

Research Article

AI in Policing: Assessing the Readiness of the Ghana Police Service

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<https://doi.org/10.56331/ijps.v5i1.16299>

Submitted: 27 October 2025
Accepted: 10 December 2025
Published: 25 September 2026

Citation: Ogochukwu C. Nweke & Smita Francis "AI in Policing: Assessing the Readiness of the Ghana Police Service." *International Journal of Police Science* 5, no. 1 (2026). 10.56331/ijps.v5i1.16299.

Abstract:

Around the world, the spread of digital technologies, and of the internet and artificial intelligence (AI) in particular, has opened new avenues for unlawful conduct, placing the public at greater risk and quickening the growth of organised crime.¹ Security forces now face real pressure to bring AI into the way they police. This study asked how ready the Ghana Police Service (GPS) is to do so. Working within the Unified Theory of Acceptance and Use of Technology (UTAUT), it drew on qualitative interviews with 30 participants across three regions of Ghana. A few enablers stood out, among them leadership support, an ongoing digitalisation drive, and a growing awareness of what AI might offer. The obstacles, though, were harder to miss: tight budgets, gaps in policy, thin skills, and unresolved ethical concerns. On balance, the GPS sits at an early stage of readiness for AI adoption. The study therefore points to four priorities, namely training and capacity building, clear policy and regulatory frameworks for AI use, investment in AI-compatible digital infrastructure, and sustained awareness campaigns within the Service and among the

Keywords: AI adoption; Ghana; Ghana Police Service; law enforcement; technology readiness; UTAUT model.



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1. Introduction

Technology has reshaped how people live, work, and deal with one another.¹ The same shifts have changed how individuals and organisations go about their work in agriculture, education, health, and transport. Policing has not been exempt. Law enforcement agencies around the world have taken up new technologies to strengthen security and keep people and property safe.² These tools matter for security work because they reach into the heart of how the police are organised and how they carry out the core task of controlling crime.³ Over the years, security services have relied on a familiar set of them, including video cameras, data mining systems, thermal sensors, biometrics, GPS tracking, and internet and telecommunications networks.⁴ The police use such technologies to detect, investigate, prosecute, and prevent crime.⁵

Artificial intelligence (AI) is a more recent addition to this toolkit, and security agencies are beginning to use it to sharpen their work. Its conceptual roots reach back to the middle of the twentieth century, taking clearer shape in the 1950s.⁶ John McCarthy is credited with coining the term artificial intelligence.⁷ Definitions of AI vary, but the common thread is the idea of machines that match or surpass human beings in intelligence. As Stahl and colleagues observed, AI systems can surface insights buried in vast, unstructured data within a short time, drawing out connections that a human operator would likely miss.⁸ Dubravova and colleagues described artificial intelligence as computer systems that carry out processes which would otherwise call for human intelligence.⁹ In that sense, AI mimics human intelligence: it can reason, plan, perceive, and interpret natural language. Its tasks range from image recognition and image creation to the generation and recognition of natural language, among others.¹⁰

Increasingly in the fight against crime and the promotion of public safety, AI is becoming a major tool for the police.¹¹ According to Raji and Sholademi, AI has revolutionized crime prevention and law enforcement. Policing has evolved with technology, and AI is now a normal part of the job. Using natural language processing, machine learning, and predictive analytics, for example, helps prevent and solve crimes.¹² Machine learning algorithms, for their part, can sift through large volumes of data to expose trends and patterns that may, in principle, flag potential criminal activity.¹³ Predictive policing models illustrate the point: by drawing on historical crime records, they anticipate where and when offences are likely to occur, helping agencies place their resources where they are most needed.¹⁴ A number of countries, particularly wealthier ones, have already folded AI into their security and crime control efforts. Japan, for instance, used AI for crowd management at the 2020 Tokyo Olympics.¹⁵ An AI-based protection system helped guard the Games against terrorist attack. In the United States, the Los Angeles Police Department (LAPD) adopted predictive policing to pinpoint likely crime hotspots.¹⁶ Officers there combine geographic information systems, historical crime data, and predictive algorithms to do so. That use of AI cut violent crime in the area by 25%.¹⁷ Across Europe, police and migration agencies apply a range of AI methods, including real-time facial recognition in public spaces. The European Union goes further, encouraging member states to deploy AI in law enforcement through data analytics, digital forensics, computer vision, biometrics, and generative AI.¹⁸ Falode and colleagues note that Russia, Israel, and the United States are among the countries that have woven AI comprehensively into every arm of their security forces.¹⁹ The wider security architecture of these states now

leans on AI. Israel offers a stark example: during its 2021 conflict with Hamas, it relied on offensive and defensive weapon systems run largely by AI to intercept the many strikes launched against it.²⁰

