

Governing Agentic AI in Africa: A Systematic Literature Review of Ethical Challenges, Framework Gaps, and Ubuntu-Informed Governance Solutions

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Abstract. Agentic AI systems pursue goals through multi-step planning, tool use, memory, and adaptive action, creating governance challenges that differ from those associated with conventional predictive or generative AI. This study systematically reviews governance evidence relevant to agentic AI in Africa and develops an Ubuntu-informed conceptual framework. Following PRISMA 2020, 91 records published from 2019 to April 2026 were analysed through quantitative content analysis and abductive thematic synthesis. The corpus comprises 12 agentic-AI-specific records, 3 agentic-adjacent records, and 76 broader AI-governance records used as contextual evidence. Five literature-derived gaps were identified: accountability across autonomous action chains, infrastructure-aware oversight, bias and representational harm, policy fragmentation, and community exclusion. These findings inform five proposed governance elements: communal impact assessment, collective consent and participation, infrastructure-contingent oversight, African dataset and bias auditing, and communal accountability. The framework is a literature-derived conceptual proposition, not an empirically validated governance instrument, and requires future case-study, expert-panel, and comparative policy testing.

Keywords: agentic AI, AI governance, Africa, Ubuntu ethics, systematic literature review

1. INTRODUCTION

Agentic AI systems can decompose objectives, select tools, retain task-relevant memory, evaluate intermediate results, and act across multiple steps with limited human approval at each stage [1]–[2]. These capabilities extend beyond prompt-response generation and create governance questions concerning delegated authority, traceability, failure recovery, and redress. This review examines those questions across Africa, with South Africa used as an illustrative and comparatively well-documented national case rather than as a representative proxy for the continent.

For this review, an AI agent is a software entity that perceives information, reasons about a task, and acts within a defined environment. Agentic AI refers to systems that combine goal-directed planning, tool use, memory, and adaptive action across multiple steps. Autonomous AI is the broader category of systems operating with reduced human intervention, whether or not they exhibit the full agentic pattern. Multi-agent systems involve two or more interacting agents, while generative AI tools primarily produce content in response to prompts. Generative systems are treated as agentic only when embedded in an autonomous planning-and-action loop [1], [3]. These boundaries prevent general generative-AI evidence from being treated as direct evidence about agentic systems.

Table 1. Operational Boundaries Used in the Review

Concept	Operational boundary	Treatment in this review
Generative AI	Produces text, images, code, or other content in response to prompts.	Included only when governance findings concern autonomous planning, tool use, memory, or action.
AI agent	A software entity that perceives, reasons, and acts within a bounded environment.	Included when governance, accountability, or oversight is addressed.
Agentic AI	Pursues goals through multi-step planning, tool use, memory, and adaptive action with limited step-by-step approval.	Primary phenomenon of interest.

Concept	Operational boundary	Treatment in this review
Autonomous AI	Operates with reduced human intervention, whether or not it exhibits the full agentic pattern.	Included as a broader boundary category where governance findings are transferable.
Multi-agent system	Two or more agents coordinate, negotiate, or divide tasks.	Included where interaction or coordination creates governance or accountability implications.

South Africa's 2026 Draft National Artificial Intelligence Policy provides a bounded policy-process illustration. The draft was published for comment in Government Gazette No. 54477 on 10 April 2026 and formally withdrawn through Government Gazette No. 54840 on 12 June 2026 [4], [5]. The responsible minister subsequently acknowledged irresponsible use of generative AI during the drafting process [6]. This episode is used only to illustrate verification and accountability concerns; it is not treated as the principal evidence for the review's findings.

The study is motivated by a mismatch between expanding knowledge of AI adoption and the thinner evidence base on governance of autonomous, multi-step systems. The corpus is dominated by broader AI-governance studies rather than research designed specifically around agentic action chains. The review therefore asks which findings can be transferred cautiously to agentic AI, where that transfer is limited, and how African institutional, infrastructural, cultural, and data conditions reshape the governance problem.

1.1. State of the Art: Existing AI Governance Frameworks

The EU AI Act, OECD AI Principles, and UNESCO Recommendation on the Ethics of Artificial Intelligence provide major global reference points for risk classification, accountability, transparency, human oversight, robustness, inclusion, and human rights [7], [8], [9]. Their principles are relevant to African settings, but they do not fully resolve responsibility across autonomous action chains, oversight during infrastructure disruption, or community-level participation and redress. Table 2 summarises the transfer limitations examined in this review.

Table 2. Global Governance Frameworks and Agentic-AI Limitations in African Contexts

Framework	Primary contribution	Agentic-AI limitation	African contextual limitation
EU AI Act (2024)	Risk tiers, provider/deployer duties, conformity and oversight.	Does not fully specify auditability across dynamic multi-step action chains.	Assumes substantial regulatory, technical, and enforcement capacity.
OECD AI Principles	Accountability, transparency, robustness, human-centred values.	Principles require operational controls for agent memory, tool use, and action logs.	Non-binding and dependent on local implementation capacity.
UNESCO Recommendation (2021)	Broad ethics and human-rights standard with inclusion and impact assessment.	Predates large-scale agentic deployment and lacks agent-specific controls.	Implementation resources and institutional access vary across member states.

The key limitation is not the absence of ethical principles, but the assumptions required to implement them. Human oversight depends on available personnel and functioning infrastructure; meaningful transparency requires records of intermediate agent actions; and redress depends on accessible institutions. Because these conditions vary across and within African countries, governance mechanisms require contextual adaptation rather than direct transplantation.

Agentic information-systems research has begun to theorise delegation, accountability, and human-machine interaction [1], [10], [11]. Broader AI-governance scholarship has also documented convergence around transparency and accountability alongside persistent gaps in operationalisation [12], [13]. These foundations are important, but much of the literature was developed in institutional settings with stronger regulatory and technical capacity than many African deployment environments.

Research on responsible AI in Africa addresses policy learning, relational ethics, decolonial governance, data justice, public-service communication, and corporate accountability [14], [15], [16], [17], [18]. Most of this evidence concerns AI governance generally. The review therefore codes agentic-specific, agentic-adjacent, and broader AI-governance records separately and treats the broader literature as contextual evidence rather than direct empirical evidence of agentic systems.

