iJRASET
International Journal For Research in
Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 14 **Issue:** IX **Month of publication:** September 2026

DOI: https://doi.org/10.22214/ijraset.2026.84793

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 14 Issue IX Sep 2026- Available at www.ijraset.com

The Trust Paradox in AI–Blockchain Systems: Exploring Transparency, Immutability, and Human Trust

Akash Kanhai
Student, Bachelor of Computer Applications, KK Modi University, Durg

Abstract: Artificial Intelligence (AI) and Blockchain have emerged as two influential technologies in the development of modern digital systems. AI provides intelligent prediction, automation, and decision-making capabilities, while Blockchain offers decentralization, traceability, transparency, and resistance to unauthorized modification. Because of these complementary characteristics, the integration of AI and Blockchain is increasingly presented as a way to create more secure and trustworthy digital environments. However, an important question remains: does greater technical transparency and immutability necessarily result in greater human trust? This paper explores this question through a qualitative thematic analysis of existing research on AI trust, algorithmic transparency, explainability, Blockchain immutability, accountability, and AI–Blockchain integration. Twenty relevant research works were examined to identify recurring concepts, opportunities, limitations, and contradictions. The analysis reveals a trust paradox: Blockchain can increase confidence in the integrity and history of recorded information, but its immutability does not automatically establish trust in the quality of the underlying data or the decisions produced by AI. Similarly, making an AI system more transparent does not necessarily make it more understandable or trustworthy to ordinary users. Four major themes emerged from the literature: technical transparency, perceived human trust, accountability and explainability, and the limitations of immutability. The study argues that trustworthy AI–Blockchain systems require more than technological guarantees. They require understandable explanations, appropriate human oversight, data governance, accountability mechanisms, and context-sensitive transparency. The paper concludes by proposing a conceptual trust framework that connects Blockchain integrity with AI explainability and human-centered governance.
Keywords: Artificial Intelligence, Blockchain, Human Trust, Transparency, Immutability, Explainable AI, Accountability, Thematic Analysis, Trustworthy AI.

I. INTRODUCTION

Artificial Intelligence and Blockchain are frequently described as transformative technologies because they address different but complementary problems. Artificial Intelligence enables computer systems to identify patterns, make predictions, automate decisions, and learn from data. Blockchain, in contrast, provides a distributed method for recording and verifying information without depending entirely on a single central authority. Nakamoto's original Blockchain design demonstrated how a distributed ledger could establish a verifiable transaction history using cryptographic techniques and consensus rather than relying solely on a trusted intermediary [1]. Subsequent research has expanded Blockchain into areas such as healthcare, finance, supply chains, identity management, and data sharing [2]–[5].

The growing interest in combining AI and Blockchain is therefore understandable. AI can provide intelligence to Blockchain-based systems, while Blockchain can potentially provide stronger data provenance, auditability, and integrity for AI systems. Previous research has proposed Blockchain-supported machine learning, privacy-preserving predictive modelling, decentralized AI architectures, and AI-enabled Blockchain applications [6]–[10]. These developments have created the impression that combining the two technologies can automatically produce systems that are more trustworthy.

However, trust is not purely a technical property. A Blockchain network may accurately preserve a record, but the record itself may have been incorrect when it entered the system. Similarly, an AI model may produce a highly accurate prediction while remaining difficult for users to understand. A system can therefore be technically secure without being perceived as trustworthy by its users.

This distinction becomes particularly important when AI is involved in decisions that affect individuals. Research on trust in automation has shown that people need to develop an appropriate level of reliance on automated systems rather than simply trusting or rejecting them [11], [12].

©IJRASET: All Rights are Reserved

Research on human trust in AI similarly indicates that trust is influenced by system characteristics, users, context, and perceptions of machine intelligence [13]. More recent research has shown that algorithmic transparency and explainability can influence perceptions of trustworthiness, although the relationship is not always straightforward [14], [15].

Blockchain introduces another dimension to this issue. Its immutability is often associated with security and trust. Once information has been validated and recorded, altering the historical record becomes difficult. However, immutability can also create problems when incorrect, outdated, or sensitive information is permanently preserved. Recent work on Blockchain governance emphasizes that Blockchain does not eliminate trust; rather, it changes where trust is placed, shifting some reliance from people and institutions toward technological infrastructures and rules [16].

