributed in any form or by any means, whether electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the Managing Editor of the *International Journal for Legal Research & Analysis (IJLRA)*.

The views, opinions, interpretations, and conclusions expressed in the articles published in this journal are solely those of the respective authors. They do not necessarily reflect the views of the Editorial Board, Editors, Reviewers, Advisors, or the Publisher of IJLRA.

Although every reasonable effort has been made to ensure the accuracy, authenticity, and proper citation of the content published in this journal, neither the Editorial Board nor IJLRA shall be held liable or responsible, in any manner whatsoever, for any loss, damage, or consequence arising from the use, reliance upon, or interpretation of the information contained in this publication.

The content published herein is intended solely for academic and informational purposes and shall not be construed as legal advice or professional opinion.

**Copyright © International Journal for Legal Research & Analysis.
All rights reserved.**

ABOUT US

The *International Journal for Legal Research & Analysis (IJLRA)* (ISSN: 2582-6433) is a peer-reviewed, academic, online journal published on a monthly basis. The journal aims to provide a comprehensive and interactive platform for the publication of original and high-quality legal research.

IJLRA publishes Short Articles, Long Articles, Research Papers, Case Comments, Book Reviews, Essays, and interdisciplinary studies in the field of law and allied disciplines. The journal seeks to promote critical analysis and informed discourse on contemporary legal, social, and policy issues.

The primary objective of IJLRA is to enhance academic engagement and scholarly dialogue among law students, researchers, academicians, legal professionals, and members of the Bar and Bench. The journal endeavours to establish itself as a credible and widely cited academic publication through the publication of original, well-researched, and analytically sound contributions.

IJLRA welcomes submissions from all branches of law, provided the work is original, unpublished, and submitted in accordance with the prescribed submission guidelines. All manuscripts are subject to a rigorous peer-review process to ensure academic quality, originality, and relevance.

Through its publications, the *International Journal for Legal Research & Analysis* aspires to contribute meaningfully to legal scholarship and the development of law as an instrument of justice and social progress.

PUBLICATION ETHICS, COPYRIGHT & AUTHOR RESPONSIBILITY STATEMENT

The *International Journal for Legal Research and Analysis (IJLRA)* is committed to upholding the highest standards of publication ethics and academic integrity. All manuscripts submitted to the journal must be original, unpublished, and free from plagiarism, data fabrication, falsification, or any form of unethical research or publication practice. Authors are solely responsible for the accuracy, originality, legality, and ethical compliance of their work and must ensure that all sources are properly cited and that necessary permissions for any third-party copyrighted material have been duly obtained prior to submission. Copyright in all published articles vests with IJLRA, unless otherwise expressly stated, and authors grant the journal the irrevocable right to publish, reproduce, distribute, and archive their work in print and electronic formats. The views and opinions expressed in the articles are those of the authors alone and do not reflect the views of the Editors, Editorial Board, Reviewers, or Publisher. IJLRA shall not be liable for any loss, damage, claim, or legal consequence arising from the use, reliance upon, or interpretation of the content published. By submitting a manuscript, the author(s) agree to fully indemnify and hold harmless the journal, its Editor-in-Chief, Editors, Editorial Board, Reviewers, Advisors, Publisher, and Management against any claims, liabilities, or legal proceedings arising out of plagiarism, copyright infringement, defamation, breach of confidentiality, or violation of third-party rights. The journal reserves the absolute right to reject, withdraw, retract, or remove any manuscript or published article in case of ethical or legal violations, without incurring any liability.

ALGORITHMIC GOVERNANCE UNDER RERA ACT

AUTHORED BY - PARI PATRA & PURWA SAWANT

Second year, B.A.LL.B

Thakur Ramnarayan College of Law, Mumbai

Abstract:

The implementation of AI within the regulations stipulated under the Real Estate (Regulation and Development) Act, 2016 (RERA) presents an interesting instance of how technology could enhance the process of regulation in India. This paper focuses on the impact of AI-based tools such as predictive analytics, explainable artificial intelligence, and machine learning on regulatory operations within the RERA authorities. Specifically, AI would assist RERA regulators in making regulatory decisions based on efficient analysis, monitoring of compliance, and provision of intelligent dispute resolution techniques, such as the use of "Smart Courts." The integration of AI within RERA poses several challenges in terms of legality and legitimacy. In relation to data quality, issues such as poor algorithms and biases could make the AI-based process of making regulatory decisions unfair.