What holds for the developed world does not yet hold for much of the Global South, the sub-Saharan region included, and Ghana is no exception. Across Africa, the integration of AI into policing and law enforcement is only beginning.²¹ Ghana's 1992 Constitution names the Ghana Police Service as the principal body responsible for internal security.²² Under that mandate, the Service is charged with keeping public order, detecting and preventing crime, apprehending offenders, and protecting people and property. It is, accordingly, the institution most closely associated with preventing violence and safeguarding elections.²³ In its day-to-day work, the GPS already draws on a spread of technologies: video cameras, data mining systems, thermal sensors, biometrics, GPS tracking, and internet and telecommunications networks. These help it share information more readily with other security agencies and coordinate crime prevention.²⁴ Its closed-circuit television (CCTV) cameras, for example, allow round-the-clock surveillance, aid the arrest of offenders, and sharpen investigations, especially in urban centres.²⁵ Useful as these tools are, this study contends that AI could take the work of the GPS considerably further. The reasoning is straightforward: criminal operations are growing more sophisticated, and the Service needs equally sophisticated means to stay ahead. The global spread of technologies such as the internet, and AI above all, has itself fed a rise in unlawful behaviour that endangers the public and lets organised crime grow faster.²⁶ Racoveanu makes a related point, tracing part of the surge in organised crime, now among the most pressing problems facing many countries, to the advance of AI.²⁷ Criminals, in other words, are turning AI to their own ends, which makes them harder to detect and deter through conventional policing. That alone underlines why the GPS should bring AI fully into its operations. Experts estimate that AI can cut urban crime by as much as 40%.²⁸ It can also shorten the time it takes to respond to emergencies.²⁹ Ghanaian scholarship, however, has tended to examine technology in policing broadly rather than AI in particular. Nweke and Francis, for instance, looked at how technology can support law enforcement and found that social media and mobile data terminals can markedly improve the efficiency, engagement, and transparency of police work.³⁰ Elsewhere, Nweke and Francis have written on community policing and technology in Ghana, and Ofori-Atta on digital surveillance and policing in the country.³¹ This study addresses the resulting gap by assessing how ready the Ghana Police Service is to put artificial intelligence to work.

2. Theoretical Framework

This study is built on the Unified Theory of Acceptance and Use of Technology (UTAUT), the model developed by Venkatesh and colleagues, which it uses to gauge how willing the GPS is to adopt AI in enforcing the law.³² UTAUT is generally used to predict whether a new technology will take hold and to measure the uptake of different technologies. It holds that four main factors shape the willingness of organisations, and of public institutions in particular, to embrace new tools: facilitating conditions (FC), effort expectancy (EE), social influence (SI), and performance expectancy (PE).³³ The model adds four moderating variables, namely gender, age, experience, and voluntariness of use, which condition the links between behavioural intention, actual use, and the factors that underlie them.³⁴ Figure 1 sets out these components.

