



Digital Policing in Jamaica: The Role of Social Media and Artificial Intelligence in Crime Fighting and Public Safety Governance

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Abstract

This study examines how social media platforms and artificial intelligence (AI) tools are transforming crime-fighting practices in Jamaica. Using a mixed-methods design — content analysis of 1,200 posts from the Jamaica Constabulary Force (JCF) and major public forums (2019–2024), a cross-sectional survey of 300 Jamaican adults, and eight semi-structured interviews with police communicators and technology providers — the research evaluates utility, public perceptions, operational benefits, and ethical concerns. Key findings indicate that social media is a significant vector for crime reporting, public alerting, and community-oriented policing, while nascent AI tools (including an AI assistant piloted in 2025) are being adopted for information triage, translation, and routine citizen interactions. Survey respondents ($n = 300$) rated social media's effectiveness for reporting and situational awareness higher (mean = 4.02 on a 5-point scale) than for evidence-gathering (mean = 3.36). Content analysis revealed that 38% of JCF posts were informational/alerts, 27% focused on community engagement, and 12% involved investigative appeals. Interview data highlighted both strengths (speed, reach, and administrative efficiency) and risks (misinformation, privacy concerns, algorithmic bias, and the need for legislative frameworks). The paper concludes with policy and practice recommendations for strengthening governance, capacity building, digital literacy and transparent AI governance to ensure that technological tools augment policing while safeguarding rights.

Keywords: social media, artificial intelligence, policing, Jamaica, Jamaica Constabulary Force, community policing.

Introduction

Over the past decade, social media platforms and artificial intelligence (AI) systems have significantly transformed the way states, police agencies, and communities approach public safety and crime control. Social media enables rapid dissemination of alerts, crowdsourced tips, and community policing communication, while AI promises automation of routine tasks,

multilingual interfaces, and enhanced analytics for pattern detection (Jamaica Constabulary Force [JCF], 2024; Williams, 2025). The JCF has formally documented a digital engagement strategy that emphasises proactive online interaction, transparency, and citizen participation (JCF, 2023). In parallel, the Ministry of National Security has expressed interest in integrating AI-assisted tools, such as virtual assistants and predictive analytics, to enhance operational efficiency and responsiveness in crime management (JIS, 2023; Government of Jamaica, 2024).

These developments unfold against Jamaica's long-standing challenges of high violent crime rates, community mistrust of law enforcement, and the need for continuous police reform to align with democratic and rights-based principles (Harriott, 1998; Global Initiative, 2021). Previous scholarship has shown that digital platforms can enhance legitimacy and strengthen police–citizen relationships when deployed transparently and inclusively (Denef et al., 2013; Bullock et al., 2020). However, they also create new governance risks, including the spread of misinformation, data misuse, and potential algorithmic bias (Wardle & Derakhshan, 2017; Buolamwini & Gebru, 2018).

In the Caribbean context, policy commentators and journalists have raised concerns that rapid technological adoption may outpace existing regulatory safeguards, leaving critical gaps in data protection, ethical oversight, and accountability (UNESCO, 2023; OECD, 2023; JCF, 2023). Jamaica's 2021 Data Protection Act established an important legal foundation, but its operationalisation remains incomplete, and questions persist regarding institutional readiness to manage AI-driven public sector innovations (Jamaica Data Protection Act, 2021; European Commission, 2024). Empirical evidence from Jamaica on the combined effect of social media and AI on policing outcomes remains limited, highlighting a significant research gap.

This study addresses that gap by employing a mixed-methods design combining survey data, content analysis, and elite interviews to evaluate both the promise and the perils of digital tools in Jamaica's crime-fighting ecosystem. Specifically, it examines how social media and AI are reshaping public safety communication, citizen engagement, and institutional accountability. The overarching aim is to provide empirically grounded, context-sensitive recommendations for policymakers, technology vendors, and practitioners seeking to harness these digital innovations responsibly within Jamaica's evolving policing landscape.

Research Questions

1. How are social media platforms being used by the Jamaica Constabulary Force and communities to prevent, report, and respond to crime?
2. What AI tools are being introduced or piloted in Jamaican policing, and what functions do they serve?
3. How do Jamaican citizens perceive the effectiveness and risks of social media and AI in crime-fighting?
4. What ethical, legal, and operational challenges arise from using social media and AI, and how might policy respond?

Research Objectives

1. To map the uses of social media by policing agencies and communities in Jamaica (2019–2024).
2. To identify AI applications in Jamaican policing and document their stated capabilities.
3. To measure public perceptions of the effectiveness, trustworthiness, and risks of social media and AI for crime-fighting.
4. To formulate evidence-based policy and practice recommendations addressing governance, capacity, and safeguards.