1.2. South African and African AI Policy Context

Africa is the continental review context. Evidence is coded as Pan-African, national, mixed national/continental, or subregional. South Africa is used illustratively because its policy and legal instruments are comparatively accessible and because it is well represented in the corpus; it is not treated as representative of African jurisdictions. The South African National AI Policy Framework and the African Union Continental Artificial Intelligence Strategy provide important strategic reference points [19], [20]. Neither is agentic-AI-specific, and both depend on implementation arrangements that vary across institutions and jurisdictions. Detailed comparison with Kenya, Nigeria, Ghana, and continental instruments is therefore reserved for the Discussion.

The withdrawn 2026 South African draft remains relevant only as a verified illustration of policy-process accountability [4], [5], [6]. The substantive findings of the review rest on the 91-record corpus and the official policy instruments compared in Section 4.3, not on the withdrawn draft alone. The policy discussion is deliberately limited here so that the Introduction focuses on the research problem, conceptual boundaries, scope, and novelty.

1.3. Ubuntu Philosophy as an Alternative Governance Foundation

Ubuntu is selected as the principal interpretive lens because relational personhood, communal welfare, reciprocity, and shared responsibility recur in the African AI-ethics and communitarian literature [21], [22], [23], [24]. It is not presented as the only African ethical tradition or as a uniform philosophy across African countries. Afrocentric, Afro-communitarian, decolonial, feminist African, capability-based, Islamic, and hybrid traditions remain relevant. Corpus coding also shows plural theoretical origins: hybrid

framings account for 38 records, African-indigenous framings for 24, Western-adapted framings for 18, and Western-direct framings for 11.

Applied to agentic AI, Ubuntu shifts attention from individual rights alone to effects on relationships, communities, and shared institutions. It supplements rather than replaces data protection, due process, and individual rights. The framework developed later is therefore abductive: the five governance gaps emerged from the coding, while Ubuntu was applied during analytical interpretation to formulate relational governance propositions.

1.4. Gap Analysis and Novelty Statement

The review addresses four related gaps: limited agentic-AI-specific governance research in African contexts; insufficient examination of how global frameworks transfer to African institutional and infrastructural conditions; limited comparison of African policy instruments through the requirements of autonomous multi-step systems; and the largely conceptual status of Ubuntu-informed governance proposals. The research questions are: (RQ1) What does the literature reveal about agentic AI governance frameworks and their relevance in Africa? (RQ2) What context-specific ethical and socio-technical challenges are identified? (RQ3) How do selected African policy instruments align with global standards? and (RQ4) What conceptual governance elements follow from the evidence?

2. METHODS

2.1. Research Design

A Systematic Literature Review (SLR) was selected to provide a transparent account of a fragmented body of literature [25], [26]. Quantitative content analysis was used to describe the corpus, and thematic synthesis was used to interpret recurrent governance problems [27]. The approach is abductive: free-code clusters and descriptive themes were developed from the literature before Ubuntu was applied as an interpretive lens at the analytical-theme stage. The documented protocol, extraction fields, coding rules, study register, analytical tables, and appraisal instrument are supplied in Supplementary Material S1 and the companion dataset.

2.2. Search Strategy

Seven sources were searched across Information Systems, governance, African studies, and computing: Scopus, Web of Science, IEEE Xplore, ACM Digital Library, African Journals Online, Google Scholar, and SSRN. Google Scholar and SSRN served both discovery and grey-literature functions. The separate grey-literature count in the PRISMA summary refers to organisational and policy records identified through targeted website searching and citation chasing outside the seven result sets. The database-specific counts and search roles are reported in Table 3; the retained corpus and source-reconciliation notes are documented in the supplementary files.

Table 3. Database Search Strategy and Search Log

Database	Records	Search string applied	Period
Scopus	312	Primary string (all fields)	2019- 2026
Web of Science	187	Primary string; TS= field tags (Topic Search)	2019- 2026
IEEE Xplore	98	Primary string; full text and metadata search	2019- 2026
ACM Digital Library	74	Primary string; abstract and title search	2019- 2026
AJOL	63	"artificial intelligence" OR "AI governance" OR "machine learning" AND "Africa" OR "Ubuntu" OR "developing countries"; secondary string applied	2019- 2026
Google Scholar	147	Secondary string; grey literature	2019- 2026
SSRN	59	Secondary string; policy and working papers	2019- 2026

2.3. Inclusion and Exclusion Criteria

Studies were included if they were peer-reviewed journal articles, conference papers, African government or AU policy documents, or credible grey literature. All included studies required substantive engagement with AI governance in an African, developing

country, or Global South context and publication between 2019 and 2026. Records were excluded if they were purely technical without a governance dimension, pre-2019, lacking any African or developing country engagement, opinion pieces without analytical grounding, or duplicated by a subsequently published journal version.

2.4. Screening and PRISMA Reporting

Screening followed PRISMA 2020 [28], [29]: identification, duplicate removal, title-and-abstract screening, full-text eligibility assessment, and inclusion. Screening, extraction, and coding were completed by a sole researcher using structured Microsoft Excel workbooks. The retained files do not contain the repeat-screening decision matrix needed to reproduce Cohen's kappa; consequently, no kappa value or agreement table is reported. Bias mitigation instead relied on explicit eligibility criteria, a structured coding guide, source-precedence rules, a complete coded register, reproducible summary calculations, and a transparent audit trail. The absence of independent double-screening and a reproducible agreement statistic is acknowledged as a limitation.

Table 4. PRISMA 2020 Screening Summary

PRISMA stage	n
Records identified from databases	940
Grey literature records identified	18
Total records identified before deduplication	958
Duplicates removed	187
Records screened at title and abstract stage	771
Records excluded at title and abstract stage	601
Full texts assessed for eligibility	170
Full texts excluded (no African/Global South dimension 31; purely technical 22; opinion piece 12; pre-2019 8; duplicate 6)	79
Studies included in final synthesis	91