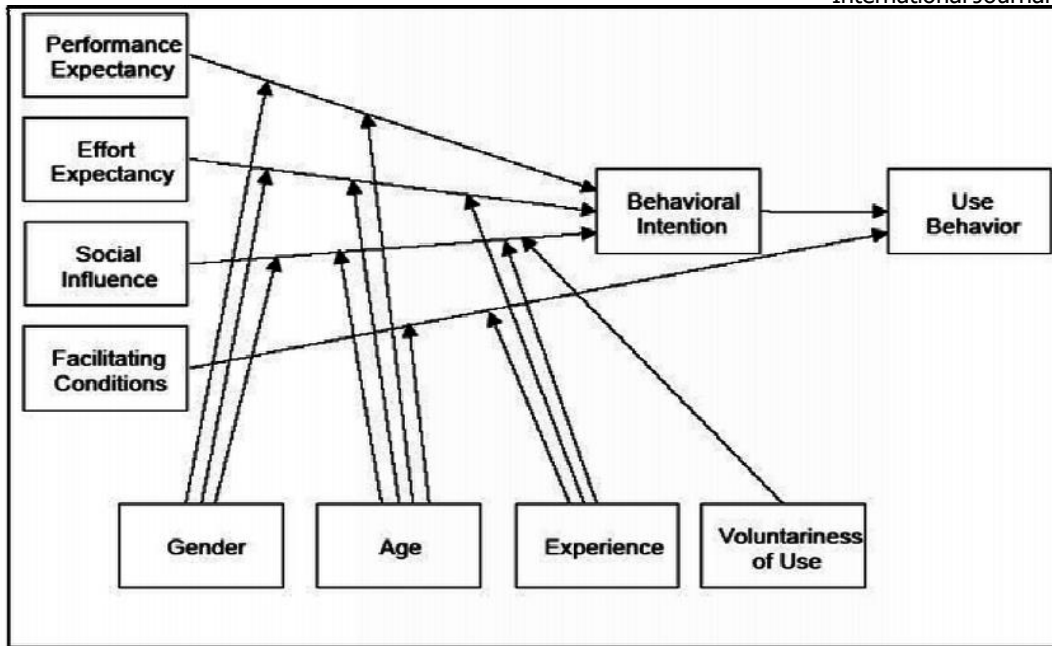


Figure 1. The Unified Theory of Acceptance and Use of Technology (UTAUT) Model

Source: Venkatesh et al. (2003).

These four ideas have since been refined against the competing models now in circulation. Performance expectancy captures how far a person or an organisation believes that a technology will help them do their work better.³⁵ Effort expectancy concerns how easy the system is to use.³⁶ Social influence reflects the degree to which someone feels that people who matter to them expect them to take up the new approach. Facilitating conditions describe how far a person judges that the technical and organisational infrastructure needed to support the system is actually in place.³⁷ The model also carries a set of moderators, among them age, gender, experience, and voluntariness.³⁸

Applying UTAUT here, the study reads the willingness of the Ghana Police Service (GPS) to adopt AI through these core determinants. It examines readiness across the four components. Performance expectancy frames how officers view the contribution AI might make to policing; effort expectancy turns on how easily officers can learn and use AI; social influence weighs the encouragement coming from the public, peers, and leaders; and facilitating conditions take in the resources, infrastructure, and policy support available for adoption. Reading the four together lets the study separate the likely barriers from the enablers. The overall picture speaks to the technological, institutional, and operational readiness of the GPS to adopt AI and put it to use in law enforcement and crime prevention.

3. Methodology

Research Design

The study adopted a qualitative research design, and a case study in particular, to examine how ready the Ghana Police Service (GPS) is to adopt artificial intelligence. A qualitative case study suited the task, given the exploratory aim of the work and the need to understand institutional perceptions, practices, and constraints as they play out in

a real organisational setting.³⁹ Starman makes the point that case study research lends itself to enquiries after rich, situated insight rather than statistically generalisable findings.⁴⁰

The Ghana Police Service was the case, and its readiness to adopt AI was the object of analysis. Where sampled external stakeholders offered comments, these served to situate the institutional and governance dynamics rather than to extend the case beyond the Service itself.

Study Context and Regional Scope

The fieldwork spanned three regions of Ghana, namely Greater Accra, Ashanti, and the Northern Region. The choice was deliberate, capturing variety in administrative role, operational demand, and the infrastructural capacity of the Service.

Greater Accra entered the study as the national administrative and policy hub of the Service. Ashanti was a densely populated region, where there were multiple policing needs, while the Northern Region provided insight into policing over a large area with a relatively small infrastructure. Combined, these jurisdictions provided a balanced perspective of the readiness of institutions across varied policing contexts, but did not imply a uniform distribution of the ability to embrace AI throughout the Service.

Study Participants and Sampling Technique

Participants were selected using purposive sampling, and were selected because they have knowledge and experience in the fields of digital systems, organisational decision-making and policing operations. As Hennink and Kaiser reason, purposive sampling lets a researcher recruit the people best placed to supply information-rich data that speaks to the research aims.⁴¹

Recruitment fell into two broad groups. The first comprised serving officers of the Ghana Police Service, spanning managerial, supervisory, and operational ranks, along with officers attached to technology-related functions. The second brought in external stakeholders whose expertise lay in the regulation, policy, or technology behind AI in public institutions.

Thirty participants took part in all, drawn from the three regions and both groups. Sample size was governed by the adequacy of the information: interviewing continued until the same themes kept recurring and fresh interviews yielded nothing new. This reflects current qualitative thinking, which values the depth and relevance of data over fixed numerical targets.⁴²

Table 1 summarises the study population.

