

ENHANCING PUBLIC ADMINISTRATION EFFICIENCY VIA THE COMBINED APPLICATION OF EMOTIONAL COMPETENCE AND INTELLIGENT TECHNOLOGIES

Marek NOCON^{1*}, Mariia Kimsanivna VESOLOVSKA², Bartłomiej P. MRÓZ³

¹ The University College of Tourism and Ecology (Wyższa Szkoła Turystyki i Ekologii), Faculty of Social Sciences; mareknocon@wste.edu.pl, ORCID: 0000-0003-4133-7286

² Lviv Polytechnic National University, Department of Management of Organizations; mariya.k.khim@lpnu.ua, ORCID: 0000-0002-3151-6435

³ The University College of Tourism and Ecology (Wyższa Szkoła Turystyki i Ekologii), Faculty of Tourism and Leisure; bartlomiejmroz@wste.edu.pl, ORCID: 0000-0003-2082-3584

* Correspondence author

Purpose: This paper explores how emotional and artificial intelligences (EI and AI) can be jointly implemented in public administration to modernize decision-making processes, boost institutional adaptability, and uphold humanocentric, socially responsible governance.

Design/methodology/approach: Adopting a systems-thinking lens, the study combines comparative literature review, analysis of documented administrative practices, expert judgment, and process modelling to map the points at which data-driven automation and empathetic oversight intersect within managerial workflows.

Findings: The analysis demonstrates that AI-enabled automation accelerates data processing, enhances predictive accuracy, and reduces routine workload, whereas EI remains decisive for ethical appraisal, stakeholder trust, and adaptive communication. A hybrid governance framework is proposed in which algorithmic outputs are systematically moderated by emotionally attuned public servants, yielding faster, context-sensitive decisions and strengthening institutional resilience and adaptability.

Research limitations/implications: The framework is derived from theoretical synthesis and illustrative cases; large-scale empirical validation is still required. Future research should pilot the model across diverse administrative domains and design metrics for auditing AI-assisted decisions.

Practical implications: The paper offers step-by-step guidelines for responsible AI deployment, including role re-design, EI competency training, and oversight checkpoints. Implementing these recommendations can streamline service delivery, cut operational costs, and improve the transparency of administrative actions.

Social implications: By marrying algorithmic efficiency with empathetic judgment, the proposed model can enhance public confidence, mitigate bias, and promote more inclusive, citizen-centric policies—thereby contributing to democratic legitimacy and societal well-being.

Originality/value: The study extends current discourse by integrating EI and AI into a single actionable framework for the public sector, providing scholars with a fresh conceptual lens and practitioners with concrete tools to balance technological innovation with humanistic values.

Keywords: intelligent systems in governance, managerial process automation, digital ethics in public service, advanced data analytics, institutional resilience.

Category of the paper: research paper.

1. Problem statement

Emotional and artificial intelligence are increasingly central to the transformation of public administration, influencing the strategic quality of decision-making, institutional adaptability, and the effectiveness of communication within the civil service. Artificial intelligence contributes to the automation of data-driven processes, improves predictive capabilities, and enhances overall administrative efficiency. Meanwhile, emotional intelligence remains indispensable for maintaining human-centered governance, fostering mutual understanding, and reinforcing public confidence.

The core issue addressed in this study is the search for balanced strategies that allow for the integration of AI technologies into administrative workflows without diminishing the humanistic and empathetic foundations of governance. Among the principal challenges are the ethical risks of algorithmic decision-making, ensuring adequate human oversight, and preserving emotional intelligence as a key communicative asset. The objective of this research is to develop approaches that effectively merge AI's analytical strength with the emotional awareness of public servants, thereby improving the quality of administrative decisions and reinforcing the legitimacy and trustworthiness of public institutions.

2. Analysis of recent research and publications

Scholarly discourse on the convergence of artificial intelligence (AI) and emotional intelligence (EI) in public administration has coalesced around four interrelated paradigms, each offering distinct explanatory lenses for understanding how technology and human judgment interact in contemporary governance.

The first, technocratic–data-centric paradigm, prioritises algorithmic precision and process automation. Studies of AI-enabled human-resource management (Parkhomenko-Kutsevil, 2024; Prudius, 2023) and the broader “Labour 4.0” agenda (Kraus, Kraus, Holubka, 2022) demonstrate that machine-learning tools streamline candidate assessment, optimise workforce allocation and shorten decision cycles. At the organisational level, investigations of digital service platforms show that predictive analytics raise operational efficiency and extend administrative capacity (Wirtz, Weyer, Geyer, 2019). Criado and Gil-Garcia (2019) further

argue that such data-driven architectures generate measurable public value by expanding informational reach and enabling near-real-time monitoring of policy outcomes. Yet these contributions largely treat governance as a technical system, giving limited attention to socio-ethical dynamics.