Keywords: RERA, Algorithmic Governance, Artificial Intelligence, Consumer Protection.

1. Introduction

Algorithmic Governance

The concept of algorithmic governance has emerged over the last decade, but takes up an idea that has been present for much longer: that digital technologies structure the social in particular ways. Engaging with the concept of algorithmic governance is complex, as many research fields are interested in the phenomenon, using different terms and having different foci. To inquire what constitutes algorithmic governance makes an important contribution to contemporary social theory by interrogating the role of algorithms and their ordering effect. We define algorithms as computer-based epistemic procedures which are particularly complex – although what is complex depends on the context. Algorithms shape procedures with their inherent mathematical logics and statistical practices.

The relevance of dealing with algorithmic governance becomes evident with regard to

competing narratives of what changes in governance when it makes use of algorithms: one narrative is for example that governance becomes more powerful, intrusive and pervasive. A different narrative stresses that governance becomes more inclusive, responsive, and allows for more social diversity¹.

Rera

The Real Estate (Regulation and Development) Act, 2016 (RERA)² is a central legislation to govern the Indian real estate industry by introducing a transition towards a more transparent and efficient system in a sector long associated with opacity. RERA has been enforced on the 1st of May, 2017, and in its current form, as passed by Parliament, it aims to protect the interests of homebuyers and ensure fair business practices in the real estate industry by introducing standardized regulations in the industry across the country. The Act has been made applicable to all real estate projects, both residential and commercial, with a plot size above 500 square meters or more than eight apartments. These projects will be required to be registered with the State Real Estate Regulatory Authority. This requirement has been introduced to filter out non-compliant and fraudulent project registrations.

One of the main features of the Act is the requirement for developers to deposit a minimum of seventy percent of the revenues generated by the projects in a separate escrow account to avoid the diversion of funds to other projects and to introduce financial discipline in the industry. Additionally, the Act has also introduced the requirement to disclose information pertaining to the projects, such as the plans and designs sanctioned by the authorities and the status of the approvals. These disclosures will also have to be made publicly accessible on the website of the authority. To avoid the situation where the buyers might be locked in by unfair contracts and end up being stranded upon withdrawal, the DOC has introduced a model sale agreement. Additionally, the promoters will also be required to adhere to the timelines declared for the projects, and failure to adhere to the same will attract a penalty and interest on the same to be paid by the buyers.

¹ Katzenbach, C., & Ulbricht, L. (2019). Algorithmic governance. *Internet Policy Review*, 8(4). <https://doi.org/10.14763/2019.4.1424>

² An Act to establish the Real Estate Regulatory Authority for regulation and promotion of the real estate sector and to ensure sale of plot, apartment or building, as the case may be, or sale of real estate project, in an efficient and transparent manner and to protect the interest of consumers in the real estate sector and to establish an adjudicating mechanism for speedy dispute redressal and also to establish the Appellate Tribunal to hear appeals from the decisions, directions or orders of the Real Estate Regulatory Authority and the adjudicating officer and for matters connected therewith or incidental thereto.

RERA reduces the burden on consumer courts through the provision of specialized adjudicatory authorities and appellate tribunals, thus facilitating swifter resolution and reducing costs incurred. Consumer protection is extended up to five years beyond possession, thus holding unscrupulous developers accountable for structural flaws and inferior workmanship. The Act is intended to protect the interests of homebuyers and ensure that apartments or houses are constructed and made available to the buyers within the stipulated timeframe. This includes provisions that are relevant to the contemporary era and aim to ensure that developers do not induce homebuyers to seek loans to fund the development. Hence, the Act is applicable to projects that have not been given a completion certificate prior to the commencement date. This is a major relief to several homebuyers whose projects have been delayed. The regulatory framework introduced by RERA is a paradigm shift from an unregulated market to a well-structured and developed system. By offering legitimate protection, financial accountability, and information clarity, the Act aims to introduce a new era of a balanced and investment-led market³.