Table 1. Description of the Study Population

Category	Sub-groups	Sample (N)	Description
Primary population	Police officers and administrators	15	Senior officers, mid-level officers, and general police personnel
	Technical and information technology (IT) personnel	5	Information and communications technology (ICT) unit staff, and cybercrime and digital forensics experts
	Specialised units	5	Criminal Investigations Department (CID), cybersecurity, and intelligence teams; Public Affairs Department (PAD)
Secondary population	Government and policy regulators	1	Ministry of the Interior, National Security, and Data Protection Commission
	Technology and AI experts	2	AI researchers and developers, and technology firms working on AI in security
	Civil society and academia	2	Security analysts, law enforcement researchers, and legal experts

Source: Authors' construct (2025).

Instruments and Data Collection Procedure

Data came from semi-structured interviews, shaped by an interview schedule that probed how participants viewed artificial intelligence, institutional capacity, and organisational readiness. The core UTAUT constructs, namely performance expectancy, effort expectancy, social influence, and facilitating conditions, guided the questions.

Interviews took place either in person or over secure virtual channels, depending on where participants were and when they were free. Each ran for roughly 25 to 45 minutes. Most were audio-recorded with consent to preserve accuracy; where recording was not possible, detailed notes were taken during the interview and written up immediately afterwards to hold on to meaning and context.

Ethical Considerations

Ethics sat at the centre of the research, all the more so because the institution under study is strongly hierarchical. Participants were told plainly what the study was for, that taking part was voluntary, and that they could withdraw at any point without penalty. Consent was secured before each interview.⁴³

Interviews were run in a way that protected confidentiality and eased any sense of institutional pressure. The emphasis on identifying details was removed in the transcription process, and the material was kept safely and used only for academic purposes. These steps were meant to encourage frank, reflective conversation while keeping participants anonymous.⁴⁴

Data Analysis

The data were read thematically, following the six-step method set out by Braun and Clarke.⁴⁵ That meant getting to know the material through repeated reading of transcripts and field notes, generating initial codes, and building up themes that captured the patterns running through the data.

Although the analysis was mainly inductive, UTAUT supplied the interpretive lens, offering a way to see how organisational, technological, and social factors fed into readiness for AI adoption in the Service. Themes were reworked for coherence and tied back to the participant groups and research aims to keep the analysis clear.

Trustworthiness of the Study

Several steps shored up the trustworthiness of the study. Engaging information-rich participants lent credibility, and the data were worked with closely and consistently.⁴⁶ A clear audit trail of methodological and analytical choices supported reliability. Reflexivity about the researcher's own part kept interpretation anchored in what participants actually said rather than in what they might be assumed to think.

4. Findings

This section draws together the main results, which rest on interviews with Ghana Police Service personnel and selected external stakeholders in Greater Accra, Ashanti, and the Northern Region. The results are set out under the core UTAUT constructs, which framed the analysis of institutional readiness for AI. The constructs give a useful scaffold, though the account stays rooted in what participants lived and in the realities of the organisation.

Performance Expectancy: Perceived Value of AI for Policing Outcomes

Awareness of what AI might do for policing ran wide across the participant groups. Most tied it to better crime detection, sharper predictive analysis, and stronger intelligence-led work. Senior and supervisory officers were especially alert to its value in handling large volumes of data and in speeding up decisions grounded in evidence.

Several participants saw room for AI in crime pattern analysis, suspect identification, and operational planning, above all in large cities where data move in bulk. One officer put it plainly: AI would surface trends the naked eye would miss, particularly where the same offences recur across jurisdictions.

That optimism, though, usually came with caveats. Some doubted whether AI could deliver without sound data infrastructure and clear rules of operation. Others wondered whether its benefits would reach every region, given the imbalances in resources and technological capacity that already exist.

On the whole, performance expectancy read as cautiously positive, held back less by any resistance to technology than by doubt over whether the institution is ready to turn AI's promise into results on the ground.

Effort Expectancy: Skills, Training, and Ease of Use

Perceptions of effort expectancy turned closely on technical competence and training. AI did not strike most participants as especially daunting, yet many questioned whether they were equipped to engage seriously with sophisticated digital systems.

Technology training, by most accounts, was limited and clustered in administrative or specialised units. Operational officers, particularly those outside Greater Accra, said that any exposure to advanced digital tools came informally and through personal initiative rather than through structured, institutional programmes.

One participant admitted that “the technology continues to evolve, but our training does not evolve with it”, which laid bare the gap between what the organisation wants and what it can currently support. That gap has bred a certain anxiety about the added workload and learning that AI might demand.

Even so, there was no outright opposition. Participants suggested instead that ease of use would hinge on the quality of training and system design, which implies that effort expectancy could improve markedly given enough institutional backing.