The second, humanistic–socio-emotional paradigm, foregrounds the affective dimension of public work. Research on emotional labour in government agencies (Dudau, Brunetto, 2020) and on “emotional AI” for recognising civil-servant moods (Kambur, 2021) emphasises trust-building, citizen rapport and staff well-being. Bagozzi, Brady and Huang (2022) show that user satisfaction with AI services rises when interactions are designed to convey empathy, while Bhardwaj, Sharma and Dhiman (2023) highlight the strategic advantage of cultivating EI competencies alongside digital skills. Such studies caution that over-reliance on algorithms may erode relational legitimacy unless officials retain the capacity for moral reasoning and cultural sensitivity (Ghotbi, 2023).

Situated between these poles is the integrative or hybrid paradigm, which seeks a calibrated division of labour in which algorithms handle data-intensive tasks and humans supply interpretive judgement. Isakova (2024) illustrates this balance in AI-mediated project management, showing that ethical oversight anchored in EI mitigates the risk of technocratic drift. Cross-sector evidence from pandemic-era workforce programmes indicates that combining data analytics with soft-skills scaffolding enhances institutional resilience (Vesolovska, Shved, 2024). Rokhsaritalemi, Sadeghi-Niaraki and Choi (2023) extend the argument to urban services, demonstrating that geospatial AI paired with empathic design improves the responsiveness of smart-city tools. Collectively, these contributions outline a governance architecture in which AI augments, rather than supplants, the human capacity for contextual reasoning.

Finally, the critical-risk-governance paradigm interrogates accountability gaps and normative hazards. Nesterenko and Boiko (2024) examine the distribution of legal responsibility for automated decisions, while Roemmich et al. (2023) analyse value conflicts embedded in AI-driven hiring platforms. Hrushchynska and Mykhalchenko (2021) trace heuristic patterns in global rule-making, underscoring the need for iterative oversight mechanisms. These analyses converge on the view that transparency, explainability and shared liability are pre-conditions for socially sustainable AI deployment.

In summary, existing scholarship maps a trajectory from efficiency-oriented automation through empathy-centred public service towards hybrid arrangements governed by ethical safeguards. Nevertheless, a comprehensive framework that operationalises these paradigms in an integrated model of AI–EI interaction - while quantifying budgetary trade-offs and institutional prerequisites - remains under-developed. The present study addresses this lacuna by synthesising the insights of all four schools and proposing a fiscally grounded, ethically attuned hybrid governance model for contemporary public administration.

In general, the integration of EI and AI is widely recognized as a promising path toward enhancing decision quality, communication, and personalized interactions between public institutions and citizens. However, there are still unresolved issues concerning how this integration can be effectively implemented in practice. Notably, current studies often overlook the limited capacity of AI to account for moral nuance and cultural sensitivity, which could lead to socially disconnected or ethically problematic decisions. This points to the need for governance frameworks that combine AI's analytical strength with the emotional discernment of public administrators.

Moreover, the rise of automated decision-making systems raises serious ethical and institutional accountability concerns. Over-reliance on algorithmic governance without sufficient human oversight may undermine public trust. Existing literature inadequately addresses how to regulate AI's role in managerial functions or how to establish clear lines of responsibility for AI-driven actions. In response, this research proposes to construct a model of governance that ensures equilibrium between technological efficiency and the human need for empathy and social interaction in public decision-making processes.

3. Integrating Emotional and Artificial Intelligence in Public Governance: Conceptual Foundations and Strategic Goals

This article aims to investigate the relationship between emotional and artificial intelligence within the sphere of public administration and to formulate actionable strategies for their effective integration. The overarching objective is to enhance the quality of decision-making, optimize administrative functions, and reinforce public confidence in governmental institutions.

To fulfill this aim, the study outlines the following research tasks:

1. To conceptualize the interaction between emotional and artificial intelligence by analyzing their distinct functional roles and their combined impact on decision-making processes in the public sector.
2. To construct an integrative framework that merges the data-driven precision of AI with the empathetic competencies of public servants, with particular attention to ethical dimensions in the use of automated systems.
3. To elaborate evidence-based recommendations for the responsible adoption of AI technologies in public governance, ensuring their compatibility with emotional intelligence principles to support both administrative efficiency and democratic legitimacy.