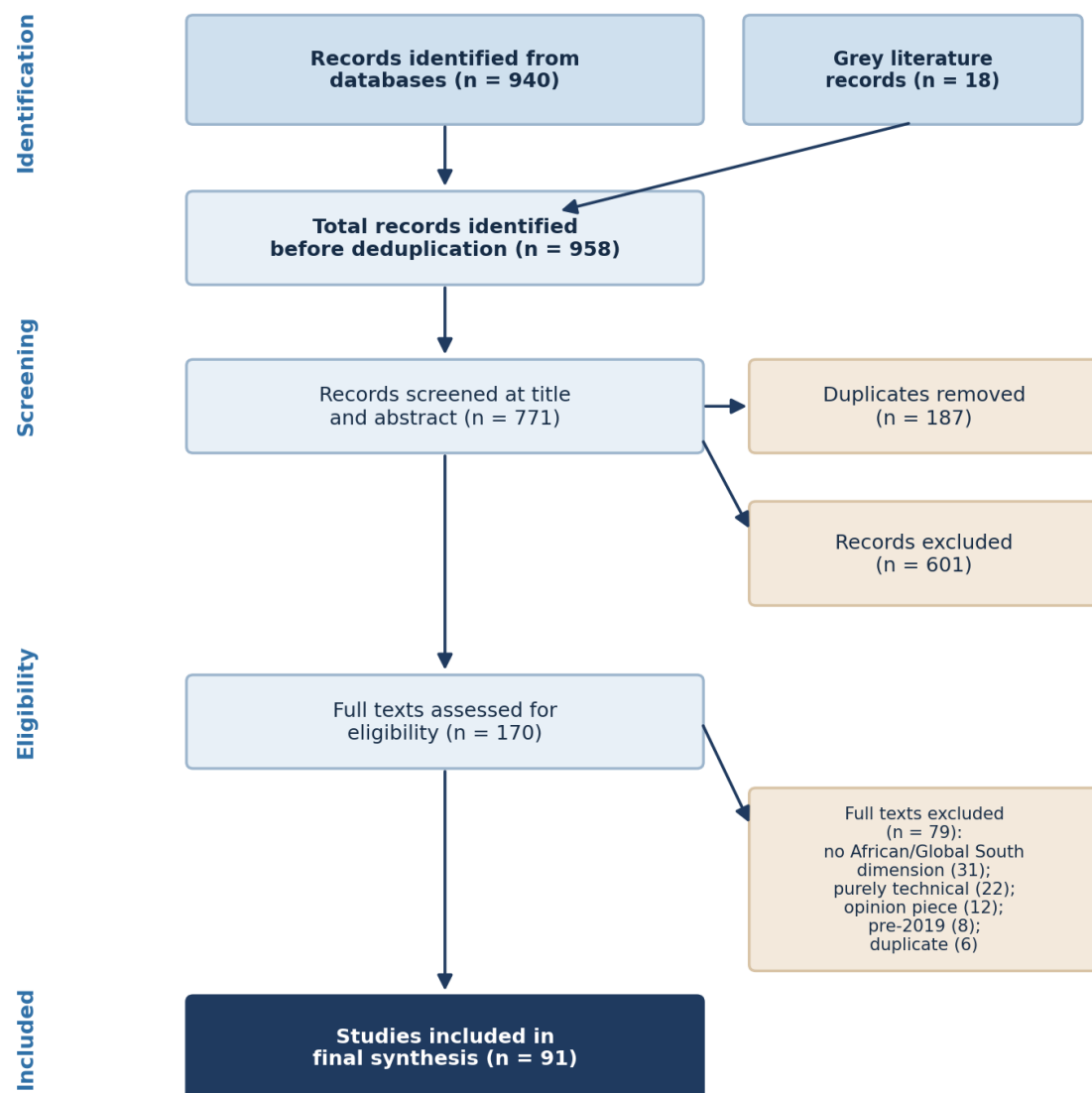


Figure 1. PRISMA 2020 flow diagram documenting record

2.5. Quantitative Content Analysis

All included records were coded in Microsoft Excel using six category groups: bibliographic characteristics; African contextualisation; governance focus; agentic-AI specificity; method and theoretical framing; and alignment with the five analytical themes. Coding distinguished agentic-specific, agentic-adjacent, and general AI-governance records. Frequency distributions, theme counts, cross-tabulations, and rule-based RQ mappings were generated from the cleaned coded dataset. The complete 91-record register and analytical tables are provided in Supplementary Material S1 and the companion dataset.

2.6. Thematic Synthesis

Thematic synthesis followed Thomas and Harden's three-stage process [27]. Relevant findings and conclusions were coded to generate free-code clusters; conceptually similar codes were grouped into descriptive themes; and relationships across descriptive themes were interpreted as five analytical themes. Ubuntu was introduced only at the analytical stage, reducing the risk of forcing the evidence into a pre-selected cultural lens. Table 5 provides paraphrased coding examples with Study IDs and rationales. Verbatim excerpts are not presented because the retained coding files do not preserve page-level quotation fields that could be independently audited.

Table 5. Coding Tree and Representative Paraphrased Coding Examples

Representative Study IDs and paraphrased coding example	Descriptive theme	Analytical theme	Ubuntu-informed interpretation
S029, S052, S077: autonomous decision sequences can diffuse liability and obscure the point of authorisation.	Responsibility across autonomous action chains	Accountability gaps	Shared but traceable responsibility and community- accessible redress
S046, S049, S077: power or connectivity interruption complicates human oversight and recovery of agent state.	Governance under unstable infrastructure	Infrastructure- aware governance	Oversight duties calibrated to actual operating conditions
S013, S041, S066: unrepresentative datasets and language gaps can amplify unequal outcomes across multi- step action.	Representational and data injustice	Bias and representational harm	Relational harm and locally grounded dataset accountability

Representative Study IDs and paraphrased coding example	Descriptive theme	Analytical theme	Ubuntu-informed interpretation
S013, S052, S055: non-binding strategies and overlapping mandates produce fragmented enforcement.	Policy and institutional fragmentation	Policy fragmentation	Coordinated multi-level responsibility and implementable standards
S021, S029, S066: expert-led design and inaccessible redress exclude affected communities.	Exclusion from governance design and remedy	Community exclusion	Collective participation, consent, and communal oversight

2.7. Credibility Assessment and Bias Mitigation

A seven-criterion appraisal instrument was specified for the corpus, drawing on established critical-appraisal approaches [30]. However, the supplied appraisal workbook contains no completed study-level scores. The manuscript therefore does not report a high-, moderate-, or low-credibility distribution and does not use unsupported credibility weights in the synthesis. The instrument is retained in Table 6 to document the intended assessment dimensions. Solo-author bias was further mitigated through transparent criteria, structured extraction, consistent coding rules, source reconciliation, and disclosure of unresolved data-quality limitations. Ethics approval was not required because the study analysed published literature and publicly available policy documents.