Social Influence: Organisational Culture and Leadership Signals

Social influence emerged as a strong force behind attitudes to AI. What surfaced repeatedly was the weight of leadership and institutional culture in either sanctioning or discouraging new technology.

By several accounts, senior management spoke warmly of digital innovation and returned often to the need to streamline policing. Yet that enthusiasm, participants noted, was not always matched by clear direction or follow-through, so AI came across as an aspiration rather than a working priority.

Peer influence told as well. Officers already receptive to AI tended to stay receptive in units where technology had been encouraged before. Where traditional styles of policing held sway, by contrast, doubt grew about whether AI had any real bearing on the work.

The pattern suggests that social influence flows not only from formal leadership messages but also from informal norms and everyday exchange among peers, either of which can lift or lower readiness for AI.

Facilitating Conditions: Infrastructure, Policy, and Institutional Support

Facilitating conditions stood out as the sharpest constraint on readiness. Across every region, participants pointed to infrastructure, funding, and institutional support as the sticking points.

Unreliable digital infrastructure, patchy access to hardware, and inconsistent data management systems weighed most heavily outside Greater Accra. For some participants, rolling out AI tools before these foundations were fixed would be premature.

Beyond infrastructure, participants flagged the absence of policy and regulation around AI in police work. That vacuum, they warned, raises hard questions about accountability, data protection, and ethics, not least where surveillance and automated decisions are involved.

External stakeholders said much the same, pressing for consistent governance structures to steer technology adoption. Their input reinforced a central point: readiness for AI is not only a matter of technical capacity but also of institutional, legal, and ethical groundwork.

Table 2 sets out the themes drawn from the analysis and maps them onto the UTAUT components.

Table 2. Presentation of Themes

UTAUT Component	Themes	Current Situation in the Ghana Police Service (GPS)
Performance Expectancy: Perceived Value of AI for Policing Outcomes	Crime prevention and response enhancement	AI can be exploited to the fullest for crime prediction and emergency response, but is currently not being used in this way.
	Intelligence-led policing	The use of facial recognition and digital forensics through AI is promising but as yet untapped.
	Automation of administrative tasks	Administrative paperwork and database management can be automated through AI, but this is yet to become the standard.
	AI for traffic and surveillance monitoring	AI-enabled CCTV and vehicle tracking would increase security, but existing systems are behind the times.
Effort Expectancy: Skills, Training, and Ease of Use	Police officers' technical knowledge and IT competence	Training for AI is largely non-existent among the majority of officers, and courses have not yet been implemented. Cybercrime units encounter only isolated aspects of AI.

UTAUT Component	Themes	Current Situation in the Ghana Police Service (GPS)
	User-friendly AI systems versus complexity concerns	AI is perceived to be complex, and officers cannot work with it because there is no tailor-made training.
	Integration with existing police systems	Paper-based records and legacy databases hinder integration owing to ageing infrastructure.
	Training and capacity development	Officer AI training is neither well institutionalised nor extensive, so officers must largely train themselves.
Social Influence: Organisational Culture and Leadership Signals	Public trust and ethics	The public is neutral, with apprehension related to privacy invasion and discriminatory AI decision-making.
	Partnerships with technology firms and universities	Few collaborations between the police, universities, and AI professionals exist, which holds back AI adoption.
	Legal and regulatory readiness	There is no dedicated legislation governing AI in policing and, as a result, there is legal vagueness in its deployment.
Facilitating Conditions: Infrastructure, Policy, and Institutional Support	Financial and logistical challenges	AI demands substantial investment, but there is no dedicated government fund for AI use in policing.
	Cybersecurity and risk management	Cyber-attacks are increasing, but AI-based security systems are not widely installed, and hence systems are exposed.
	Pilot projects and future implementation strategies	There are some pilot AI projects, but no prominent AI implementation project for Ghanaian policing.

Source: Field data (2025).

Figure 2 presents the study's conceptual framework, showing how AI technologies can act on organisational and behavioural variables to shape AI readiness in the Ghana Police Service.