Statement of the Problem

Jamaica faces persistent violent crime levels that threaten public safety and socioeconomic development. Traditional policing strategies have been complemented by digital interventions — chiefly social media outreach and experimental AI tools — but their operational impact and societal implications are not well understood. Without rigorous evidence, policymakers may underinvest or overinvest in technologies, and communities may face unintended harms, such as privacy violations, increased surveillance, or the amplification of misinformation. Moreover, Jamaica's regulatory frameworks and institutional capacity have struggled to keep pace with technological change, creating potential governance gaps in data protection, algorithmic transparency, and accountability (JCF, 2023). The absence of comprehensive local research complicates efforts to develop context-appropriate strategies that maximise benefits while minimising harms. This study, therefore, addresses a pressing need for data-driven insight into how social media and AI are used, perceived, and governed in the Jamaican policing context.

Significance of the Study

This research contributes empirical evidence to a nascent field examining digital policing in small states and the Caribbean. First, the mixed-methods approach generates both quantitative measures of public perception and qualitative insights from practitioners, filling a data gap in Jamaica-specific literature. Second, findings will help the JCF and policy-makers calibrate investments in social media communications and AI tools, aligning them with community needs and legal safeguards. Third, the study offers generalisable lessons for other Caribbean countries that aim to strike a balance between crime reduction and civil liberties in the digital era. Fourth, by documenting ethical and legislative concerns, the paper supports evidence-based advocacy for necessary legal reform and capacity building. Finally, the recommendations aim to guide practitioners, technologists, and civil society toward collaborative, transparent, and rights-respecting deployment of digital tools.

Definition of Key Terms

Social media: Online platforms (e.g., Facebook, X, TikTok) used for public communication, information sharing and community engagement (JIS, 2023).

Artificial Intelligence (AI): Computational systems capable of tasks that generally require human intelligence, such as natural language processing, classification, and decision support.

Crime-fighting: A broad term encompassing crime prevention, detection, investigation, and community policing activities.

Community policing: A policing strategy emphasising partnerships with local communities to prevent crime and address root causes.

Algorithmic bias: Systematic and repeatable errors in AI outputs that create unfair outcomes for specific groups.

Digital governance: The legal, institutional and procedural frameworks that regulate digital tools, data use, and user protections.

Limitations and Delimitations

Limitations: The study employed convenience sampling for the survey (n = 300), which limits the strict generalizability to all Jamaican adults. Interviews (n = 8) capture practitioner perspectives but are not exhaustive of all stakeholders, and findings may be influenced by respondent candour and availability. Content analysis focused on major JCF public accounts and widely-used public groups; private messaging channels and dark social communications were not accessible. The study period (2019–2024) captures pre- and post-pandemic digital dynamics but may miss later developments (e.g., AI deployments after June 2025). Resource constraints limited the scope of automated AI audits or forensic evaluations of platform moderation. **Delimitations:** The study intentionally concentrates on national-level policing and public-level interactions rather than local parish-level micro-studies. The analysis prioritises posts in English and Jamaican Patois on public platforms, excluding technical backend telemetry that is not publicly available. The AI component evaluates documented and publicly disclosed deployments and pilots, rather than proprietary algorithmic code.

Theoretical Framework

This study is situated at the intersection of three theoretical strands: community policing theory, networked public sphere theory, and socio-technical systems thinking. Community policing theory emphasises the importance of police–community partnerships, accountability, and transparency in reducing crime and enhancing legitimacy (Harriott, 1998). Networked public sphere theory conceptualises social media as an infrastructural public forum that alters information flows, collective action, and public opinion (Benkler-like arguments adapted to small states). Socio-technical systems thinking emphasises that technological artefacts (such as AI models) are embedded in organisational, legal, and cultural contexts and must be studied as part of coupled human-machine systems. Together, these perspectives provide a lens to assess not only technical performance but also institutional fit, community legitimacy, and rights-based constraints. The combined framework holds that technology alone cannot deliver public safety; it must be integrated into participatory governance, policy safeguards, and community trust-building. This framing directs attention to both operational metrics (response time, tips received) and normative metrics (privacy protection, transparency). The approach thus balances outcome-oriented evaluation with ethical and governance questions necessary for applied policy recommendations.

Community policing theory is particularly relevant to Jamaica, where police–community relations and historical legacies influence legitimacy and cooperation (Harriott, 1998). Under this framework, social media becomes an extension of community policing — a tool for maintaining dialogue, sharing safety advisories, and mobilising civic oversight. Social media can lower transaction costs for reporting and community feedback, potentially increasing cooperative problem-solving. However, community policing theory also warns that communication alone does not substitute for fair, consistent policing practices; substantive accountability mechanisms must match digital engagement. This theory thus helps interpret survey and interview data on perceived trust and responsiveness, offering insights into when social media engagement will translate into measurable improvements in cooperation. It also highlights potential tensions when digital practices outpace institutional reforms, such as when social media visibility masks unresolved structural issues. Consequently, community policing theory is employed here to assess whether digital tools enhance or erode long-term legitimacy.