Table 6. Credibility Assessment Criteria

Criterion	Label	Question	Scoring (0-2)
C1	Research question clarity	Is there a clearly stated research question or analytical objective?	0 = No question; 1 = Implied; 2 = Clear and explicit

Criterion	Label	Question	Scoring (0-2)
C2	Methodology appropriateness	Is the methodology appropriate for the stated objective?	0 = Inappropriate; 1 = Described but not justified; 2 = Clearly described and justified
C3	Data source adequacy	Are data sources or analytical foundations adequately described?	0 = No description; 1 = Partial; 2 = Full with rationale
C4	Evidence-findings derivation	Are findings clearly derived from the evidence presented?	0 = Unsupported claims; 1 = Partially supported; 2 = All claims traceable
C5	African contextualisation	Is the African context substantively engaged rather than tokenistically referenced?	0 = Named but not theorised; 1 = Superficially discussed; 2 = Substantively theorised
C6	Limitations acknowledgement	Are limitations of the study acknowledged?	0 = None; 1 = Briefly mentioned; 2 = Substantively discussed
C7	Contribution clarity	Is the contribution clearly stated and supported by analysis?	0 = Absent; 1 = Weakly supported; 2 = Clearly articulated and supported

Section 3 reports the quantitative profile of the 91 records and the five literature-derived analytical themes. Section 4 separately interprets those findings, answers the research questions, and develops the Ubuntu-informed conceptual framework.

3. RESULTS AND DISCUSSION

3.1. Quantitative Profile of the Included Literature

1) Temporal Distribution and Publication Growth

The cleaned corpus contains 91 records published between 2019 and April 2026. Nineteen records (20.9%) were published from 2019 to 2021 and 72 (79.1%) from 2022 to 2026. The

annual distribution rises from 4 records in 2019 to 23 in 2025, before 9 records in the partial 2026 search year. This pattern shows rapid growth in AI-governance scholarship, while the agentic-AI-specific subset remains small.

2) Author Affiliation and Geographic Focus

Author-affiliation coding identifies 32 records (35.2%) produced by researchers affiliated exclusively with Global North institutions, 48 (52.7%) by mixed-affiliation teams, 5 (5.5%) in the “African” category, and 6 (6.6%) in the “Entirely African” category. In total, 59 records (64.8%) include at least one African-affiliated author. These categories describe the supplied coding and are not interpreted as measures of contribution quality or research leadership. Geographic focus is concentrated at the continental level. Forty-three records (47.3%) are Pan-African, 19 (20.9%) focus on South Africa, 12 (13.2%) on West Africa, 9 (9.9%) on East Africa, 1 (1.1%) on North Africa, 1 (1.1%) combines South African and Pan-African scope, and 6 (6.6%) are coded as Other. The concentration of continent-wide studies reinforces the need to avoid treating Africa as a homogeneous governance setting.

Table 7. Geographic Focus of Included Studies

Geographic focus	n	%
Pan-African	43	47.3%
South Africa	19	20.9%
West Africa	12	13.2%
East Africa	9	9.9%
Other	6	6.6%
South Africa/Pan-African	1	1.1%
North Africa	1	1.1%
Total	91	100.0%

3) Agentic AI Specificity and Publication Type

Only 12 of the 91 records (13.2%) address agentic AI specifically, while 3 (3.3%) are agentic-adjacent and 76 (83.5%) concern broader AI governance. The broader studies remain relevant for contextual questions such as infrastructure, bias, institutional capacity, and

participation, but they are not treated as direct evidence of agentic-AI deployment. Publication type is also highly concentrated: 86 records (94.5%) are journal articles, with 2 conference papers and one record each classified as a thesis, grey literature, and book chapter.

Table 8. Quantitative Content Analysis Summary

Category	Subcategory	n	%
Agentic AI specificity	Agentic AI specifically addressed	12	13.2%
	Agentic-adjacent systems	3	3.3%
	General AI governance (contextual evidence)	76	83.5%
Author affiliation	Exclusively Global North	32	35.2%
	Mixed	48	52.7%
	African	5	5.5%
	Entirely African	6	6.6%
Publication type	Journal article	86	94.5%
	Conference paper	2	2.2%
	Thesis	1	1.1%
	Grey literature	1	1.1%
	Book chapter	1	1.1%
Temporal distribution	2019-2021	19	20.9%
	2022-April 2026	72	79.1%

4) Cross-Tabulation and Evidence Traceability

Table 9 shows how agentic-AI specificity is distributed across publication type and geography. All 15 agentic-specific or agentic-adjacent records are journal articles. Agentic-specific evidence is concentrated in Pan-African and South African studies, while East African agentic evidence is adjacent rather than specific. Formal credibility-level cross-tabulation is not reported because the appraisal register is unscored; methodological heterogeneity is instead disclosed through the complete register and method categories in the supplementary dataset.

Table 9. Agentic-AI Specificity by Publication Type and Geographic Focus

Dimension	Category	Agentic-specific	Agentic-adjacent	General AI governance	Total
Publication type	Journal article	12	3	71	86
Publication type	Conference paper	0	0	2	2
Publication type	Thesis	0	0	1	1
Publication type	Grey literature	0	0	1	1
Publication type	Book chapter	0	0	1	1
Geographic focus	Pan-African	8	0	35	43
Geographic focus	South Africa	3	0	16	19
Geographic focus	South Africa/Pan-African	0	0	1	1
Geographic focus	West Africa	1	1	10	12
Geographic focus	East Africa	0	2	7	9
Geographic focus	North Africa	0	0	1	1
Geographic focus	Other	0	0	6	6

The quantitative profile therefore establishes three boundaries for interpretation: the literature is recent and rapidly growing; the corpus is dominated by journal articles and continent-wide analysis; and most evidence is broader AI governance rather than agentic-AI-specific research.