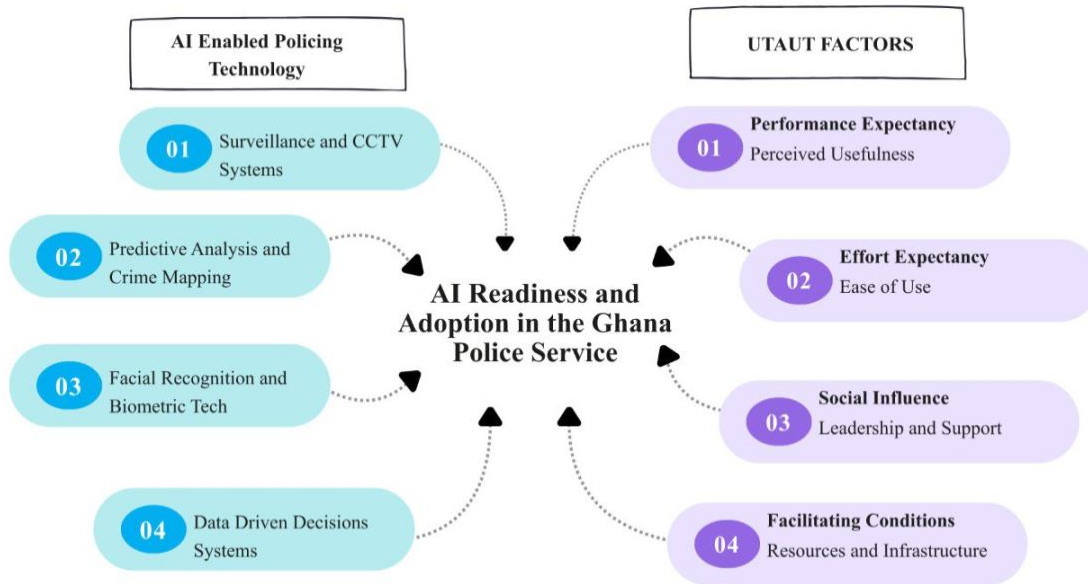


Figure 2. Conceptual Framework for Assessing AI Readiness in the Ghana Police Service Using the UTAUT Model

Source: Authors' construct (2025).

The framework is based on the well-established lens of UTAUT to analyse institutional uptake of technology. In this context, the input is the artificial intelligence (AI)-powered policing tools, including surveillance cameras, predictive analytics and biometric technologies. They are examples of the current and future applications of AI in law enforcement.

At the centre are the four constructs from the UTAUT. Performance expectancy (PE): officers' assessment of the likelihood that AI will help them be more effective at their jobs, in investigations, and in decision-making. Effort expectancy (EE) refers to the users' perception of how easy it is to use a system and how much expertise is needed to use the system efficiently. Social influence (SI) deals with leaders' support for the adoption of AI in law enforcement as well as the views of peers and the general public on AI adoption in law enforcement. Facilitating conditions (FC) encompass the institutional support (e.g., digital infrastructure, laws and ethics, funds and training).

Together these constructs shape the outcome, namely AI readiness and adoption in the Ghana Police Service. Readiness, on this view, is not simply about whether the technology exists; it is a multidimensional state resting on organisational preparedness, human capacity, and institutional orientation. By linking AI technologies to adoption outcomes through the UTAUT constructs, the framework gives a structured reading of both the openings and the limits of AI integration in Ghanaian policing.

Cross-cutting Themes: Trust, Job Security, and Public Confidence

Beyond the core constructs, a few themes cut across the accounts. Much of this centred on trust, inside the organisation and beyond it. Others believed that the decisions made by AI might be subjective and difficult to appeal, potentially undermining the trust people have in the police.

Another concern voiced was that of job security and role replacement, especially from rank-and-file officers. Very few thought AI would take the job of officers completely, but many were worried about changes to their jobs and how they would be appropriately assisted in that transition.

These concerns are a reminder that technological change carries a human dimension as much as a technical or organisational one.

Summary of Findings

Taken as a whole, readiness for AI in the Ghana Police Service looks uneven and conditional. The potential of AI is widely recognised, yet readiness is undercut by shortfalls in training, infrastructure, policy clarity, and institutional support. Leadership signals and organisational culture do much to shape perceptions, but it is the facilitating conditions that will decide whether interest in AI ever becomes practice.

5. Discussion

This study set out to gauge how ready the Ghana Police Service is to adopt artificial intelligence, reading the question through UTAUT. What emerges is a mixed and layered picture of readiness, coloured by perceived usefulness, gaps in skills and training, organisational culture, and, most decisively of all, institutional and infrastructural conditions. The discussion places these findings alongside the wider literature and draws out what they mean for technology adoption in hierarchical police organisations across the Global South.

Performance Expectancy and the Promise of AI in Policing

Consistent with the literature on AI in law enforcement, most participants recognised what AI could do for the efficiency of policing, particularly in crime analysis, intelligence-driven work, and decision-making.⁴⁷ This fits UTAUT's claim that performance expectancy drives acceptance, especially once users see a clear operational payoff.