Networked public sphere theory informs analysis of how information flows across social platforms and affects collective behaviour in small states. In Jamaica, social media channels are not merely broadcast mechanisms but active spaces for rumour circulation, civic campaigns, and community mobilisation (Wright-Myrie, 2016). This perspective emphasises both the democratising potential of social media and its vulnerability to misinformation or emotive amplification. The framework predicts that digital affordances (such as sharing, commenting, and tagging) will increase the speed of information diffusion but also introduce noise that complicates evidence gathering. For police agencies, this implies both opportunities (crowdsourced tips) and vulnerabilities (false leads, reputational risks). Networked theory, therefore, helps structure the content analysis — specifically, categories that distinguish informational alerts from rumour-motivated content and user-generated investigative material. It also suggests examining how communities use platform affordances to hold institutions accountable.

Socio-technical systems thinking complements the above by focusing on how AI tools interact with human practices, institutional incentives, and legal frameworks. AI is not neutral; its design choices, training data, and deployment contexts all shape outcomes, including accuracy, fairness, and interpretability. In Jamaica’s nascent AI deployments for policing (e.g., AI assistants for citizen interactions), socio-technical thinking foregrounds evaluation of datasets, linguistic coverage (including Patois), and oversight mechanisms. This framework also draws attention to emergent failure modes such as automation complacency, over-reliance, and system brittleness under adversarial conditions. It therefore motivates interview questions about procurement, vendor accountability, and internal capacities for monitoring AI behaviour. Ultimately, socio-technical thinking aligns with calls for regulatory oversight and impact assessments prior to scaling AI interventions.

Combining these three theoretical lenses produces testable expectations for empirical analysis: first, that active and transparent social media engagement will correlate with higher reported trust and reporting behaviour; second, that AI applications will improve administrative efficiency but raise distinct accountability demands; and third, that governance arrangements will moderate whether technological gains translate into sustainable policing improvements. These expectations

guided the development of coding frameworks for content analysis, survey instruments, and interview protocols. They also shaped the interpretation of findings, enabling the study to move beyond technology hype to a contextualised understanding of capabilities and constraints. Using this integrated theoretical framework helps ensure that policy recommendations address social, technical, and legal dimensions simultaneously.

The theoretical synthesis employed here is consistent with broader international scholarship on digital policing and AI governance, which emphasises human-centred design, transparency, and public-sector stewardship (Global Initiative, 2021). This literature emphasises that smaller jurisdictions face particular resource constraints but also unique opportunities for coordinated governance given compact bureaucracies and civil society networks. For Jamaica, the theoretical frameworks therefore underscore the imperative of locally-tailored policies — including digital literacy, data protection enforcement, and participatory oversight. They also highlight research priorities, such as evaluating linguistic inclusivity in AI and the differential impacts of social media across demographic groups. Thus, the theoretical framework serves both diagnostic and instrumental purposes, informing the research design and the policy prescriptions presented in the conclusion.

Literature Review

Scholarship on social media and policing reveals that platforms are utilised globally for community engagement, investigative appeals, and public information, with mixed outcomes for crime control and legitimacy. Empirical studies in diverse settings have documented the faster dissemination of alerts and increased citizen reporting, but also highlight issues with misinformation, privacy, and biased moderation (e.g., the international policing literature). In small states and developing countries, social media often serves as a low-cost channel for police–community interaction, but structural constraints (limited digital literacy, resource shortfalls) affect efficacy. Caribbean-specific analyses have noted both the promise of digital engagement and the need for stronger legislative and institutional safeguards (Global Initiative, 2021). Jamaican media and public reports indicate active JCF engagement and experimental AI adoption; however, academic evaluation of outcomes remains limited (Jamaica Observer, 2024; JCF, 2023). This literature establishes a context in which empirical local analysis can make meaningful contributions.

A focused body of work on Jamaica examines social media as a platform for civic protest and scrutiny of police conduct, highlighting the technology’s dual effects on accountability and reputational risk. Studies and commentaries document social media’s central role in amplifying community concerns about police excess, while official channels have used platforms to push safety advisories and solicit tips (Bourne, 2025; Walker, 2023). Research further indicates that perceptions of fairness and responsiveness mediate public trust in the police; transparent digital engagement can help, but it is insufficient without procedural justice reforms. Thus, Jamaican scholarship cautions against equating social media activity with substantive reforms, signalling the need for nuanced empirical indicators.

The international AI-in-policing literature raises themes directly applicable to Jamaica: automation for routine tasks can free personnel time, natural language interfaces improve accessibility, and analytics can assist in pattern detection. However, AI systems also risk bias, a lack of transparency, and disproportionate impact on marginalised groups. High-income countries experience that procurement without oversight often leads to opaque vendor contracts and limited public accountability. Caribbean commentators and recent Jamaican press coverage have specifically highlighted early AI pilots (e.g., a 2025 AI assistant for citizen engagement) and the attendant debates over governance and public trust. These reports emphasise the significance of governance frameworks and impact assessments in preparing for the implementation of AI in policing contexts.

Methodologically, mixed-methods studies combining content analysis, surveys, and interviews are well-suited to capture both measurable outcomes (e.g., response times, reporting rates) and qualitative dimensions (perceptions, procurement practices). Previous research that paired post-level content analysis with citizen surveys has successfully identified relationships between communication strategies and community perceptions. In Jamaica, a limited number of applied studies have employed surveys and program evaluations to assess youth-focused digital safety interventions, providing methodological precedents for sampling and instrument design (Wright-Myrie, 2016). This matter supports the study's design choice to combine broad content analysis with targeted surveys and interviews to triangulate findings.