Therefore, the central question of this study is not whether AI and Blockchain can technically be integrated. That question has already received considerable attention. Instead, this paper asks:

When AI and Blockchain are integrated, does technical transparency and immutability actually translate into human trust?

This paper refers to this tension as the Trust Paradox.

The objective of the study is to explore this paradox through a qualitative thematic analysis of existing research and to identify the conditions under which AI–Blockchain systems can become genuinely trustworthy from a human perspective.

II. BACKGROUND OF AI AND BLOCKCHAIN

A. Artificial Intelligence and Trust

AI systems increasingly participate in activities that traditionally depended on human judgment. Recommendation systems, fraud detection, medical decision support, recruitment tools, autonomous systems, and conversational AI are examples of systems where people may need to rely on machine-generated outputs.

Trust is important because users rarely have complete knowledge of how complex AI systems operate. Lee and See [11] argued that trust influences whether humans appropriately rely on automation. Hoff and Bashir [12] subsequently synthesized empirical research and identified multiple factors affecting trust, including characteristics of the automation, the user's characteristics, and the surrounding context.

Glikson and Woolley [13] further demonstrated that human trust in AI is influenced by both cognitive and emotional factors. This means that technical performance alone may not determine whether users trust an AI system.

Explainability has therefore become an important part of trustworthy AI. Arrieta et al. [17] described Explainable Artificial Intelligence (XAI) as an important research area for improving the interpretability and transparency of AI systems. Rai [18] similarly emphasized the importance of moving from opaque "black-box" systems toward systems whose decisions can be meaningfully understood.

However, transparency and explainability should not be treated as identical concepts. A system may expose large amounts of technical information without helping a user understand why a particular decision was made.

B. Blockchain and Immutability

Blockchain is generally characterized by decentralization, distributed consensus, cryptographic security, transparency, and immutability. Nakamoto's original work established the foundation for a distributed transaction history that does not depend on a conventional central authority [1].

Later systematic reviews have shown that Blockchain research has expanded far beyond cryptocurrency. Yli-Huumo et al. [3] identified privacy, security, scalability, and application-related challenges in Blockchain research, while Casino et al. [4] reviewed a broad range of Blockchain applications and research directions.

Immutability is one of Blockchain's most attractive characteristics. It provides confidence that an already recorded event has not been secretly changed. This can be valuable for auditing, provenance, transaction histories, and data verification.

Nevertheless, immutability should not be interpreted as proof that the information is true.

For example, suppose an inaccurate piece of information is entered into a Blockchain. The system may preserve the information perfectly, but it will preserve the wrong information. Blockchain can therefore establish confidence in the integrity of a record without necessarily establishing confidence in its original correctness.

This distinction becomes particularly significant when AI-generated information is stored or verified using Blockchain.

III. AI–BLOCKCHAIN INTEGRATION

The integration of AI and Blockchain has been proposed as a means of combining computational intelligence with decentralized data integrity.

Blockchain can potentially support AI in several ways:

1) Data provenance: recording the origin and history of data.
2) Auditability: maintaining records of model-related activities.
3) Data integrity: detecting unauthorized modifications.
4) Decentralized collaboration: supporting multiple participants without a single central repository.
5) Access management: controlling access to data and computational resources.
6) Accountability: creating an auditable history of transactions or actions.

AI can similarly enhance Blockchain systems through:

a) Fraud detection.
b) Anomaly detection.
c) Predictive analytics.
d) Intelligent access control.
e) Automated decision support.
f) Pattern recognition.

Kuo and Ohno-Machado [6], for example, proposed Model-Chain, a Blockchain-based framework for privacy-preserving distributed predictive modelling. The work demonstrated how Blockchain could support collaboration between institutions without directly sharing observation-level data.

Research has continued to explore this intersection. IJRASET papers have discussed the application of Blockchain to AI, AI-supported Blockchain security, and integrated AI–Blockchain systems [7]–[10]. These studies illustrate the technical potential of the two technologies.

However, technical integration does not automatically resolve the human side of trust.

A system can have:

Blockchain integrity + AI intelligence ≠ automatic human trust

This relationship represents the central problem examined in this study.