The results also show, however, that seeing the usefulness of AI is not enough to make an institution ready. Officers were largely upbeat about its potential, yet that hope often sat beside doubt over whether the present institutional environment could realise it. Other policing contexts reveal the same strain, where the promise of AI runs up against poor data ecosystems, fragmented infrastructure, and weak operational integration.⁴⁸

In the Ghanaian case, performance expectancy seems more aspirational than operational, driven more by the technological trends officers observe elsewhere than by hands-on experience with AI-enabled systems.

Effort Expectancy, Skills, and Organisational Capacity

Effort expectancy proved a powerful influence on readiness. Although few found AI inherently hard to use, limited training and technical ability were widespread. This tallies with the literature that places skills development at the centre of technology adoption in the public sector, above all in developing countries.⁴⁹

The uneven spread of training across regions and units points to deeper organisational habits in large, centralised police forces. Where digital capacity-building stays concentrated at headquarters or in specialist units, frontline officers can feel that technology is being handed down to them with little connection to the realities of their work.⁵⁰

The reluctance, tellingly, is less about resistance to AI than about uncertainty and a sense of not being equipped. Read through UTAUT, that means effort expectancy could rise sharply with steady, context-specific training that demystifies AI and grounds it in real policing tasks.

Social Influence and the Role of Organisational Culture

Social influence shaped attitudes to AI in quieter but no less telling ways. Senior leaders were widely seen to endorse modernisation in principle, yet participants sensed a gap between the rhetoric and what actually followed. The literature echoes this, stressing that leadership support achieves little without visible investment and effort.⁵¹

Peer norms and organisational culture also played a factor. Wherever they had successfully piloted digital tools, officers were warm to AI, but where traditional policing held sway, AI was cool and abstract. The point highlights the importance of informal norms for technology acceptance, which formal policy is often blind to.

In hierarchical settings like the police, then, social influence works through both top-down cues and lateral exchange among peers, strengthening or dampening readiness according to the local climate.

Facilitating Conditions as the Primary Constraint

Of all the UTAUT constructs, facilitating conditions weighed heaviest on readiness. Time and again, participants named infrastructural limits, patchy funding, and the want of clear policy as the chief obstacles to AI. This bears out the broader critique of AI in government, which insists that technological innovation cannot be prised apart from governance, regulation, and institutional capacity.⁵²

Data quality, system compatibility, and ethical oversight were especially pressing in the Ghanaian context. Without explicit rules on accountability, data protection, and the limits of AI use, participants hesitated to move from experiment to live deployment. That hesitation mirrors a wider global anxiety about algorithmic governance and responsible AI, sharpest where security is at stake.⁵³

The implication is that AI readiness is an institutional challenge as much as a technical one, to be met through coordinated investment in infrastructure, policy, and organisational change.

Beyond the UTAUT: Trust, Ethics, and the Human Dimension

UTAUT organised the analysis well, yet the findings also reach past its constructs. Beyond this, the importance of trust, fairness and civic legitimacy was prominent in participants' stories, which reflect broader social and cultural concerns about the use of AI in policing.⁵⁴ The need for security and the threat of job displacement highlight the human aspect of AI even more. Few expected officers to be dismissed in large numbers, yet questions about changing roles and responsibilities left many feeling ambivalent. This resonates with a body of work that suggests that the effectiveness of AI in policing cannot be achieved solely through technological preparedness, but requires deliberate attention to workforce and ethical concerns.⁵⁵

Implications for AI Adoption in Policing Organisations

Read together, the findings point to a willingness within the Ghana Police Service to embrace AI, but a conditional one. Appetite for innovation and an awareness of what AI can do are both present, yet hemmed in by structural, institutional, and governance constraints. For police organisations in comparable settings, the lesson is to treat AI adoption as organisational change rather than a narrow technological fix.

Theoretically, the study affirms UTAUT's continued value while exposing its limits when applied to hierarchical, resource-constrained arms of the state. Building in trust, ethics, and institutional legitimacy could sharpen the framework's purchase in policing.

Summary

In conclusion, the level of AI readiness in the Ghana Police Service primarily hinges on the interaction between perceived benefits, skills and training, organisational culture and facilitating conditions. AI is indeed a cause for interest, but implementation will rely on answers to the questions of infrastructure, governance, and human capacity. They contribute to the broader discussion of responsible, context-aware policing use of AI, especially in the Global South.