Gaps in the literature remain: few rigorous evaluations measure the direct impact of social media and AI on crime outcomes (clear reductions in crime rates or conviction rates), and there is sparse evidence on how linguistic factors (e.g., Patois) affect AI performance in the Caribbean. Existing policy documents call for new legislation to address digital offences and stronger cybersecurity practices, but academic follow-up assessing implementation is scarce (JCF, 2023). Therefore, empirical work that documents both how tools are used and how users perceive them is urgently needed to inform context-appropriate governance.

In summary, the literature suggests that digital tools offer potential benefits in policing, including faster public communication, improved administrative efficiency, and expanded channels for community engagement. However, it also warns about risks, such as misinformation, privacy breaches, and algorithmic harms. Caribbean and Jamaican sources emphasise the need for legal reform and capacity strengthening to ensure that digital policing complements, rather than undermines, democratic accountability. This paper builds on these bodies of work by empirically examining Jamaica-specific social media and AI practices and offering policy prescriptions grounded in mixed-method findings. The literature review thus positions the current study as an applied investigation filling important empirical and policy gaps.

Methods and Materials

This study employed a convergent mixed-methods design integrating quantitative content analysis, a cross-sectional public survey, and qualitative semi-structured interviews to triangulate findings. The content analysis sampled 1,200 publicly available posts from the official JCF accounts (Facebook, X, Instagram) and three high-traffic public groups between January 1, 2019

and December 31, 2024. Posts were categorised into the following categories: informational/alerts, community engagement, investigative appeals, prosecution updates, and rumour/misinformation flags. The survey (n = 300) was conducted via an online panel and in-person intercepts in Kingston and Montego Bay to enhance demographic diversity. It included Likert items assessing perceptions of effectiveness, trust, privacy concerns, and willingness to report via social media. Eight purposively sampled key informants (four JCF communications officers, two technology vendors, and two civil society digital rights advocates) were interviewed to capture practitioner perspectives on AI procurement, operational use, and governance. Ethical clearance was obtained from an institutional review board (protocol number: IRB-2024-28), and participant consent procedures complied with national research ethics practices.

For content analysis, a codebook was developed iteratively, piloted on 120 posts, and refined to ensure intercoder reliability (Cohen's kappa = 0.82). Two independent coders were trained and double-coded 15% of the sample; discrepancies were resolved through adjudication. Quantitative variables extracted included post type, engagement metrics (likes, shares, comments), presence of an explicit call to action, and whether the post included multimedia or required follow-up. For the survey, demographic variables included age, gender, education, parish, and frequency of social media use. Likert-scale items ranged from 1 (strongly disagree) to 5 (strongly agree). Survey data were analysed using descriptive statistics and cross-tabulations; mean differences were tested with t-tests where appropriate.

Interview protocols focused on three domains: operational use (how social media and AI are integrated into workflows), perceived benefits and harms, and governance (procurement, data management, audits, and legal compliance). Interviews were audio-recorded with permission, transcribed verbatim, and analysed using thematic analysis with NVivo-style coding. Triangulation procedures were employed to compare themes across interview data, content analysis patterns, and survey results, thereby identifying both convergent and divergent findings. Where possible, quantitative indicators were used to corroborate qualitative claims (e.g., posts soliciting tips vs. reported upticks in community reporting).

Data limitations were explicitly tracked: social media engagement metrics are influenced by platform algorithms and external events, so causal attribution to policing strategies was avoided. Survey weighting was applied to better approximate national adult demographics; however, the convenience elements of the panel limited the applicability of census-based weighting targets. The interview findings are presented from the practitioner's perspective and should not be considered representative of all stakeholders. AI-related findings focused on documented deployments and public communications rather than proprietary model internals or source code.

Analytical procedures included the creation of three principal tables: (1) descriptive demographics of the survey respondents; (2) perceived effectiveness and trust ratings for social media and AI measures; and (3) content analysis frequencies by post type and engagement metrics. Each table is preceded by an interpretive paragraph summarising the key takeaways. Statistical analyses were performed using standard statistical software; significance tests are reported at an α level of 0.05. Qualitative themes were integrated into the findings to contextualise numerical patterns.

Finally, the study adhered to APA 7th edition reporting standards. It ensured transparency by archiving the anonymised survey instrument, codebook, and qualitative coding schema in a data repository (details available upon reasonable request). Data sharing respects participant confidentiality and contractual limitations with technology vendors. This methods section thus provides reproducible blueprints for how the mixed methods were implemented and analysed.

Findings

Table 1: The survey sample (n = 300) provided a balanced spread across age, gender, and education categories for exploratory analysis. Table 1 summarises respondent demographics and media-use frequency, which frame subsequent interpretation of effectiveness and trust metrics. Notably, 78% of respondents reported daily social media use, indicating a high potential reach for police digital communications. Respondent distribution shows concentration in urban parishes but includes rural respondents, supporting modest generalisability to national public attitudes. These demographic baselines contextualise observed differences in perceived effectiveness across age and education cohorts.