IV. PROBLEM STATEMENT

Current literature frequently associates Blockchain with trust because of its decentralized, transparent, and immutable characteristics. Similarly, AI is increasingly expected to become more trustworthy through explainability, transparency, and improved performance.

However, these assumptions create several questions.

First, transparency does not always mean understandability. An AI system can reveal information about its algorithm or data while still remaining difficult for ordinary users to interpret.

Second, immutability does not guarantee truthfulness. Blockchain can prevent unauthorized changes to recorded information, but it cannot necessarily determine whether the information was accurate before it was recorded.

Third, technical trust and human trust are different. A user may trust that a Blockchain record has not been modified while still distrusting the organization, AI model, or decision associated with that record.

Fourth, excessive reliance on automated systems can produce inappropriate trust. Trust research has consistently emphasized the importance of calibrated or appropriate reliance rather than blind confidence [11]–[13].

Therefore, there is a need to examine AI–Blockchain trust as a socio-technical problem, rather than treating it only as a matter of cybersecurity or system architecture.

V. RESEARCH OBJECTIVES

The main objectives of this study are:

1) To examine how transparency influences trust in AI–Blockchain systems.
2) To explore the relationship between Blockchain immutability and perceived trust.
3) To identify the difference between technical trust and human trust.

4) To examine the role of explainability and accountability in AI–Blockchain systems.
5) To identify limitations and contradictions associated with Blockchain-based trust.
6) To develop a conceptual understanding of the conditions required for trustworthy AI–Blockchain systems.
7) To identify future research opportunities in human-centered AI–Blockchain design.

VI. RESEARCH QUESTIONS

The study addresses the following research questions:
RQ1: How does transparency influence human trust in AI–Blockchain systems?
RQ2: Does Blockchain immutability necessarily lead to greater trust?
RQ3: What is the relationship between technical integrity and human-perceived trust?
RQ4: What role do explainability and accountability play in trustworthy AI–Blockchain systems?
RQ5: What conditions are necessary for AI–Blockchain systems to achieve appropriate rather than blind human trust?

VII. RESEARCH METHODOLOGY

A. Research Design

This study adopts a qualitative thematic literature analysis. Instead of developing and testing a new AI or Blockchain application, the study examines existing academic research to understand recurring concepts and relationships surrounding trust.
A qualitative approach is appropriate because the purpose is to understand how trust is conceptualized, what factors influence it, and where contradictions exist within the existing literature.

B. Literature Selection

Twenty research works were selected to provide coverage across four related areas:
- Blockchain technology and its characteristics.
- AI–Blockchain integration.
- Human trust in AI and automation.
- Transparency, explainability, and accountability.

The literature includes foundational studies as well as recent research. Relevant IJRASET publications were also considered because the intended publication context is IJRASET.

C. Thematic Analysis

The selected literature was examined through the following stages:
Stage 1 – Familiarization:
The major arguments and findings of each paper were reviewed.
Stage 2 – Initial coding:
Repeated concepts such as transparency, immutability, trust, explainability, privacy, accountability, and human oversight were identified.
Stage 3 – Theme development:
Related codes were grouped into broader themes.
Stage 4 – Interpretation:
The relationships and contradictions among the themes were examined.
Stage 5 – Synthesis:
A conceptual explanation of the AI–Blockchain trust paradox was developed.
The purpose was not to count the frequency of words mechanically. Instead, attention was given to the meaning and relationship of recurring concepts.

VIII. THEMATIC ANALYSIS AND FINDINGS

1) Theme 1: Transparency Does Not Automatically Produce Trust

Transparency is frequently presented as one of the major advantages of Blockchain and one of the important requirements for trustworthy AI.

Blockchain can provide visibility into transaction histories and make records auditable. AI transparency, on the other hand, concerns the ability to understand how data, models, and decisions contribute to an outcome.

However, the literature suggests that transparency is more complicated than simply exposing information.

Grimmelikhuijsen [14] found that explainability can influence perceptions of trustworthiness, but transparency based solely on accessibility may not be sufficient. This distinction is important because ordinary users may not possess the technical knowledge required to interpret source code, model architecture, cryptographic hashes, or Blockchain transactions.

Therefore:

Information visibility is not the same as meaningful understanding.