6. Conclusion

This study has weighed how ready the Ghana Police Service is to adopt artificial intelligence, drawing on interviews with police officers and selected external stakeholders in Greater Accra, Ashanti, and the Northern Region. UTAUT provided the analytical frame for examining how perceptions of usefulness, ease of use, social influence, and facilitating conditions bear on institutional readiness for AI-enabled policing. The picture that emerges is not one of outright readiness but of readiness that is uneven and conditional. AI's ability to enhance policing capabilities, particularly in decision support and intelligence analysis, was acknowledged, aligning with the broader understanding of its role in modern policing practices.⁵⁶ However, weaknesses in skills, in infrastructure, and in organisational governance held that optimism in check.

Leadership support and talk of digital transformation may be gathering pace, but they have not yet translated into end-to-end institutional readiness. Sound infrastructure, steady funding, and a consistent policy focus proved the

decisive factors in whether AI adoption can move from idea to practice. The findings bear out the view that AI in policing is an institutional problem before it is a technical one.⁵⁷

Notably, the study foregrounds human and ethical concerns, among them trust, accountability, and the fear of changing roles. These reach beyond the core UTAUT constructs and call for a wider way of thinking about technology readiness in hierarchical state security bodies.

Practical and Policy Recommendations

On the strength of these findings, the study offers several recommendations for responsible, context-aware use of AI in the Ghana Police Service.

The first is steady, structured capacity-building. Training should do more than explain what AI is; it should show officers how to use it in the everyday work of policing. It also needs to be shared fairly across regions and units so that existing gaps in digital capacity do not widen.

The second is to put facilitating conditions first. Digital infrastructure, data systems, and the wider technological base must be in place before any serious AI rollout. Without those foundations, AI initiatives will not move past the symbolic.

The third is to build policy and governance frameworks. Any technology should come with a clear accountability, ethical use, and monitoring of AI systems, along with a solid data protection framework. This is particularly relevant in policing and can have significant impacts on public rights, trust and legitimacy in algorithmic decision-making processes.⁵⁸

The fourth is leadership that is not lip service but is felt. Institutional priorities that are shared through communication, resource allocation and monitoring are the basis for strategic intent becoming practice.

Finally, officers' concerns about their jobs and job security need to be addressed directly. Openness on these issues can lead to greater trust and help defuse uncertainty, encouraging a more positive attitude to change in the workforce.⁵⁹

Contributions of the Study

This study contributes to the growing literature on the use of AI in policing, providing grounded evidence from a Global South context that is under-represented in the literature. The results demonstrate the utility of UTAUT in a hierarchical police organisation as well as its limitations and the importance of considering institutional, ethical and human factors in any research on the readiness of a technology.

Limitations and Future Research

Findings in qualitative case studies are subject to certain limitations, as in all other qualitative research. The study was conducted in three regions of Ghana and the sample was limited, restricting the generalisability of the findings.

It may also not be as accurate at predicting actual responses once AI is implemented, as it is based on self-reported perceptions.

This research could be broadened in the future by comparing the results across countries, or by using a mixed methodology to test the relationship between perceived readiness and actual use. Longitudinal study of institutional readiness would be useful to follow to see the development of institutional readiness in relation to the shift from AI policy talk to the actual implementation.

Finally, the openness of the Ghana Police Service and their willingness to embrace AI signals a pragmatic approach to policing. The appetite for innovation is there, but meaningful and responsible adoption will call for a long-term commitment to infrastructure, capacity, governance, and the human side of change. In setting out these concerns, the study offers a grounded, context-aware contribution to the ongoing research on AI in policing.

Acknowledgements

The authors are grateful to the officers of the Ghana Police Service and to the external stakeholders who gave their time to take part in this study. Author contributions were as follows: conceptualisation, O.C.N. and S.F.; methodology, O.C.N.; validation, S.F.; formal analysis, O.C.N. and S.F.; investigation, O.C.N.; resources, O.C.N.; writing, original draft preparation, O.C.N.; writing, review and editing, O.C.N. and S.F. Both authors have read and agreed to the published version of the manuscript.

Disclosures

Funding: This research was funded by STADIO.

Informed Consent: Informed consent was obtained from all subjects involved in the study.

Data Availability: The data presented in this study are available on request from the corresponding author. The data are not publicly available owing to restrictions.

Use of Artificial Intelligence: In writing this article, the authors used AI tools to locate background literature, to edit the language of the draft, and to check that terminology stayed consistent across sections. The research design, data collection, data analysis, interpretation of findings, and conclusions are the authors' own. Each suggestion the tools provided was checked against the authors' intended meaning and either amended or discarded where it did not fit.

Conflicts of Interest: The authors declare no conflict of interest.

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