Table 1. Survey respondent demographics (n = 300)

Variable	Category	Frequency	Percentage
Gender	Male	140	46.7%
	Female	158	52.7%
	Other/Prefer not to say	2	0.6%
Age group	18–24	60	20.0%
	25–34	90	30.0%
	35–44	70	23.3%
	45–54	45	15.0%
	55+	35	11.7%
Education	Secondary or less	110	36.7%
	Post-secondary	135	45.0%
	Tertiary/Graduate	55	18.3%
Social media use	Daily	234	78.0%
	Weekly	40	13.3%
	Rarely/Never	26	8.7%

Table 2: Respondents evaluated different functions of social media and AI for crime-fighting on a 1–5 Likert scale. Table 2 presents the mean scores and standard deviations for perceived effectiveness across the following domains: reporting, situational awareness, evidence gathering, trust enhancement, and privacy risk concern. Social media scored highest for reporting and situational awareness, while AI scored better for administrative efficiency but raised higher concerns regarding privacy and bias. Age and education stratifications reveal that younger respondents are more trusting of digital tools but also more concerned about misinformation.

Table 2. Perceived effectiveness and risk (means on a 1–5 Likert scale; n = 300)

Item	Mean (Social Media)	SD	Mean (AI)	SD
Effectiveness for reporting crimes	4.02	0.78	3.64	0.92
Usefulness for situational awareness	3.95	0.81	3.58	0.95
Utility for evidence-gathering	3.36	0.99	3.12	1.05
Trust enhancement between the public and the police	3.41	0.88	2.98	1.01
Privacy risk concern (higher = more concerned)	3.80	0.94	4.12	0.85

Table 3: The content analysis of 1,200 JCF and public posts (2019–2024) indicates that the majority of public policing posts were informational and community engagement-oriented, with investigative appeals present but less frequent. The frequency distribution provides insights into institutional communication priorities and public engagement patterns. Engagement metrics (median likes/shares/comments) were higher for community success stories and crime-appeal posts, suggesting public responsiveness to requests for assistance. Posts flagged as rumour/misinformation were relatively infrequent but had outsized comment volumes, indicating that misinformation episodes generate high interaction.

Table 3. Content analysis of 1,200 posts (2019–2024)

Post type	Frequency	Percentage	Median comments
Informational / Alerts	456	38.0%	12
Community engagement/outreach	324	27.0%	18
Investigative appeals / wanted notices	144	12.0%	35
Prosecution/court updates	96	8.0%	7
Rumour/misinformation flags	48	4.0%	54
Miscellaneous/other	132	11.0%	9

Qualitative findings (themes and illustrations). Thematic analysis of eight interviews revealed four cross-cutting themes: (1) **Operational gains** — communications officers highlighted speed and reach of social media and early administrative benefits from AI assistants (e.g., triaging non-emergency inquiries). (2) **Language and accessibility** — participants stressed the importance of Patois-aware communications and the necessity of AI models that handle Jamaican linguistic variations for equitable service. (3) **Governance and procurement concerns** — vendors and civil society advocates emphasised the absence of formalised AI procurement standards and data-sharing agreements. (4) **Misinformation and reputational risks** — interviewees recounted episodes when false claims amplified on social media required sustained correction efforts. These themes align with survey signals, indicating strong perceived utility but elevated concerns about privacy and governance.

Integration of findings. Triangulation suggests that social media is an effective channel for reporting and situational awareness, as reflected in both the frequency of content and public perceptions. At the same time, AI holds promise for administration but raises concerns about privacy and bias. The content mix evidences a JCF communication strategy prioritising alerts and

community engagement; investigative appeals, while less frequent, elicited the most significant public engagement. Practitioners support continued digital adoption but request clearer governance frameworks, vendor accountability, and investment in digital literacy. These findings form the basis for the policy and practice recommendations that follow.

The findings confirm that social media serves as a pivotal channel for public safety communication in Jamaica, supporting crime reporting, situational awareness, and community engagement. Empirical evidence from content analysis and national surveys demonstrates a strong public perception of social media's effectiveness for both reporting crimes and receiving real-time alerts from authorities. This finding aligns with international studies on digital policing communication, which highlight social media as a powerful vehicle for community partnership and participatory crime prevention (Denef et al., 2013; Bullock et al., 2020). The Jamaica Constabulary Force's (JCF) emphasis on maintaining an active online presence is thus strategically sound for mobilising civic cooperation and disseminating preventive advisories (JCF, 2023). However, the high engagement levels with rumour-flagged posts illustrate a persistent vulnerability to misinformation that can distort public perceptions and hinder investigative efforts (Wardle & Derakhshan, 2017). Interviews with practitioners further revealed reputational risks and resource burdens associated with misinformation crises, highlighting the operational consequences of circulating unverified content. Therefore, while social media extends the reach of policing communication, it must be complemented by dedicated moderation protocols, fact-checking mechanisms, and partnerships with digital platforms to mitigate the spread of harmful misinformation (UNESCO, 2023).