Relevance of AI in RERA

A prominent contemporary example of algorithmic governance in the implementation of RERA is provided by the initiative taken by the Uttar Pradesh Real Estate Regulatory Authority (UPRERA)⁴. U.P. RERA wishes to leverage emerging technologies such as artificial intelligence (AI)⁵, machine learning (ML)⁶ and natural language processing (NLP)⁷ for designing, developing, and implementing an ‘Intelligent Quasi-Judicial System - Smart Court’, that would enable the Authority in achieving an efficient, fair, explainable, and speedy processing of complaints filed. Artificial Intelligence (AI) is a technological ability to efficiently and seamlessly perform a complex task which significantly required human intelligence by leveraging the capabilities of big data, machine learning, neural networks, pattern recognition, self-learning, predictive analytics, data science, and natural language processing approaches. The way forward is to do process re-engineering and automation based

³<https://acr-journal.com/article/contemporary-legal-provisions-under-rera-strengthening-consumer-protection-in-india-s-real-estate-sector-1570/>

⁴ <https://www.up-rera.in/index>

⁵ The ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.

⁶ Machine learning is the subset of artificial intelligence (AI) focused on algorithms that can “learn” the patterns of training data and, subsequently, make accurate *inferences* about new data. This pattern recognition ability enables machine learning models to make decisions or predictions without explicit, hard-coded instructions.

⁷ Natural language processing (NLP) is a subfield of computer science and artificial intelligence (AI) that uses machine learning to enable computers to understand and communicate with human language.

on cutting edge technologies in various processes of eCourts. The pandemic has led to a surge in digitization of the eCourts system with creation of virtual courts, and adoption of online dispute resolution mechanisms. Apparently, AI will be key technology in scaling up and strategizing the capabilities of online platform/system. One such example is usage of AI for increasing administrative efficiency by automating the routine processes by leveraging the capabilities of machine learning / deep learning algorithms which can be deployed to support the real time activities like scheduling hearings and creating cause lists, to more complex tasks like discovery and review of evidentiary documents. Other simpler tasks which can benefit from the use of AI/ML include interventions at the level of smart complaint filling, intelligent filtering/prioritization of cases or notifications and tracking of cases.

Eventually, in the process of enhancing the Quasi-Judicial system, AI technology will promisingly contribute to building three major categories of systems namely, supportive systems (inform-support-advise) for the users of Quasi-Judicial systems, function-based automation systems (replace humans who perform routine jobs and activities) and autonomous systems (support Presiding Officers in decision making). Overall, U.P. RERA seeks to identify the steps for scaling their eCourts solution with inclusion of emerging technologies like AI/ML, cognitive computing, and big data technologies. It is also pertinent to reiterate that the success of these pilots and further innovation, will be contingent on the availability of adequate training data corpuses, and capacity building of stakeholders through training and skill development⁸.

Problem Statement

With the increasing integration of algorithmic systems and artificial intelligence into regulatory and quasi-judicial functions within RE-RAs in India, there are significant legal issues pertaining to fairness, transparency, accountability, and regulatory legitimacy. The integration of AI systems into regulatory mechanisms for complaint resolution, compliance management, and adjudicatory support within RE-RAs raises important questions pertaining to conformity with natural justice requirements, rationality in decision-making processes, and non-arbitrariness. The lack of transparency in AI systems and processes, as well as data biases and liabilities, have resulted in a regulatory accountability gap. In the absence of a clearly defined statutory framework on algorithmic decision-support systems within RE-RAs, there exists a critical need to evaluate whether existing regulatory safeguards under administrative and

⁸ https://www.up-rera.in/pdf/Rera_EOI20230512.pdf

constitutional law are sufficient to regulate AI systems within RE-RAs.