A Blockchain explorer may make transactions publicly visible, but this does not mean that every user understands what the transactions represent. Similarly, publishing an AI model's technical architecture does not necessarily explain an individual decision.

This suggests that AI–Blockchain systems should move from technical transparency toward human-understandable transparency.

2) Theme 2: Immutability Creates Confidence—but Also a Paradox

The second major theme concerns Blockchain immutability.

Immutability can increase confidence because users know that historical records are difficult to modify after validation. This is especially useful for auditing, provenance, and verification.

However, the same characteristic can become problematic when incorrect information is permanently recorded.

Consider a simplified example:

AI system produces incorrect result → result is recorded on Blockchain → Blockchain preserves the result permanently.

The Blockchain has successfully protected the integrity of the record, but it has not corrected the AI's mistake.

This leads to an important distinction:

Blockchain can protect the integrity of information without guaranteeing the validity of information.

This issue is consistent with broader Blockchain literature emphasizing that technical properties such as immutability must be considered alongside governance, data quality, privacy, and application context [3], [4], [16].

The trust paradox therefore emerges because users may interpret immutability as evidence that information is "true," when it may only demonstrate that the recorded information has remained unchanged.

3) Theme 3: Technical Trust Is Different from Human Trust

One of the strongest findings from the literature is that trust has multiple layers.

A user can have:

1) Technical trust

Confidence that:

- the record has not been altered;
- the system follows its protocol;
- transactions are cryptographically protected;
- data provenance can be verified.

2) Institutional trust

Confidence in:

- the organization operating the system;
- developers;
- data providers;
- regulators;
- governance mechanisms.

3) Human trust

Confidence that:

- the system is understandable;
- decisions are fair;

- users can challenge incorrect outcomes;
- humans remain responsible;
- the technology is being used appropriately.

These forms of trust are related but not identical.

Glikson and Woolley [13] showed that human trust in AI involves cognitive and emotional dimensions. Lee and See [11] similarly emphasized that appropriate reliance depends on system performance, context, and user perceptions.

Consequently, Blockchain may strengthen **technical trust** while leaving **human trust** unresolved.

For example, a person may accept that a Blockchain record is authentic but still ask:

- Who entered the data?
- Was the data accurate?
- Why did the AI make this decision?
- Who is responsible if the decision is wrong?
- Can the decision be appealed?

These questions cannot be answered by immutability alone.

4) Theme 4: Explainability Connects AI Transparency with Human Trust

The fourth theme concerns explainability.

AI systems often operate as complex models whose internal decision processes are difficult for users to understand. The development of XAI has attempted to address this issue.

Arrieta et al. [17] identified explainability as an important component of responsible AI, while Rai [18] emphasized the importance of making AI systems more understandable.

Research also suggests that explanations can affect trust, but explanations themselves must be meaningful. A technically correct explanation may not be useful if it is too complicated for the intended audience.

Therefore, an AI–Blockchain system should not merely provide:

“The Blockchain proves that the AI decision has not been modified.”

It should also provide:

“Here is why the AI reached this decision, what information influenced it, how reliable the result is, and who is responsible for reviewing it.”

This represents a shift from proof of integrity toward explanation of decision-making.

5) Theme 5: Accountability Cannot Be Delegated Entirely to Technology

Accountability emerged as another important theme.

Blockchain creates an auditable record, which can help identify when transactions or activities occurred. However, an audit trail does not automatically establish responsibility.

Suppose an AI system makes an incorrect decision and the decision is recorded immutably. The Blockchain can potentially establish what happened, but it does not independently answer:

Who should be held responsible?

Kroll et al. [19] emphasized the importance of accountability mechanisms for algorithmic systems. Brundage et al. [20] similarly argued that trustworthy AI requires mechanisms through which claims about AI safety, security, fairness, and privacy can be verified.

This suggests that AI–Blockchain systems should include clearly defined responsibility structures.

Accountability should therefore involve:

AI Developer → Data Provider → System Operator → Human Reviewer → Organization → Regulator

rather than assuming that the Blockchain itself is responsible.