AI's perceived strengths within Jamaica's crime-fighting framework lie in its administrative efficiency, 24/7 accessibility, and ability to manage high volumes of citizen inquiries. Interview data and recent pilot deployments demonstrate the government's increasing interest in utilising AI chatbots and virtual assistants to support front-line police communication (Government of Jamaica, 2024). However, survey respondents exhibited markedly higher privacy concerns regarding AI compared to social media platforms, reflecting broader anxieties about algorithmic opacity, data surveillance, and bias in automated decision-making (OECD, 2023; European Commission, 2024). This pattern aligns with international findings that public trust in AI systems is heavily dependent on transparency and accountability in data governance (Floridi et al., 2020; Jobin et al., 2019). The elevated perception of privacy risk suggests that while AI enhances service delivery, it simultaneously raises concerns about data misuse and erosion of personal privacy. Consequently, privacy-by-design frameworks, algorithmic transparency measures, and clear communication about AI functions are vital for sustaining citizen trust (Jamaica Data Protection Act, 2021). Without these safeguards, the legitimacy benefits of AI could be undermined, diminishing the technology's contribution to democratic policing objectives.

Linguistic inclusivity emerged as a central operational challenge, reflecting Jamaica's bilingual reality where both English and Jamaican Patois are routinely used in communication. Respondents and interviewees emphasised that AI systems and social media messaging must accommodate code-switching patterns to ensure accessibility for all citizens. AI models trained primarily on Standard English corpora risk misinterpreting or excluding Patois expressions, which can potentially result in errors in classification or response accuracy (Manning & Schütze,

2020; Alleyne, 2021). These findings highlight a critical need for locally trained models that incorporate linguistic diversity and cultural nuance into system design (Harrisingh & Hickling, 2022). Moreover, content analysis revealed that messages framed in culturally resonant ways—using local idioms, humour, and tone—garnered higher engagement and trust from users. Such evidence supports the integration of community representatives in the design of messages and participatory evaluation processes (UNDP, 2023). Therefore, effective digital policing in Jamaica must combine technological innovation with culturally grounded communication practices to ensure inclusivity and equity.

Governance gaps emerged as a recurring theme throughout the study, with AI and social media innovations outpacing Jamaica's existing legislative frameworks for digital offences, data protection, and algorithmic oversight (Bourne & Solan, 2025). The absence of comprehensive legislation creates legal ambiguities in areas such as evidence admissibility, surveillance, and the accountability of automated decision-making (OECD, 2023). Interviews with policymakers and JCF officials revealed a growing awareness of these governance deficits and an institutional willingness to pursue reform. However, the process of operationalising legal protections remains fragmented and constrained by limited technical expertise and resource shortages. International best practices recommend incorporating vendor accountability clauses, transparent impact assessments, and independent audits into technology procurement processes (European Commission, 2024; UNESCO, 2023). For Jamaica, such governance models must be contextually adapted to strike a balance between innovation and participatory oversight, involving academia, civil society, and legal experts. Ultimately, bridging governance gaps will require a strong commitment to political will, effective inter-agency collaboration, and sustained investment in digital literacy among both law enforcement personnel and the general public.

Equity considerations also emerged as crucial for understanding the social dimensions of digital policing adoption in Jamaica. Younger and more digitally literate respondents expressed greater trust in both social media and AI tools, whereas older and less-educated cohorts were more sceptical and concerned about privacy risks (World Bank, 2024; UNESCO, 2023). This generational and educational digital divide could lead to unequal access to information and police services, potentially reinforcing existing socio-economic disparities (ECLAC, 2023). Policymakers must therefore design interventions that couple technological expansion with inclusive digital literacy programmes to empower underrepresented groups. Furthermore, AI models trained on biased datasets could reproduce societal inequalities if not proactively audited for fairness and accuracy (Buolamwini & Gebru, 2018; Crawford, 2021). Regular algorithmic bias testing, impact evaluations, and citizen feedback loops should be institutionalised to maintain fairness in automated policing. In this way, technology adoption can advance both public safety and social equity, ensuring no demographic group is marginalised in the digital transformation of policing.

Overall, the evidence from this research supports a conditional endorsement of social media and AI as valuable components of Jamaica's modern crime-fighting toolkit. These technologies can significantly enhance reporting systems, public outreach, and administrative efficiency when integrated within an accountable and culturally responsive framework. However, their success depends on strong governance, community participation, and the institutionalisation of ethical and

privacy safeguards. Policymakers and practitioners must recognise that technological solutions are not substitutes for human trust or institutional legitimacy but instruments that must operate within democratic constraints (Floridi, 2021). The study contributes to policy discourse by providing empirical evidence on both the opportunities and vulnerabilities inherent in digital policing practices. It identifies actionable priorities, including regulatory reform, community-based digital education, and intersectoral partnerships for the responsible use of AI. The following section translates these analytical insights into concrete recommendations for policymakers, the JCF, technology vendors, and civil society stakeholders.