2. LITERATURE REVIEW

Algorithmic Governance

The concept of algorithmic governance was developed in the past ten years or so. It is grounded in the old idea that digital technologies have specific effects upon the social world. It is difficult to engage with the concept of algorithmic governance in terms of methodology because of the variety of interests in different domains of research, the variety of terminologies used in different fields of study, and the variety of focal points. An examination of the concept of algorithmic governance is significant in terms of the contribution it makes to the current state of social theory in the way it examines the role of algorithms in the process of ordering the social world. By algorithms, we refer to computer-based epistemic practices characterized by significant complexity, the degree of which is dependent upon the context; we refer to mechanisms that impact procedures in terms of their mathematical logic.

We prefer the term ‘algorithmic governance’ over the term ‘algorithmic regulation’ because the former term captures the variety of the social ordering process in terms of different actors, mechanisms, structures, degrees of institutionalization, and authority. The term ‘algorithmic governance’ is more inclusive in the sense that it accommodates the socially ordering process that is analytically and structurally decentralized and not state-centric. The term ‘algorithmic governance’ is more relevant in the sense that it captures the objective of the current article in the way it scrutinizes the variety of the contribution of algorithms in the process of social ordering.

In a broad sense, the roots of the idea can be found in the history and sociology of science, technology, and society. It is well understood that technology is at the same time the mirror of society and the reshaper of society⁹. From the concerns of Socrates about writing and literacy¹⁰, the interdisciplinarity of the cybernetic revolution in the fusion of technical, biological, and social systems and their control¹¹. The more immediate antecedent of the idea of algorithmic governance is the famous dictum of Lawrence Lessig that "code is law," which considers

⁹ Bijker, W. E., & Law, J. (Eds.). (1992). *Shaping Technology/Building Society: Studies in Sociotechnical Change*. Cambridge, MA: The MIT Press

¹⁰ Ong, W. J. (1982). *Orality and literacy : the technologizing of the word*. London; New York: Methuen.

¹¹ Wiener, N. (1948). *Cybernetics: or control and communication in the animal and the machine*. Cambridge, MA: The MIT Press.

software code or more broadly technical architecture as one of the four regulators of social behaviour (along with law, market, and social norms). The institutional nature of software/algorithms was conceptualized in the literature (Katzenbach, 2017; Katzenbach, 2012¹²; Napoli¹³, 2013). Although Rouvroy and Berns introduced the term "gouvernance algorithmique" in 2009, Müller-Birn, Dobusch, and Herbsleb (2013) were the first to conceptualize the idea of "algorithmic governance" as a coordination mechanism different from "social governance." The term "algorithmic regulation" was introduced by Tim O'Reilly (2013)¹⁴.

One such noteworthy example of this phenomenon was the 2010 entrepreneurial initiative in New York City to enhance the conditions of work in corporate offices via a computer program named WeWork. The program would optimize the conditions of work by designing the office space. The architects' suggestions might not be entirely accurate. Therefore, the computer program would be more accurate in designing the office space. The algorithm would use all the data available about the space and design the conditions of work in such a manner that the conditions would be more favourable for the enhancement of the social process of work. The proposition of the algorithm designing conditions more favourable for the enhancement of the social process has gained more attention in the last ten years. The algorithm has become an essential element of our daily lives. The effects of the algorithm are just being discussed. The algorithm has become the most essential element in our daily lives. From the algorithm we get on our social media accounts to the algorithm we use to book our flight schedules. The algorithm has become an essential element in our daily lives. The "governance" in this paper refers to public governance. Public governance involves the production and implementation of ideas, policies, regulations, and plans concerning the general public. The focus of this paper is not on the private corporate world. The focus of this paper is the interactive approach to governance. The interactive approach to governance involves the process of orderly interactions between individuals and collectives. The process of orderly interaction between individuals and collectives depends on the frameworks in which they operate. Various

¹² Katzenbach, C. (2012). Technologies as Institutions: Rethinking the Role of Technology in Media Governance Constellations. In N. Just & M. Puppis (Eds.), *Trends in Communication Policy Research: New Theories, New Methods, New Subjects* (pp. 117–138). Bristol: Intellect.