IX. THE TRUST PARADOX

Based on the thematic analysis, the central paradox can be represented as follows:

More transparency
↓
More information becomes available
↓
But information may become technically complex
↓
Understanding does not necessarily increase
↓
Human trust may remain uncertain

Similarly:

More immutability
↓
Greater confidence that records are unchanged
↓
But incorrect information may also remain unchanged
↓
Integrity ≠ truth
↓
Human trust may still be limited

Therefore, the relationship can be expressed conceptually as:

Technical Integrity ≠ Human Trust
and

Transparency ≠ Understanding
The real challenge is to connect the two.

X. CONCEPTUAL TRUST FRAMEWORK

Based on the identified themes, this study proposes a conceptual framework consisting of five interconnected layers.

1) Layer 1: Data Integrity

Blockchain protects the history and integrity of recorded data.
Key elements:
- Hashing
- Distributed records
- Provenance
- Immutable logs

2) Layer 2: AI Intelligence

AI processes information and generates:
- Predictions
- Recommendations
- Classifications
- Decisions

3) Layer 3: Explainability

The system communicates:
- Why a decision was made
- Which factors influenced the decision

- Confidence or uncertainty
- Relevant evidence

4) Layer 4: Human Oversight

Human actors should be able to:

- Review decisions
- Challenge outputs
- Correct inappropriate outcomes
- Override decisions when necessary

5) Layer 5: Governance and Accountability

The system should clearly establish:

- Responsibility
- Data ownership
- Privacy rules
- Audit procedures
- Redress mechanisms
- Regulatory compliance

The framework can therefore be represented as:

Blockchain Integrity
↓
AI Decision/Prediction
↓
Explainable Output
↓
Human Review and Oversight
↓
Governance & Accountability
↓
Appropriate Human Trust

This framework suggests that trust should be treated as an **outcome of multiple interacting factors**, rather than as a direct consequence of Blockchain implementation.

XI. DISCUSSION

The findings demonstrate that the relationship between AI, Blockchain, and trust is more complicated than commonly presented.

Existing technical literature frequently emphasizes Blockchain's transparency and immutability and AI's predictive capabilities. IJRASET publications also demonstrate substantial interest in integrating these technologies for security, authentication, academic verification, supply-chain transparency, and other applications [7]–[10]. These studies demonstrate practical potential but also reinforce the need to distinguish technical system properties from human perceptions of trust.

The first important implication is that trust should not be treated as a binary property.

Users do not simply "trust" or "not trust" a system. They may trust one aspect while questioning another. A user might trust Blockchain's transaction history but not trust the AI recommendation generated from the recorded data.

The second implication concerns transparency. The literature indicates that more information is not always better. Research on AI transparency has shown that explainability and accessibility can affect trust differently [14], while recent research has also challenged the assumption that transparency always increases trust. For example, Schilke and Reimann reported that disclosure of AI usage could reduce trust under some circumstances, demonstrating that transparency can have unintended social effects. This reinforces the idea that transparency must be carefully designed around users and context rather than treated as an automatic solution.

The third implication is related to immutability.

Blockchain's inability to easily alter historical records is useful for accountability and auditability, but permanence can become problematic when information is inaccurate or privacy-sensitive. Recent research on redactable Blockchain systems highlights this tension between immutability and the need for privacy-oriented data control.

The fourth implication is that trust requires human-centered governance.

A trustworthy AI–Blockchain system should not attempt to remove humans from the trust process. Instead, it should provide people with sufficient information and authority to understand, review, and challenge automated decisions.

Thus, the objective should not be:

“Create a system that people trust automatically.”

It should be:

“Create a system that gives people sufficient evidence to develop appropriate and informed trust.”

This distinction is particularly important because excessive trust can be as problematic as insufficient trust.

XII. RESEARCH GAP

The literature review identifies several research gaps.

1) Limited focus on the human meaning of Blockchain transparency: Many studies treat transparency as a technical characteristic. Less attention is given to whether ordinary users can actually understand the information made available.
2) Confusion between integrity and truth: Blockchain can establish confidence that a record has not been modified, but this does not guarantee the accuracy of the original input.
3) Fragmented research on AI trust and Blockchain trust: AI research often focuses on explainability and human reliance, whereas Blockchain research frequently emphasizes decentralization, security, and immutability. There is comparatively less integrated discussion of how these different forms of trust interact.
4) Limited attention to inappropriate trust: Much of the discussion focuses on increasing trust. However, the objective should be appropriate trust, where users rely on AI when its capabilities justify reliance and question it when necessary.
5) Need for human-centered governance: AI–Blockchain research frequently concentrates on architecture and technical performance. More attention is required toward responsibility, human oversight, user comprehension, and mechanisms for correcting inappropriate decisions.