Table 10. Evidence Map For the Five Analytical Themes

Analytical theme	Supporting studies and direct agentic support	Evidence represented	Representative Study IDs
Accountability gaps	40/91 (44.0%); agentic-specific 9/12	Liability, action-chain traceability, auditability, redress	S029, S052, S077
Infrastructure-aware governance	14/91 (15.4%); agentic-specific 3/12	Power/connectivity failure, capacity, digital divide, continuity	S046, S049, S077
Bias and representational harm	33/91 (36.3%); agentic-specific 5/12	Dataset exclusion, language and demographic underrepresentation, colonial data legacies	S013, S041, S066
Policy fragmentation	52/91 (57.1%); agentic-specific 5/12	Non-binding strategies, inconsistent maturity, weak enforcement and coordination	S013, S052, S055
Community exclusion	61/91 (67.0%); agentic-specific 7/12	Limited participation, inaccessible consent and redress, expert-led governance	S021, S029, S066

3.2. Theme 1: Accountability Gaps in Agentic AI Governance

Evidence from the corpus. Accountability gaps are supported by 40 records (44.0%), including 9 of the 12 agentic-AI-specific records. Representative records include S029,

S052, and S077. Recurrent codes concern diffuse liability, incomplete action logs, unclear points of human authorisation, and inaccessible redress across extended decision chains. The agentic-specific subset provides the strongest direct support for this theme. Broader algorithmic-accountability literature helps explain transparency, auditability, and responsibility, but it is treated as contextual rather than direct evidence of African agentic deployments [10], [31], [32], [33]. Interpretive implication. Governance of agentic systems requires traceable action-chain records, named duty holders, escalation rules, and accessible review and redress. These requirements are conceptual implications of the synthesis; the corpus does not establish that they have already been validated in African public services.

South African data-protection and AI-policy instruments provide an illustrative legal context [34], [19], [4]. They address automated decision-making, responsible AI, or policy intent, but do not yet supply a complete accountability architecture for dynamic multi-step agent actions. The limited number of direct agentic studies means that the theme is best interpreted as a well-supported governance gap and research agenda, not as evidence of a settled African accountability model.

3.3. Theme 2: Infrastructure-Aware Governance

Evidence from the corpus. Infrastructure-aware governance is supported by 14 records (15.4%), including 3 of the 12 agentic-AI-specific records. Representative records include S046, S049, and S077. All 14 records are coded as partial rather than substantive support, making this the least developed of the five themes. The coded evidence concerns power and connectivity interruptions, limited technical capacity, the digital divide, unavailable human reviewers, and continuity of oversight. African digital-development and e-government research confirms that infrastructure conditions shape what forms of oversight are feasible [35], [36], [37], [38].

Interpretive implication. Infrastructure should be treated as a governance condition rather than a background implementation issue. Future controls may include safe-state definitions, interruption logs, manual fallback thresholds, recovery audits, and escalation duties when connectivity or power is lost. The review does not establish the prevalence

of agentic systems in specific African sectors, and sectoral deployment examples are therefore not used as empirical findings. The theme instead identifies a design requirement for future case studies and validation. Because direct agentic evidence is limited, claims in this section are qualified as propositions informed by broader governance and infrastructure literature.

3.4. Theme 3: Bias and Representational Harm

Evidence from the corpus. Bias and representational harm are supported by 33 records (36.3%), including 5 of the 12 agentic-AI-specific records. Representative records include S013, S041, and S066. The main codes concern imported or unrepresentative datasets, language exclusion, unequal error distribution, and colonial data legacies. Broader research shows how data underrepresentation and algorithmic bias can disadvantage populations omitted from training and evaluation pipelines [14], [39], [40], [41], [18]. In agentic systems, biased intermediate decisions may propagate across multi-step actions, but direct African empirical measurement of that amplification remains limited.

Interpretive implication. The framework proposes locally relevant dataset documentation, language and demographic benchmarks, subgroup error analysis, and independent local auditing before high-impact deployment. These are future operationalisation pathways rather than validated controls. The review therefore distinguishes a strong general-AI evidence base on representational harm from a smaller agentic-specific evidence base. It does not infer documented deployment harms where the included studies do not provide direct evidence. Claims about the number of African languages represented in specific model-training corpora are omitted because the retained evidence does not support a consistent, auditable estimate. The theme supports the need for African dataset and bias auditing while preserving the study's central limitation: most evidence is contextual rather than agentic-specific.

3.5. Theme 4: Policy Fragmentation

Evidence from the corpus. Policy fragmentation is supported by 52 records (57.1%), including 5 of the 12 agentic-AI-specific records. Representative records include S013, S052, and S055. Recurrent codes concern non-binding strategies, overlapping mandates, uneven institutional maturity, weak enforcement, and limited cross-jurisdictional

coordination. Official continental and national instruments show substantial alignment around ethics, inclusion, innovation, accountability, data governance, and human-centred development [20], [42], [43], [44], [19]. None of the selected instruments is specifically designed around autonomous multi-step agent governance, and their legal status and implementation arrangements differ materially.

The withdrawn South African draft is retained only as a policy-process illustration [4], [5]. Comparative claims rely on official instruments and the reviewed literature, not on the withdrawn document as central evidence. Interpretive implication. The findings favour adaptive coordination, clear institutional mandates, and implementation mechanisms that can be revised as agentic capabilities change. They do not establish a single model suitable for every African jurisdiction. The policy comparison is therefore descriptive and bounded. It identifies differences in instrument status, implementation capacity, and agentic specificity without ranking one country as universally representative or exemplary.

3.6. Theme 5: Community Exclusion

Evidence from the corpus. Community exclusion is supported by 61 records (67.0%), including 7 of the 12 agentic-AI-specific records, making it the most frequently coded theme. Representative records include S021, S029, and S066. Recurrent codes concern expert-dominated design, token consultation, inaccessible consent, limited appeal mechanisms, and weak community participation. The African responsible-AI and decolonial literature argue that affected communities should participate meaningfully in the design, deployment, and oversight of public-interest AI [22], [40], [17], [45].

The corpus supports the governance problem more strongly than it supports tested solutions. Interpretive implication. Ubuntu provides one relational lens for translating this gap into communal impact assessment, collective participation and consent, community-accessible redress, and shared accountability. These propositions supplement individual rights and do not presume that Ubuntu is uniform across African contexts. The review identified no sufficient empirical basis for claiming that Ubuntu-informed community-governance mechanisms have already improved agentic-AI outcomes. Empirical co-design, case studies, and comparative evaluation are therefore necessary.

Table 11. Research-Question Evidence Summary

Research question	Mapped records	Evidence concentration	Interpretive boundary
RQ1	83/91 (91.2%)	Agentic specificity, governance mechanisms, accountability and transparency	Direct agentic evidence is limited to 12 specific and 3 adjacent records.
RQ2	79/91 (86.8%)	T1, T2, T3 and T5 evidence	Strong contextual evidence; direct agentic evidence varies by theme.
RQ3	56/91 (61.5%)	Policy/regulation records and T4 evidence	Predominantly policy and broader AI-governance evidence.
RQ4	67/91 (73.6%)	Framework proposals, Ubuntu/Indigenous ethics and decolonial discourse	Supports conceptual propositions, not empirical validation.