¹³ Napoli, P. M. (2013). *The Algorithm as Institution: Toward a Theoretical Framework for Automated Media Production and Consumption* [Working Paper No. 26]. New York: McGannon Center, Fordham University. Retrieved from https://fordham.bepress.com/mcgannon_working_papers/26

¹⁴ O'Reilly, T. (2013). Open Data and Algorithmic Regulation. In B. Goldstein & L. Dyson (Eds.), *Beyond transparency: Open data and the future of civic innovation* (pp. 289–300). San Francisco: Code for America Press.

structures emerge from the process of governance. Structures refer to the institutional arrangements such as the bureaucracy, the network, and the markets¹⁵.

AI in the Legal Industries

Recently, there has been an increase of academic focus on using Artificial Intelligence Technologies for supporting judicial and administrative decision-making processes. The early studies of using Artificial Intelligence to support Legal Reasoning involved investigating whether legal reasoning can be modelled using a computer system that could analyse supplied legal rules, precedents and factual patterns. The technology has continued to evolve from being a basic tool to becoming a full-blown Decision Support System through the use of Artificial Intelligence in all kinds of legal settings.

Recent academic publications are analysing some of the broader implications of integrating artificial intelligence (AI) into the law and regulation process. Many scholars point out that algorithms are being used to assist legal professionals and governmental institutions not only for research, but also for administration and regulation of governmental entities through the use of algorithms to provide analysis of large amounts of data and assist in determining compliance with legal requirements. Courts and other entities in many jurisdictions have begun to use AI-based technologies for (1) allocating cases, (2) verifying documents, and (3) automating the drafting of repetitive or routine judicial orders. Although these activities demonstrate how AI can help improve the efficiency, decrease the time lag in the judicial process and enhance public access to Justice, many advocates are continuously working to ensure that AI technology is used safely and responsibly by investigating concerns related to algorithm accountability and bias, data bias, and a lack of clear mechanisms to hold AI technologies accountable. Therefore, many scholars and others advocate for the establishment of regulatory frameworks that are transparent, ethical standards that govern the application of AI technologies, and institutional safeguards to ensure that AI decision-making systems operate in a manner consistent with (1) the principles set forth in the Constitution, (2) the public's right to receive justice, and (3) principles of justice and the rule of law generally¹⁶.

¹⁵ Katzenbach, Christian, Ulbricht, Lena "Algorithmic Governance" 2019, Alexander von Humboldt Institute for Internet and Society, Berlin, Available on <https://www.econstor.eu/handle/10419/210652>

¹⁶ International Journal of Law www.lawjournals.org ISSN: 2455-2194 Received: 22-11-2025, Accepted: 16-01-2026, Published: 31-01-2026 Volume 12, Issue 1, 2026, Page No. 219-222 Artificial intelligence and judicial decision-making in India: A critical doctrinal and empirical analysis.

Technology and RERA

Implementation with regard to the Real Estate (Regulation and Development) Act, 2016, there has been a gradual shift toward using more digital technologies in the regulatory bodies in order to create more transparency, increase efficiency, and make the real estate industry more accessible. All state RERA regulatory authorities maintain an online regulatory portal. The portals provide developers with the ability to register their projects, upload required disclosures, submit quarterly progress reports, as well as manage compliance. Additionally, the portals allow homebuyers to obtain information on projects and verify developer credentials, providing a mechanism through which a homebuyer can electronically file complaints with RERA. Further, many of the RERA authorities have developed digital case management systems that permit e-filing of required documents, and allow for performing online hearings between the parties to a dispute, as well as for electronically monitoring regulatory proceedings.

The Uttar Pradesh Real Estate Regulatory Authority is one of the most advanced regulatory authorities in India under the Real Estate (Regulation and Development) Act 2016. With a focus on transparency, efficiency, and ease of access to the regulatory framework, UP RERA embraces various digital technologies to improve how this regulatory regime functions. One major initiative taken by UP RERA has been the implementation of an online regulatory portal, where developer registration projects are required to be registered, along with required disclosures, updates on constructions, and compliance with the regulatory framework. This portal provides information about project details, allows verification of registration status, reviews of approvals, and monitoring of the progress of real estate development projects to home buyers. By providing this public information via the portal, UP RERA has significantly reduced the information asymmetry between developers and home buyers and increased consumer protection.