XIII. IMPLICATIONS

1) Implications for Researchers: Researchers should treat trust as a multidimensional concept rather than a direct consequence of technical security. Future studies should combine technical, behavioral, ethical, and organizational perspectives.
2) Implications for Developers: Developers should avoid assuming that Blockchain's immutability automatically makes an AI system trustworthy. Systems should provide understandable explanations, provenance information, uncertainty indicators, and mechanisms for human intervention.
3) Implications for Organizations: Organizations deploying AI–Blockchain systems should establish clear responsibility structures. A transparent audit trail is useful only when an organization also defines who is responsible for reviewing and responding to problematic decisions.
4) Implications for Users: Users should be educated that Blockchain verifies the integrity of recorded information but does not necessarily prove the correctness of that information or the quality of an AI decision.
5) Implications for Policymakers: Regulatory frameworks should address not only data security but also explainability, accountability, privacy, human oversight, and the ability to challenge automated decisions.

XIV. LIMITATIONS OF THE STUDY

This study has several limitations.

First, the research is based on existing literature rather than primary interviews or surveys. Therefore, the findings represent a synthesis of existing academic perspectives rather than direct measurements of public trust.

Second, only a selected set of 20 research works was examined. A larger systematic review could identify additional themes.

Third, AI and Blockchain are rapidly developing fields. New technologies, regulations, and applications may change the relationship between transparency, immutability, and trust.

Finally, the conceptual framework proposed in this paper has not been empirically validated. Future studies should test the framework through interviews, surveys, experiments, or case studies.

XV. FUTURE RESEARCH DIRECTIONS

Future research can extend this work in several directions.

First, researchers could conduct interviews with AI developers, Blockchain professionals, organizational managers, policymakers, and end users to understand how different stakeholders define trust.

Second, experimental research could investigate whether users trust an AI decision more when its reasoning is supported by a Blockchain-based audit trail.

Third, researchers could compare different levels of transparency to determine whether more information actually increases understanding.

Fourth, future studies could investigate the relationship between Blockchain immutability and the right to modify or delete personal information.

Fifth, future research could examine trust in specific domains such as healthcare, financial services, education, digital identity, and public administration.

Finally, quantitative studies could operationalize the framework developed in this paper and test relationships among:

Transparency → Explainability → Perceived Integrity → Accountability → Human Trust → Appropriate Reliance

Such research would complement the qualitative findings presented here.

XVI. CONCLUSION

The integration of Artificial Intelligence and Blockchain has significant potential to improve the integrity, traceability, and intelligence of digital systems. However, the analysis presented in this study demonstrates that technological capabilities alone do not guarantee human trust.

Blockchain's immutability can provide confidence that information has not been altered, but it cannot independently guarantee that the information was correct when entered. Similarly, AI transparency can make information about a model available, but availability does not necessarily mean that users understand the model's decisions.

This creates the Trust Paradox: the technologies designed to make systems more transparent and reliable may still fail to generate meaningful human trust if users cannot understand the information, question decisions, or identify responsibility.

The findings suggest that trustworthy AI–Blockchain systems should be designed around five complementary principles: data integrity, explainability, transparency, human oversight, and accountability.

The central conclusion of this research is therefore:

Trust should not be engineered into AI–Blockchain systems merely through immutability and transparency; it should be developed through understandable evidence, accountable governance, and appropriate human involvement.

Future AI–Blockchain research should consequently move beyond the question of whether Blockchain can make AI more secure and instead investigate when, why, and under what conditions people should trust AI–Blockchain systems.

REFERENCES

[1] S. Nakamoto, “Bitcoin: A Peer-to-Peer Electronic Cash System,” 2008.

[2] J. Zheng, S. Xie, H.-N. Dai, X. Chen, and H. Wang, “An Overview of Blockchain Technology: Architecture, Consensus, and Future Trends,” Proceedings of the IEEE International Congress on Big Data, pp. 557–564, 2017.