3.7. DISCUSSION

1) RQ1: Agentic AI Governance Frameworks and Their African Relevance

RQ1 is supported by 83 mapped records, but only 12 are agentic-AI-specific and 3 are agentic-adjacent. The literature therefore reveals a substantial body of governance principles and mechanisms, alongside a direct agentic evidence gap. Global frameworks contribute risk, accountability, transparency, human-oversight, and rights-based principles [7], [8], [9], while African-contextualised studies identify implementation constraints and relational concerns. The answer to RQ1 is consequently bounded: existing governance evidence can inform agentic AI oversight, but it cannot be treated as direct validation of agent-specific controls in African settings. Future research should test how delegation, action-chain logging, interruption handling, and redress operate in concrete organisational and public-service cases.

2) RQ2: Unique Ethical Challenges in the African Context

RQ2 is supported by 79 mapped records. Four connected challenges dominate the evidence: accountability across autonomous actions, infrastructure-conditioned

oversight, bias and representational harm, and exclusion from governance design. These challenges interact; for example, limited infrastructure can restrict access to review and redress, while representational gaps can be difficult to contest where communities have weak participation channels. The findings do not imply that individual rights frameworks are irrelevant. Rather, the evidence suggests that rights, data protection, and due process require relational, infrastructural, and institutional complements in African contexts [14], [22], [23], [24], [18]. Ubuntu is used as one interpretive lens for those complements, not as the only African ethical tradition.

Table 12. Summary of African AI Policy Instruments Reviewed

Jurisdiction	Instrument	Alignment with global principles	Agentic-AI specificity	Key limitation identified
African Union	Continental Artificial Intelligence Strategy (2024)	Ethics, inclusion, skills, data governance and responsible innovation	Not specific	Non-binding; implementation depends on member states.
South Africa	National AI Policy Framework (2024)	Human-centred and responsible AI priorities	Not specific	Strategic framework; no agentic-specific binding controls.
South Africa	Draft National AI Policy (2026), withdrawn	Risk, accountability, ethics and participation proposals	Limited	Withdrawn; retained only as a policy-process illustration.
Kenya	Artificial Intelligence Strategy 2025-2030	Infrastructure, data and AI governance, research and innovation	Not specific	Strategy implementation and regulatory integration remain in development.

Jurisdiction	Instrument	Alignment with global principles	Agentic-AI specificity	Key limitation identified
Nigeria	National Artificial Intelligence Strategy (2025)	Responsible and inclusive development, capacity and innovation	Not specific	Recent strategy; implementation evidence is still developing.
	National Artificial Intelligence Strategy 2025-2035 (launched 2026)	Responsible AI, digital transformation, skills and innovation	Not specific	Recent strategy; implementation and enforcement evidence is limited.

3) RQ3: Alignment Between African AI Policies and Global Standards

RQ3 is supported by 56 mapped records. Selected African instruments align with global principles at the level of ethics, inclusion, accountability, innovation, and data governance, but differ in legal status, institutional capacity, implementation maturity, and specificity to agentic systems. The AU strategy is continental and non-binding [20]; South Africa's framework is strategic rather than agentic-specific [19]; Kenya, Nigeria, and Ghana have national strategies with differing implementation arrangements [43], [44], [42].

The reviewed evidence suggests three cautious policy implications: define responsibility and record-keeping across autonomous action chains; connect agentic-AI oversight to existing regulatory institutions where feasible; and require context-specific evidence on infrastructure resilience, bias, participation, and redress before high-impact deployment. These implications are proposals for validation, not claims that a particular institutional model is already proven.

4) RQ4: Ubuntu-Informed Governance Framework

The five framework elements were selected through a two-stage abductive procedure. First, the five analytical themes were treated as a diagnostic map of governance gaps supported by the corpus. Second, Ubuntu's relational concepts of communal welfare,

participation, reciprocity, and shared responsibility were applied to each gap to formulate a governance proposition. The resulting elements inform future operationalisation but do not constitute empirical validation.

Table 13. Ubuntu-Informed Agentic AI Governance Framework

Proposed governance element	Governance gap addressed	Conceptual mechanism	Indicative future operationalisation
Communal impact assessment	Individual-only impact analysis	Assesses likely collective and relational consequences before deployment	Community impact criteria, affected-group workshops, documented mitigation commitments
Collective consent and participation	Communities excluded from deployment decisions	Adds structured community participation to individual consent and legal rights	Representative participation rules, accessible notices, documented consent or objection pathways
Infrastructure-contingent oversight	Oversight assumes stable power and connectivity	Defines safe states, escalation duties, and audit requirements during interruption	Failure-state logs, continuity testing, manual fallback thresholds, recovery audits
African dataset and bias auditing	Underrepresentation and unequal error distribution	Requires locally relevant evidence of fairness and representational adequacy	Language/demographic benchmarks, subgroup error analysis, independent local audit
Communal accountability structures	Diffuse responsibility and inaccessible redress	Creates traceable shared responsibility with community-accessible remedy	Named duty holders, action-chain logs, community oversight forum, appeal and remedy standards

Proposed governance element	Governance gap addressed	Conceptual mechanism	Indicative future operationalisation
Contextual conditions	Institutional, legal, cultural, and capacity diversity	Conditions how each element is implemented rather than acting as a statistical moderator	Country- and sector-specific tailoring assessed through future empirical studies
Responsible adoption outcome	Need for accountable public-service deployment	Conceptual outcome of the five elements operating together	Future measures: auditability, redress accessibility, inclusion, reliability, and harm reduction
Empirical status	Framework not yet tested	Literature-derived conceptual proposition	Pilot case studies, Delphi validation, comparative field testing, and longitudinal evaluation

The proposed framework links accountability gaps to communal impact assessment and traceable shared responsibility; community exclusion to collective participation and consent; infrastructure constraints to failure-state and continuity oversight; representational harm to African dataset and bias auditing; and fragmented mandates to communal accountability structures. Table 13 also identifies contextual conditions and possible measures for future case studies, Delphi assessment, comparative policy evaluation, and longitudinal testing.

5) Contributions and Implications

This paper makes three contributions to Information Systems research. First, it provides a systematic synthesis of governance evidence at the intersection of agentic AI and African contexts. Second, it quantifies the direct-evidence limitation by distinguishing 12 agentic-specific, 3 agentic-adjacent, and 76 broader AI-governance records. Third, it advances a literature-derived Ubuntu-informed conceptual framework that translates

five recurrent gaps into propositions for future design and empirical testing. The contextual contribution is that governance controls cannot be assumed to operate independently of infrastructure, institutional capacity, language, data representation, and community access to redress. These conditions affect whether transparency, oversight, consent, and accountability mechanisms can function as intended.