Along with developing digital registration and disclosure systems in India, UP RERA has developed better case management and dispute resolution systems using advanced technology. The authority has developed a system where buyers can file complaints through an online electronic filing system, keep track of their complaints, and have hearings held virtually or with digital documentation, thus making the dispute resolution process much more efficient by reducing the time required for resolution. The UP RERA has also begun to explore the use of

AI-assisted "Smart Court"¹⁷ systems to make the case management and document analysis processes within the regulatory body more efficient. These systems are intended to assist the UP RERA authorities to manage more complaints at once, create an organized repository of all of the related case files, and use data-driven decision-making tools to assist with the overall decision-making process. Although the implementation of these technologies provides a glimpse into how effective digital governance can be in regulatory institutions, it also shows that the need for safeguards to ensure transparency, accountability, and fairness exists whenever an automated or algorithmic decision-making system is utilized in an administrative setting.

Central Concepts of XAI

Artificial Intelligence (AI): The design and implementation of computer programs that mimic how humans reason and solve problems. The short answer: AI is a computer program that can think and learn like a human. Examples include ML (machine learning), NN (neural networks), and DL (deep learning). The potential applications of AI are vast and varied; examples include: Econometrics (predicting stock prices), Biometrics (using facial recognition), E-commerce (creating recommendation systems), Automotive industry (autonomous driving).

Explainable AI identifies the reasoning behind results generated by automated systems to improve understandability, as opposed to black-box systems¹⁸. The XAI¹⁹ approach receives increased attention within a system that regulates real estate transactions under the Real Estate (Regulation and Development) Act, 2016, because regulatory agencies perform the same duties and responsibilities as quasi-judicial agencies, e.g. adjudicating disputes and supervising developer compliance with laws and enforcing laws. Using machine learning to process large volumes of real estate data — e.g., projected completion dates of construction, financial statements submitted by the developer, and complaint patterns — results in predicting or determining a risk of a given project or developer. XAI improves the interpretability of machine learning outputs through techniques such as feature-attribution, model visualization, and rule-

¹⁷ A smart court is a modern judicial system that integrates advanced technologies like AI, big data, and cloud computing to enhance efficiency, fairness, and transparency in legal proceedings. It digitizes the entire litigation process, from filing to judgment, often featuring online hearings and automated case management, pioneered largely by China.

¹⁸ A black box AI is an AI system whose internal workings are a mystery to its users. Users can see the system's inputs and outputs, but they can't see what happens within the AI tool to produce those outputs.

¹⁹ Explainable artificial intelligence (XAI) is a set of processes and methods that allows human users to comprehend and trust the results and output created by machine learning algorithms.

based reasoning, allowing regulators to identify which variables most influenced the algorithm outputs. Thus, it provides regulators with the ability to determine if a delay in a project was a result of substantial financial irregularities, excessive buyer complaint activity, or inconsistencies in construction progress reporting.

XAI, or explainable artificial intelligence, is the interpretive layer that sits between the analytical function of AI algorithms and the humans making choices based on those analyses. Traditional AI models are often non-interpretable because of the complicated statistical interrelations between the independent variables and their associated dependent variables. As such, the mathematical outputs generated from traditional AI algorithms can typically only be translated into a form that most people can understand using one or more explainable frameworks including: feature importance scoring, and decision trees; developing local explanations for specific cases and using visualization tools to display the mathematics in an easy to understand manner²⁰.