[3] J. Yli-Huumo, D. Ko, S. Choi, S. Park, and K. Smolander, “Where Is Current Research on Blockchain Technology?—A Systematic Review,” PLOS ONE, vol. 11, no. 10, 2016.

[4] F. Casino, T. K. Dasaklis, and C. Patsakis, “A Systematic Literature Review of Blockchain-Based Applications: Current Status, Classification and Open Issues,” Telematics and Informatics, vol. 36, pp. 55–81, 2019.

[5] M. Iansiti and K. R. Lakhani, “The Truth About Blockchain,” Harvard Business Review, vol. 95, no. 1, pp. 118–127, 2017.

[6] T.-T. Kuo and L. Ohno-Machado, “ModelChain: Decentralized Privacy-Preserving Healthcare Predictive Modeling Framework on Private Blockchain Networks,” arXiv preprint arXiv:1802.01746, 2018.

[7] S. Khan and O. Mangde, “Application of Blockchain in Artificial Intelligence,” International Journal for Research in Applied Science and Engineering Technology (IJRASET), 2022.

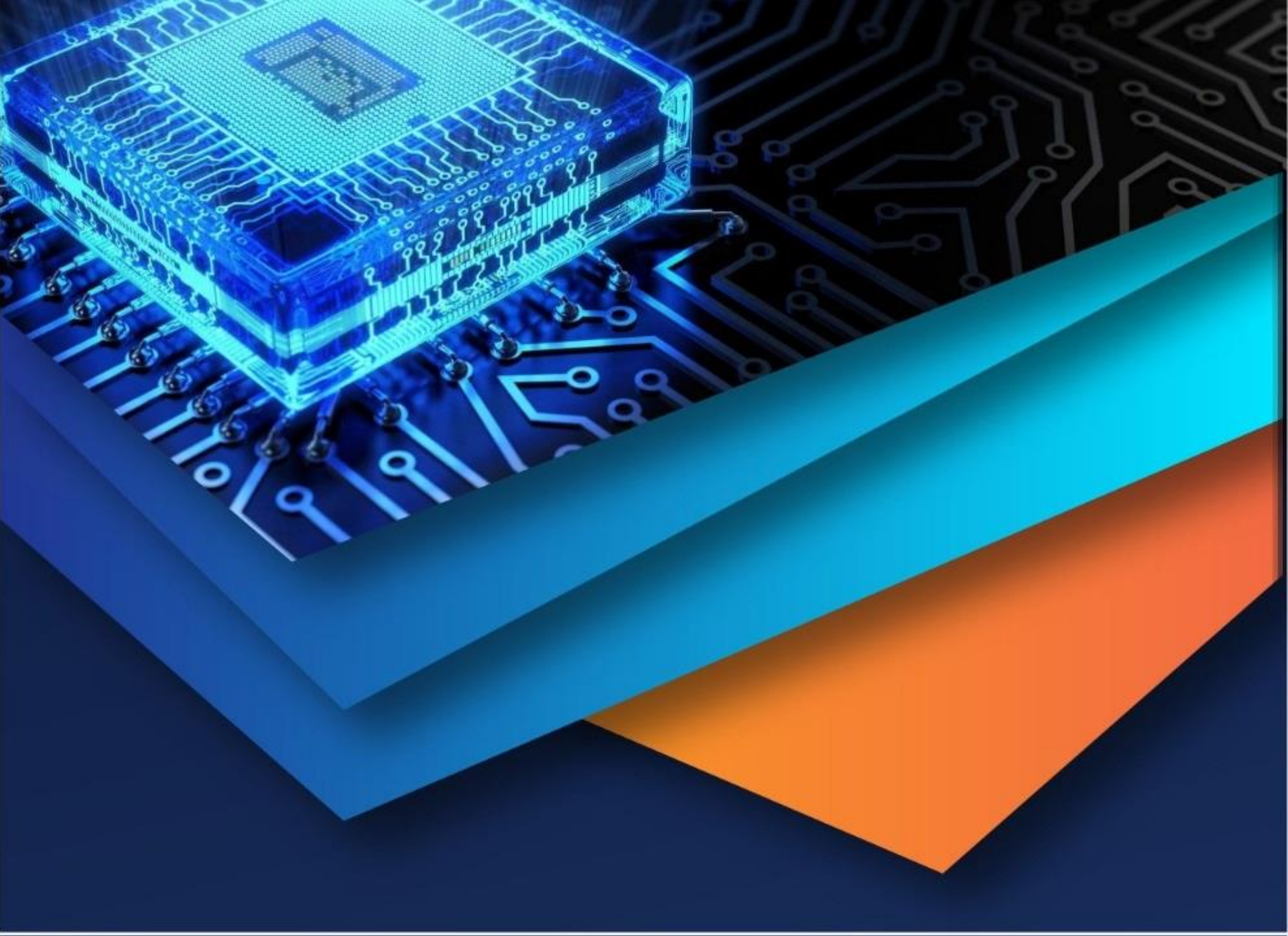
[8] S. S. Mane and S. S. Jadhav, “Artificial Intelligence in Blockchain Technology,” International Journal for Research in Applied Science and Engineering Technology (IJRASET), 2024.