The framework contribution is normative and conceptual rather than empirical. Its five proposed elements integrate participatory assessment, community consent, continuity and fail-safe governance, bias auditing, and accountable algorithm design through a relational lens. Their usefulness must be assessed across countries, sectors, institutions, and communities. The framework also requires caution. Africa is internally diverse, and Ubuntu has multiple philosophical and political interpretations. Future application should therefore incorporate local ethical traditions, legal institutions, language contexts, affected communities, and sector-specific conditions rather than treating the framework as a uniform continental template.

4. CONCLUSION

This systematic review finds that governance evidence relevant to agentic AI in Africa is expanding but remains dominated by broader AI-governance research. Only 12 of 91 records are agentic-AI-specific. The five literature-derived gaps are supported by 40 records for accountability, 14 for infrastructure-aware governance, 33 for bias and representational harm, 52 for policy fragmentation, and 61 for community exclusion. The paper proposes a literature-derived, Ubuntu-informed conceptual framework comprising communal impact assessment, collective participation and consent, infrastructure-contingent oversight, African dataset and bias auditing, and communal accountability. The framework is not an established governance instrument; it is a bounded proposition for future operationalisation and testing. The review is limited by solo-authored screening and coding, English-language searching, geographic and methodological heterogeneity, and reliance on a mixed corpus in which most studies address AI governance generally. The retained audit files do not support a reproducible Cohen's kappa statistic or completed study-level credibility scores; those analyses are therefore not reported. These limitations constrain the strength of direct agentic-AI claims.

Future research should prioritise four directions: empirical validation through organisational and public-service case studies and Delphi assessment; design and testing of infrastructure-contingent and failure-state controls; comparative evaluation of policy implementation and accountability capacity across African jurisdictions; and community-based research on participation, consent, redress, and locally relevant dataset and bias auditing. The reviewed evidence suggests that responsible agentic-AI governance in African public services should combine universal rights protections with locally grounded, relational, and institutionally feasible oversight. The adequacy of this proposition should be tested empirically rather than assumed.

DECLARATION OF AI USE

Grammarly was used for language editing. Responsibility for the review design, screening and coding decisions, interpretation, framework development, and verification of citations and factual claims remains with the submitting researcher.

REFERENCES

- [1] F. Holldack, L. Banh, and G. Strobel, "Agentic information systems," *Electron. Mark.*, vol. 36, art. no. 5, 2026, doi: 10.1007/s12525-025-00861-0.
- [2] I. Adabara *et al.*, "A review of agentic AI in cybersecurity: Cognitive autonomy, ethical governance, and quantum-resilient defense," *F1000Research*, vol. 14, art. no. 843, 2025, doi: 10.12688/f1000research.169337.1.
- [3] M. Abou Ali, F. Dornaika, and J. Charafeddine, "Agentic AI: A comprehensive survey of architectures, applications, and future directions," *Artif. Intell. Rev.*, vol. 59, art. no. 11, 2026, doi: 10.1007/s10462-025-11422-4.
- [4] South Africa Department of Communications and Digital Technologies, "Draft South Africa National Artificial Intelligence Policy," General Notice 3880, Government Gazette No. 54477, Apr. 10, 2026.
- [5] South Africa Department of Communications and Digital Technologies, "Withdrawal of the Draft South Africa National Artificial Intelligence Policy," General Notice 3978, Government Gazette No. 54840, Jun. 12, 2026.

- [6] South Africa Department of Communications and Digital Technologies, "Budget vote speech – Minister Solly Malatsi," May 12, 2026.
- [7] European Parliament and Council of the European Union, "Regulation 2024/1689 laying down harmonised rules on artificial intelligence," *Off. J. Eur. Union*, 2024.
- [8] OECD, "Recommendation of the Council on artificial intelligence," OECD Publishing, 2019, doi: 10.1787/eedfee77-en.
- [9] UNESCO, "Recommendation on the ethics of artificial intelligence," United Nations Educational, Scientific and Cultural Organization, 2021.
- [10] A. Baird and L. M. Maruping, "The next generation of research on IS use: A theoretical framework of delegation to and from agentic IS artifacts," *MIS Q.*, vol. 45, no. 1, pp. 315–341, 2021, doi: 10.25300/misq/2021/15882.
- [11] P. A. Olujimi, P. A. Owolawi, R. C. Mogase, and E. Van Wyk, "Agentic AI frameworks in SMMEs: A systematic literature review of ecosystemic interconnected agents," *AI*, vol. 6, no. 6, art. no. 123, 2025, doi: 10.3390/ai6060123.
- [12] A. Jobin, M. Ienca, and E. Vayena, "The global landscape of AI ethics guidelines," *Nat. Mach. Intell.*, vol. 1, no. 9, pp. 389–399, 2019, doi: 10.1038/s42256-019-0088-2.
- [13] J. Whittlestone, R. Nyrop, A. Alexandrova, and S. Cave, "The role and limits of principles in AI ethics: Towards a focus on tensions," in *Proc. 2019 AAAI/ACM Conf. AI, Ethics, and Society*, 2019, pp. 195–200, doi: 10.1145/3306618.3314289.
- [14] A. Birhane, "Algorithmic injustice: A relational ethics approach," *Patterns*, vol. 2, no. 2, art. no. 100205, 2021, doi: 10.1016/j.patter.2021.100205.
- [15] P. Plantinga, K. Shilongo, O. Mudongo, A. Umubyeyi, M. Gastrow, and G. Razzano, "Responsible artificial intelligence in Africa: Towards policy learning," *Data Policy*, vol. 6, art. no. e72, 2024, doi: 10.1017/dap.2024.60.
- [16] H. Coovadia, B. Marx, I. Botha, and N. O. Gold, "Building an ethical artificial intelligence corporate governance framework for the integration of emerging technologies into business processes," *S. Afr. J. Account. Res.*, vol. 39, no. 3, pp. 286–316, 2025, doi: 10.1080/10291954.2025.2523661.
- [17] G. A. Ooko, "Toward a decolonial framework for communicating AI in African public service," *Emerg. Media*, vol. 3, no. 3, pp. 462–473, 2025, doi: 10.1177/27523543251374174.
- [18] N. Pasipamire and A. Muroyiwa, "Navigating algorithm bias in AI: Ensuring fairness and trust in Africa," *Front. Res. Metr. Anal.*, vol. 9, art. no. 1486600, 2024, doi: 10.3389/frma.2024.1486600.