In the context of RERA (Real Estate Regulatory Authority) ecosystem, the interpretable approach taken by XAI enables regulatory authorities to review high volumes of project documentation, all submitted through electronic portals. That is, an AI model may process and analyse thousands of project filings to identify those filings that have a high likelihood of experiencing a delay in beginning construction. Through XAI communicators, the AI system will present to the regulatory authority explanatory indicators (e.g., prolonged stagnation in a project's quarterly updates, reactive financial withdraws) to assist the regulatory authority in confirming that the conclusions are accurate prior to taking compliance action against the developer. As such, the interpretive capabilities of XAI are critical in preserving the procedural legitimacy of the regulatory body; transparently providing reasons for regulatory decisions to developers, homebuyers and appellate authorities are necessary in order for those same regulatory authorities to do their jobs.

Explainable AI also increases technological accountability in government using machine-based data analysis by providing institutional authority or supervision for AI-generated information. Given that consumer protection and financial transparency are some of the main priorities in

²⁰ Explainable Artificial Intelligence (XAI): Concepts and Challenges in Healthcare by Tim Hulsen Department of Hospital Services & Informatics, Philips Research, 5656 AE Eindhoven, The Netherland *AI* 2023, 4(3), 652-666; <https://doi.org/10.3390/ai4030034> Submission received: 31 May 2023 / Revised: 11 July 2023 / Accepted: 9 August 2023 / Published: 10 August 2023

government, the algorithmic output from AI must have to be examined/verified by regulatory personnel. By providing an interpretable reasoning behind an AI-generated output, the regulatory team can evaluate any potential bias within the training data and/or create justifications for instituting regulation. For instance, if a monitoring process generates an output indicating that a project is “high-risk,” the explanation module could provide clarity about the basis of the output (i.e., this particular project is “high-risk” due to a history of delayed project completion and frequent complaints by buyers who purchased in that development). By having explanation capabilities, the regulatory structure can provide targeted mailings/notifications, compliance directives and continue to offer equal and transparent processing of administrative actions.

Figure 1: Technical Architecture of XAI in RERA Monitoring

(Project filings | Financial disclosures | Complaints| Progress reports)



Machine Learning Model

(Risk detection | Delay prediction)



Explainability Mechanism

(Feature attribution | Rule extraction | Visualization)



Regulatory Interpretation Layer

(RERA officials examine reasoning)



Administrative or Compliance Action

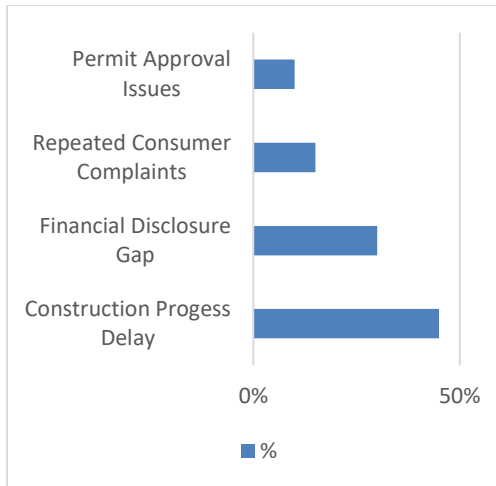
Example:

If the system predicts a **70% probability of project delay**, the explanation layer may show

that **irregular construction updates (40%)**, **financial inconsistencies (20%)**, and **buyer complaints (10%)** contributed to the prediction.

Figure 2: Example of Explainable Decision Output

AI Risk Score for Project: 0.78 (High Risk)



Rather than just marking a project as "high risk", this system identifies underlying indicators so that regulators can see analytical reasoning and support for additional enforcement activities. Illustrated through these numbers and explanations is how XAI turns regulatory AI tools from predictive systems with no transparency to systems that support decision-making with all relevant information, thus providing compatibility between algorithmic results and adequate regulatory administration and legal accountability.

Additionally, algorithmic bias may occur when certain data sets or models inadvertently favour certain outcomes. To assist with bias detection, historical data and model history must be analysed along with decision-making results to ensure that, when implemented, an automated system provides the same classification of all entities included in the classification. For instance, if an AI monitoring system flags disproportionate numbers of projects in certain locations/developer categories as "high risk" because of historical complaints against each category, this creates an unwarranted level of regulatory scrutiny. Implementing bias detection methods (e.g., statistical audits, fairness metrics, periodic algorithm reviews) allows regulatory bodies to identify and remedy these inaccuracies. By integrating explainability into systems that monitor for bias, algorithmic systems used for RERA regulatory oversight will support the performance of regulation while maintaining clarity in their processes, fairness in their outcomes, and protection for the consumer's interests.