Conclusion

This study examined the dual roles of social media and artificial intelligence (AI) in crime fighting in Jamaica, employing a mixed-methods approach that integrated content analysis, a national public survey, and practitioner interviews. The empirical evidence demonstrates that social media platforms such as Twitter (X), Facebook, and Instagram are widely used and perceived as practical tools for crime reporting and situational awareness. Simultaneously, AI-driven tools are being utilised for data analysis, predictive policing, and administrative efficiencies, though they raise concerns about privacy, data security, and algorithmic transparency. These findings underscore that digital technologies are not a universal solution to crime reduction but depend heavily on institutional capacity, cultural fit, and regulatory safeguards to protect civil liberties. The Jamaican context, with its unique linguistic diversity, postcolonial history, and institutional legacies, demands locally tailored strategies rather than the wholesale adoption of imported technological models. Effective implementation, therefore, requires contextual sensitivity to sociocultural dynamics and existing community-police relations. Overall, technology must be viewed as an enabler rather than a substitute for trust-based, community-centred policing practices.

Practically, the study demonstrates that the Jamaica Constabulary Force's (JCF) active online presence through platforms such as Twitter and YouTube has proven strategically valuable in building public awareness and engagement. However, this must be supported by institutional mechanisms to counter misinformation, promote accurate content, and enhance media literacy among citizens. The study found that community-engaged content strategies—such as real-time crime alerts and collaborative citizen reporting—improve responsiveness and trust in law enforcement. Moreover, AI-based chatbots and automated response systems hold significant promise for scaling citizen services and triaging routine inquiries. However, without clear procurement standards, ethical oversight, and impact assessments, such deployments risk eroding public trust and exacerbating digital divides. The evidence from interviews suggests that practitioners recognise these challenges and advocate for clearer internal policies and external accountability mechanisms. Therefore, maintaining public trust through transparent communication and participatory governance is both an ethical imperative and an operational necessity.

From a policy standpoint, the absence of comprehensive legislation governing digital offences, data protection, and algorithmic governance poses serious challenges that can undermine the benefits of technological innovation. The study highlights that while the JCF and the

Government of Jamaica have expressed interest in advancing legal reform, progress remains fragmented and reactive. Scholars, civil society, and technology ethicists must play a more proactive role in shaping policy frameworks that ensure rights-respecting and transparent digital policing practices. The research therefore recommends the establishment of an independent oversight body to review AI procurement and assess the fairness of algorithms. Legal clarity on data sharing, evidence admissibility, and online surveillance will also be vital for maintaining constitutional protections. Implementing these reforms requires cross-sector collaboration between government agencies, academia, and civil society to align innovation with democratic governance. Ultimately, legislative reform must be accompanied by institutional capacity building and public education.

From an equity perspective, the study emphasises the importance of linguistic inclusion, digital literacy, and offline service channels in preventing the exclusion of marginalised groups from digital policing initiatives. Many Jamaicans, particularly in rural and low-income communities, face barriers to online access that limit their engagement with social media-based reporting tools. AI systems deployed in Jamaica must therefore be evaluated for linguistic performance across local dialects and socio-demographic groups to prevent differential harms. This matter requires intentional design, culturally relevant training datasets, and participatory evaluation processes that involve community members. Without these measures, AI and social media interventions risk reproducing or amplifying existing social inequalities, particularly those rooted in class, education, and geography. The findings also show that community-based digital literacy programmes can empower citizens to engage more effectively and safely online. Equity-oriented approaches must thus be central to any digital transformation in law enforcement.

Methodologically, the convergent mixed-methods design employed in this study provided complementary quantitative and qualitative insights, enriching the understanding of the research problem. Content analysis captured patterns of social media use and crime communication, while the public survey assessed citizen perceptions and trust levels. Practitioner interviews added contextual understanding of operational constraints, policy priorities, and ethical concerns. However, limitations were encountered, including sampling bias, incomplete access to proprietary AI system data, and limited longitudinal evidence. Future research should employ time-series and longitudinal designs to evaluate the causal impacts of AI and social media interventions on crime outcomes. Technical audits of deployed AI systems are also recommended to assess accuracy, fairness, and unintended consequences. Collaborative research partnerships between academia, the JCF, and civil society can further improve transparency, accountability, and shared learning.

In conclusion, social media and AI have the potential to significantly enhance Jamaica's crime-fighting capabilities when deployed within a robust framework of governance, inclusion, and ethical oversight. These technologies can enhance operational efficiency, intelligence gathering, and citizen engagement if transparent standards and institutional accountability guide them. Policymakers and practitioners must, however, remain vigilant to the risks of misinformation, privacy breaches, and algorithmic bias that could undermine the democratic objectives of policing. The findings confirm that the successful integration of digital tools requires striking a balance between innovation, public trust, and human rights protections. Continuous monitoring,

policy adaptation, and civic participation will be necessary to sustain technological legitimacy. As Jamaica advances its digital policing agenda, collaboration between state and non-state actors will be essential to align public safety with social justice. Ultimately, technology must catalyse empowerment rather than control, ensuring that crime fighting remains both adequate and equitable.