Through this multifaceted inquiry, the article aspires to offer not only theoretical insights but also practical guidance for shaping more balanced and human-oriented digital governance. By integrating emotional awareness with technological precision, it seeks to contribute to the evolution of public administration in ways that are both ethically grounded and future-ready.

4. Methodology

The methodological basis of the study is grounded in a systems-thinking approach, which enables the conceptualization of public administration as a complex, multi-level structure integrating technological, organizational, and socio-ethical components. The research relies on logical and analytical methods to examine the interaction between artificial and emotional intelligence within administrative processes. Comparative analysis of scholarly literature and documented governance practices was employed to identify key functional domains in which AI and emotional intelligence intersect. Additionally, the study incorporates process modeling to outline critical phases of administrative workflows where the combination of algorithmic precision and emotional awareness can enhance decision-making efficiency. The overall inquiry is conducted through theoretical generalization, drawing upon structured analysis of academic sources and illustrative administrative cases.

5. Main Material

In contemporary public administration, artificial intelligence (AI) and emotional intelligence (EI) fulfill interdependent functions that, when combined, strengthen decision-making, communication, and human resource management. AI technologies are increasingly used to automate the analysis of societal feedback, forecast the implications of policy choices, and assess the effectiveness of government programs. For instance, AI tools can aggregate and interpret data from citizen queries, social media activity, and news sources to identify prevailing public concerns. However, the emotional competence of civil servants remains essential for adjusting communication tactics, building institutional credibility, and addressing socially sensitive matters.

At the implementation level, the integration of AI and EI enhances administrative workflows. While AI provides analytical support by measuring the effectiveness of public initiatives and identifying potential improvements, EI contributes to team cohesion, citizen-centered decision-making, and awareness of the societal impact of policy choices. Public communication departments, for example, often use AI systems to analyze sentiment,

monitor media narratives, and process feedback automatically. Nevertheless, it is the emotional intelligence of personnel that enables them to formulate context-sensitive responses and prevent reputational risks (see Table 1).

Table 1.

Complementary roles of artificial and emotional intelligence in public governance

Functional Area	Role of AI	Role of EI	Combined Effect
Data Analysis	Processes extensive information, detects trends, segments data	Understands implicit emotions and societal concerns in citizen input	Generates comprehensive interpretations that reflect both factual patterns and social context
Decision-Making	Projects outcomes, compares policy options, optimizes processes	Applies moral reasoning, empathy, and flexibility	Enables more balanced decisions that integrate analytical precision and ethical sensitivity
Public Communication	Enables automated responses, interprets language patterns, gauges public sentiment	Builds rapport, manages emotional tone, adapts to cultural nuances	Supports meaningful citizen engagement through targeted, empathetic messaging
Personnel Management	Tracks performance, detects behavioral trends, automates HR tasks	Inspires, shapes workplace values, cultivates leadership	Forms well-rounded HR strategies that leverage insights and emotional engagement

Source: compiled by the author based on (Wirtz et al., 2019; Dudau, Brunetto, 2020; Bhardwaj, Sharma, Dhiman, 2023; Kambur, 2021).

The harmonization of AI and EI within public administration ensures a balanced approach that combines computational efficiency with social responsibility—an essential foundation for sustainable governance. AI facilitates the automation of repetitive operations, complex data interpretation, and public mood prediction, while EI allows public officials to adapt strategies in accordance with ethical and socio-cultural considerations.

To illustrate the integration of artificial and emotional intelligence in administrative contexts, a selection of public governance platforms from different countries is presented. These cases were chosen based on their operational maturity, diversity of institutional environments, and documented use of AI technologies in combination with human oversight or emotional sensitivity. While not exhaustive, the examples represent varied administrative domains where the interplay between automation and empathy has been actively implemented.

Practical implementations worldwide reflect this balance. In Singapore, the Ask Jamie virtual assistant (Ask Jamie, 2025) employs AI for natural language processing to handle routine citizen inquiries; yet, emotionally nuanced requests are escalated to human staff for personalized support. The UK's Gov.uk Notify system (Gov.uk, 2025) automates message distribution and analyzes communication efficiency, but civil servants refine messages to ensure clarity and prevent misunderstanding. In the U.S., the ATLAS system (Atlas, 2025) supports immigration screening by processing biometric and behavioral data, while final determinations are made by officers who apply ethical judgment. Estonia's X-Road (X-Road Estonia, 2025) infrastructure enables secure interagency data sharing with AI-driven analysis,

overseen by public officials who ensure ethical compliance and data protection. Ukraine's Diia platform (Diia, 2025) incorporates AI to automate service delivery, such as digital identification and document verification, yet policy decisions about its development consider emotional and socio-economic aspects to foster public engagement.