3. ADVANTAGES

There are many opportunities to improve both the efficiency and transparency of the real estate sector through the use of artificial intelligence, particularly within the regulatory framework of the Real Estate (Regulation and Development) Act, 2016. AI is capable of analysing massive amounts of data regarding project registration, updates on construction, financial disclosures, and consumer complaints much quicker than humans are able to do so. Because of this, regulators will be able to identify irregularities or compliance issues in a timely manner, much quicker than they could have done using traditional methods. By automating the analysis of data as well as monitoring activities, regulatory bodies will have greater ability to identify delayed projects, inconsistent financials, and patterns of misconduct by developers, all of which will enhance their ability to regulate.

One of the major benefits of artificial intelligence (AI) is its potential to facilitate predictive governance. Utilizing sophisticated analytics, AI can reveal trends that might identify potential risks, such as delays in construction or discrepancies in financial records. This enables governing bodies to proactively manage risks before they grow into large-scale disputes. Additionally, digital platforms that utilize AI can offer improved access to regulatory authorities through automation of processes like case tracking, document verification, and classification of complaints. Overall, this greatly reduces the burden of administration, streamlines dispute resolution procedures, and improves the effectiveness of RERA authorities.

4. CHALLENGES

While the transformative potential of artificial intelligence in India's real estate sector is substantial, its practical implementation remains constrained by a set of structural and operational challenges. A primary concern is the issue of data quality and availability. The Indian real estate market is highly fragmented, characterized by inconsistent record-keeping, lack of digitization, and limited access to standardized datasets. Since AI systems rely heavily on large volumes of accurate, structured, and real-time data, these deficiencies significantly undermine their effectiveness and reliability²¹. Additionally, the high cost of implementing AI technologies acts as a considerable barrier, particularly for small and medium-sized developers who may lack the financial and technical capacity to integrate such advanced systems into their operations. This creates an uneven technological landscape where only larger, well-capitalized

²¹ <https://mchi.net/role-of-artificial-intelligence-in-the-real-estate-sector-in-india/>

entities can fully leverage AI-driven advantages. From a regulatory standpoint, the absence of clear, standardized frameworks governing AI adoption in real estate further complicates matters. Legal ambiguity around data protection, algorithmic accountability, and compliance obligations can deter stakeholders from investing in AI solutions due to potential legal risks. Lastly, there exists a socio-cultural dimension—resistance to change among traditional stakeholders. Many actors in the real estate ecosystem, accustomed to conventional methods, exhibit reluctance in adopting technologically disruptive tools, thereby slowing the pace of innovation and digital transformation in the sector.

Taken together, these challenges highlight the need for coordinated policy intervention, infrastructural development, and capacity-building measures to ensure that AI integration in Indian real estate is both effective and equitable.

5. Conclusion

Integration of AI within the remit of RERA has never been more imminent in the context of making the law work effectively and efficiently. AI can play an indispensable role in improving compliance, dispute resolution, and predictive analysis, thereby improving consumer protection through real estate regulations. However, incorporation of AI and similar technologies does not come without its problems. Issues of opacity, algorithmic discrimination, data privacy and security concerns, and accountability become significant barriers in incorporating these decision-making processes as legally viable options. Considering the powers vested in the RERA agencies which affect people directly, the implementation of algorithmic processes becomes a serious threat to some of the basic principles of justice.

In order to make AI processes within RERA acceptable, it is vital that both the technological advancements and legal measures are considered. Measures such as implementation of Explainable Artificial Intelligence (XAI), algorithmic audits, human intervention, and legislative framework become vital while using these technologies. In summary, successful implementation of AI within RERA is only possible if it works in conjunction with the values enshrined within the Constitution and natural justice.