[9] R. K. Poongodi, M. Mohan, S. Sudharsan, and C. Vinoth, “Zero Trust AI Authentication and Blockchain Powered Secure AI,” International Journal for Research in Applied Science and Engineering Technology (IJRASET), 2025.

[10] P. Kumar and R. K. Verma, “Explainable Artificial Intelligence Integrated with Blockchain for Transparent and Trustworthy Agricultural Supply Chain Systems,” International Journal for Research in Applied Science and Engineering Technology (IJRASET), 2026.

[11] J. D. Lee and K. A. See, “Trust in Automation: Designing for Appropriate Reliance,” Human Factors, vol. 46, no. 1, pp. 50–80, 2004.

[12] K. A. Hoff and M. Bashir, “Trust in Automation: Integrating Empirical Evidence on Factors That Influence Trust,” Human Factors, vol. 57, no. 3, pp. 407–434, 2015.
[13] E. Glikson and A. W. Woolley, “Human Trust in Artificial Intelligence: Review of Empirical Research,” Academy of Management Annals, vol. 14, no. 2, pp. 627–660, 2020.
[14] S. Grimmelikhuijsen, “Explaining Why the Computer Says No: Algorithmic Transparency Affects the Perceived Trustworthiness of Automated Decision-Making,” Public Administration Review, vol. 83, no. 2, pp. 241–262, 2023.
[15] Y. Shin, “The Effects of Explainability and Causability on Perception, Trust, and Acceptance: Implications for Explainable AI,” International Journal of Human-Computer Studies, vol. 146, 2021.
[16] M. A. Ferrag, L. Shu, X. Yang, A. Derhab, and L. Maglaras, “Security and Privacy for Blockchain Technology: A Review,” IEEE Access, 2019.
[17] A. B. Arrieta, N. Díaz-Rodríguez, J. Del Ser, A. Bennetot, S. Tabik, A. Barbado, S. Garcia, S. Gil-Lopez, D. Molina, R. Benjamins, R. Chatila, and F. Herrera, “Explainable Artificial Intelligence (XAI): Concepts, Taxonomies, Opportunities and Challenges toward Responsible AI,” Information Fusion, vol. 58, pp. 82–115, 2020.
[18] D. Rai, “Explainable AI: From Black Box to Glass Box,” Journal of the Academy of Marketing Science, vol. 48, pp. 137–141, 2020.
[19] J. A. Kroll, J. Huey, S. Barocas, E. W. Felten, J. Reidenberg, D. G. Robinson, and H. Yu, “Accountable Algorithms,” University of Pennsylvania Law Review, vol. 165, pp. 633–705, 2017.
[20] M. Brundage, S. Avin, J. Wang, H. Belfield, G. Krueger, G. Hadfield, H. Khlaaf, J. Yang, H. Toner, R. Fong, T. Maharaj, P. W. Koh, S. Hooker, J. Leung, A. Trask, and others, “Toward Trustworthy AI Development: Mechanisms for Supporting Verifiable Claims,” arXiv:2004.07213, 2020.



10.22214/IJRASET

INDEX COPERNICUS
45.98

IMPACT FACTOR: 7.129

TOGETHER WE REACH THE GOAL
IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)