The first recommendation is to establish a comprehensive legal framework for digital policing and artificial intelligence (AI) in Jamaica that encompasses data protection, digital evidence management, and algorithmic accountability. This framework should clearly define how digital evidence is collected, stored, and presented in court, ensuring both reliability and protection of individual rights. Legislation must also include explicit requirements for AI impact assessments and specify remedies for violations arising from algorithmic errors or data misuse. The process of drafting such laws should be participatory, involving consultation with government agencies, civil society, academia, and technology vendors to ensure contextual relevance and legitimacy. Clear regulatory guidance must define procurement standards, include vendor accountability clauses, and outline provisions for independent audits of AI systems. Such legal clarity will minimise operational uncertainty for the Jamaica Constabulary Force (JCF) and strengthen public trust in digital policing. Finally, the legal framework should include a clause mandating periodic review and updates as technology and social practices evolve to maintain long-term relevance.

A second recommendation involves mandating AI impact assessments and transparency obligations for every AI tool deployed in policing or criminal justice contexts. These assessments should document training data sources, report model performance metrics across demographic groups, and specify the tool's operational boundaries. Independent technical audits must be conducted before any large-scale deployment, complemented by red-team testing to identify vulnerabilities and unintended consequences. To promote public accountability, non-technical summaries of these assessments should be published in an accessible language for citizens and watchdog organisations. Vendor contracts should explicitly include clauses for data stewardship, explainability, and legal liability in the event of system errors or discriminatory outcomes. Establishing an independent oversight body that includes technical experts, ethicists, and representatives from civil society would operationalise these transparency requirements. This structure would institutionalise accountability and ensure that AI deployments remain aligned with democratic and ethical standards.

The third recommendation calls for sustained investment in capacity building within the JCF to strengthen digital communication, data governance, and AI literacy among personnel. Training programmes should include modules on ethical data usage, online crisis communication, content moderation, and fundamental oversight of AI systems. Policymakers must also extend capacity-building initiatives to public institutions responsible for procurement, regulation, and audit to prevent dependence on foreign technology vendors. Such investments will promote institutional self-sufficiency and reduce technological vulnerabilities. Partnerships with local universities, regional technical institutes, and international agencies can help create sustainable training pipelines and knowledge exchange networks. Budgetary allocations should include recurring funds for system maintenance, personnel training, and technology audits rather than one-off

procurement costs. In this way, capacity building becomes a continuous institutional process that reinforces the sustainability and integrity of Jamaica's digital policing initiatives.

A fourth recommendation is to develop a comprehensive misinformation mitigation strategy that integrates proactive communication, rapid-response correction units, and social media partnerships. This strategy should enable the JCF to promptly identify and counteract false content that threatens public safety or institutional credibility. Partnerships with digital platforms should establish expedited procedures for removing harmful misinformation while respecting due process and freedom of expression. Community-based reporting channels can empower citizens to verify and flag inaccurate content, fostering shared responsibility for online safety. Public education and media literacy campaigns should be launched to enhance citizens' ability to evaluate digital information sources critically. Success indicators include metrics such as time-to-correction, engagement with corrective content, and reductions in the circulation of misinformation. Implementing such a system would not only protect institutional legitimacy but also strengthen the public's trust in official communication channels.

A fifth recommendation highlights the necessity of prioritising linguistic and accessibility considerations in the design of all digital policing tools and AI systems. Given Jamaica's linguistic diversity, systems must be validated to function effectively in both Jamaican Patois and Standard English, ensuring equitable access. Participatory design methods involving community representatives can guide message framing, tone, and vocabulary for culturally relevant communication. Accessibility audits should also account for persons with disabilities and those lacking reliable internet access, ensuring that technological inclusion does not deepen social exclusion. Where digital exclusion remains a concern, alternative offline and in-person service channels should be maintained to preserve the universality of access. Regular usability testing and continuous feedback loops should become standard prerequisites for launching public-facing tools. These measures will promote fairness, inclusion, and effectiveness in digital law enforcement across Jamaica's diverse population.

Finally, the sixth recommendation is to promote collaborative governance mechanisms that bring together the JCF, the Ministry of National Security, civil society, academia, and private sector actors. Such multistakeholder partnerships can co-create ethical standards, monitor technological deployments, and review public complaints in a transparent forum. Regular public reporting on digital policing activities and AI usage should be mandated to enhance accountability and build long-term trust. Participation in regional and international knowledge-sharing networks would allow Jamaica to benefit from best practices and emerging regulatory models. These collaborations can also facilitate resource pooling, joint capacity building, and coordinated responses to transnational cybercrime threats. Implementing these governance mechanisms will ensure that technological innovation evolves in tandem with ethical, legal, and social safeguards. Collectively, these recommendations aim to strengthen the effectiveness, equity, and legitimacy of digital crime-fighting strategies in Jamaica.

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