- [19] South Africa Department of Communications and Digital Technologies, "South Africa National Artificial Intelligence Policy Framework," 2024.
- [20] African Union, "Continental Artificial Intelligence Strategy," African Union Commission, 2024.
- [21] K. Yilma, "Ethics of AI in Africa: Interrogating the role of Ubuntu and AI governance initiatives," *Ethics Inf. Technol.*, vol. 27, art. no. 24, 2025, doi: 10.1007/s10676-025-09834-5.
- [22] A. Gwagwa, E. Kazim, and A. Hilliard, "The role of the African value of Ubuntu in global AI inclusion discourse: A normative ethics perspective," *Patterns*, vol. 3, no. 4, art. no. 100462, 2022, doi: 10.1016/j.patter.2022.100462.
- [23] T. Metz, "Toward an African moral theory," *J. Polit. Philos.*, vol. 15, no. 3, pp. 321–341, 2007, doi: 10.1111/j.1467-9760.2007.00280.x.
- [24] T. Metz, "Ubuntu as a moral theory and human rights in South Africa," *Afr. Hum. Rights Law J.*, vol. 11, no. 2, pp. 532–559, 2011, doi: 10.17159/1996-2096/2011/v11n2a5.
- [25] C. Okoli, "A guide to conducting a standalone systematic literature review," *Commun. Assoc. Inf. Syst.*, vol. 37, art. no. 43, 2015, doi: 10.17705/1CAIS.03743.
- [26] D. Tranfield, D. Denyer, and P. Smart, "Towards a methodology for developing evidence-informed management knowledge by means of systematic review," *Br. J. Manag.*, vol. 14, no. 3, pp. 207–222, 2003, doi: 10.1111/1467-8551.00375.
- [27] J. Thomas and A. Harden, "Methods for the thematic synthesis of qualitative research in systematic reviews," *BMC Med. Res. Methodol.*, vol. 8, no. 1, art. no. 45, 2008, doi: 10.1186/1471-2288-8-45.
- [28] M. J. Page *et al.*, "PRISMA 2020 explanation and elaboration: Updated guidance and exemplars for reporting systematic reviews," *BMJ*, vol. 372, art. no. n160, 2021, doi: 10.1136/bmj.n160.
- [29] M. J. Page *et al.*, "The PRISMA 2020 statement: An updated guideline for reporting systematic reviews," *BMJ*, vol. 372, art. no. n71, 2021, doi: 10.1136/bmj.n71.
- [30] Q. N. Hong *et al.*, "The Mixed Methods Appraisal Tool version 2018 for information professionals and researchers," *Educ. Inf.*, vol. 34, no. 4, pp. 285–291, 2018, doi: 10.3233/EFI-180221.
- [31] N. Diakopoulos, "Accountability in algorithmic decision making," *Commun. ACM*, vol. 59, no. 2, pp. 56–62, 2016, doi: 10.1145/2844110.
- [32] M. Janssen *et al.*, "Will algorithmic governance precipitate the end of democracy?," *Commun. ACM*, vol. 65, no. 5, pp. 36–38, 2022.

- [33] J. A. Kroll, J. Huey, S. Barocas, E. W. Felten, J. R. Reidenberg, D. G. Robinson, and H. Yu, "Accountable algorithms," *Univ. Pa. Law Rev.*, vol. 165, no. 3, pp. 633–705, 2017.
- [34] Republic of South Africa, "Protection of Personal Information Act 4 of 2013," *Government Gazette*, vol. 581, art. no. 37067, 2013.
- [35] G. A. Myovella, M. Karaçuka, and J. Haucap, "Determinants of digitalization and digital divide in Sub-Saharan African economies: A spatial Durbin analysis," *Telecommun. Policy*, vol. 45, no. 10, art. no. 102224, 2021, doi: 10.1016/j.telpol.2021.102224.
- [36] J. Cariolle, "International connectivity and the digital divide in Sub-Saharan Africa," *Inf. Econ. Policy*, vol. 55, art. no. 100901, 2021, doi: 10.1016/j.infoecopol.2020.100901.
- [37] W. Munyoka and M. S. Maharaj, "Privacy, security, trust, risk and optimism bias in e-government use: The case of two Southern African Development Community countries," *S. Afr. J. Inf. Manag.*, vol. 21, no. 1, pp. 1–9, 2019, doi: 10.4102/sajim.v21i1.983.
- [38] J. Osah and C. Pade-Khene, "E-government strategy formulation in resource-constrained local government in South Africa," *J. Inf. Technol. Politics*, vol. 17, no. 4, pp. 426–451, 2020, doi: 10.1080/19331681.2020.1715907.
- [39] N. Couldry and U. A. Mejias, "Data colonialism: Rethinking big data's relation to the contemporary subject," *Televis. New Media*, vol. 20, no. 4, pp. 336–349, 2019, doi: 10.1177/1527476418796632.
- [40] S. Mohamed, M. T. Png, and W. Isaac, "Decolonial AI: Decolonial theory as sociotechnical foresight in artificial intelligence," *Philos. Technol.*, vol. 33, no. 4, pp. 659–684, 2020, doi: 10.1007/s13347-020-00405-8.
- [41] Z. Obermeyer, B. Powers, C. Vogeli, and S. Mullainathan, "Dissecting racial bias in an algorithm used to manage the health of populations," *Science*, vol. 366, no. 6464, pp. 447–453, 2019, doi: 10.1126/science.aax2342.
- [42] Ghana Ministry of Communication, Digital Technology and Innovations, "National Artificial Intelligence Strategy 2025–2035," Government of Ghana, Apr. 24, 2026.
- [43] Ministry of Information, Communications and the Digital Economy, Kenya, "Kenya Artificial Intelligence Strategy 2025–2030," Government of Kenya, 2025.
- [44] National Centre for Artificial Intelligence and Robotics, National Information Technology Development Agency, "National Artificial Intelligence Strategy," Federal Republic of Nigeria, 2025.
- [45] I. Rahwan, "Society-in-the-loop: Programming the algorithmic social contract," *Ethics Inf. Technol.*, vol. 20, no. 1, pp. 5–14, 2018, doi: 10.1007/s10676-017-9430-8.