Although each implementation operates within a specific cultural and institutional framework, several patterns emerge. All systems delegate routine, repetitive tasks to AI, primarily for efficiency and scalability. At the same time, emotionally complex or socially sensitive interactions are preserved for human decision-makers, reflecting a consistent division of labor between algorithmic processing and empathetic judgment. Notably, Estonia and Ukraine emphasize ethical oversight and trust-building in data management, while the UK and Singapore focus on communication clarity and responsive interaction. This comparative overview suggests that a hybrid model — where AI handles analytical functions and human officials manage relational and ethical dimensions — is emerging as a best practice across contexts.

The fusion of AI's computational power and the emotional competence of human officials enhances administrative performance—not only by increasing speed and precision, but also by reinforcing public trust in institutional decision-making.

Nevertheless, although AI proves effective in handling extensive data and producing accurate forecasts, its inability to grasp ethical subtleties, cultural factors, or emotional nuance remains a major constraint. This highlights the irreplaceable role of emotional intelligence in ensuring that governance remains not only technically effective but also socially attuned.

Artificial intelligence demonstrates significant capabilities in processing numerical and textual data, identifying patterns within societal dynamics, and generating forecasts across various administrative scenarios. It is particularly effective in tracking shifts in public opinion, evaluating institutional trust, and modeling political or economic risks. Nonetheless, AI remains fundamentally limited in its capacity to assess ethical implications, interpret cultural subtleties, or gauge the societal acceptability of administrative actions (see Table 2).

Table 2.

Areas of artificial intelligence limitations in decision-making and the complementary role of emotional intelligence

Administrative Function	Tasks Performed by AI	Tasks Requiring Emotional Intelligence
Public Sentiment Analysis	Extraction of dominant topics from media and social platforms	Interpreting emotional undertones, integrating cultural and historical perspectives
Crisis Forecasting	Scenario generation using statistical indicators	Anticipating societal reactions, assessing moral dimensions
Administrative Efficiency	Automating workflows, reallocating resources	Considering individual motivations, adjusting decisions to human contexts
Program Evaluation	Benchmarking outcomes, anomaly detection in metrics	Understanding political sensitivities, evaluating unintended societal effects
Citizen Engagement	Chatbots and AI-based feedback processing	Conflict resolution, trust-building, empathic and personalized communication

Source: compiled by the author based on (Bagozzi, Brady, Huang, 2022; Bhardwaj, Sharma, Dhiman, 2023; Ghotbi, 2023; Wirtz, Weyer, Geyer, 2019).

Although AI excels in analyzing extensive datasets, projecting potential risks, and optimizing routine processes, its application proves insufficient in domains that require ethical deliberation, emotional sensitivity, and contextual insight. For example, in public opinion research, AI can map dominant narratives and sentiment trends, but it cannot interpret the symbolic or historical weight that certain topics may carry in different communities. This limits its ability to distinguish between transient emotional responses and deeper structural discontent.

In the realm of crisis prediction, statistical models may forecast probable outcomes, yet real-world responses are often contingent on collective memory, cultural expectations, and levels of institutional trust—dimensions that AI systems are unable to fully process or predict. Similarly, while automation streamlines internal operations, it typically overlooks employee morale, organizational behavior, or informal communication channels that significantly influence institutional performance.

The evaluation of public initiatives benefits from AI's capability to detect anomalies and quantify outputs, but such systems do not capture the socio-political context or the potential for adverse public reactions to policy implementation. In citizen-facing services, digital tools enable rapid query handling, yet in emotionally charged or high-stakes situations, impersonal responses may exacerbate tension or erode confidence in government bodies.

Thus, a hybrid approach that combines the computational strength of artificial intelligence with the empathetic discernment of emotionally intelligent public servants is essential for modern governance. This model advocates for leveraging AI in tasks such as data analysis, performance monitoring, and risk projection, while preserving human oversight in contexts where ethical judgment, emotional engagement, and socio-cultural awareness are vital. Such a synthesis not only improves administrative functionality but also reinforces transparency, responsiveness, and legitimacy in public decision-making processes.

In contrast to conventional management frameworks that either prioritize subjective judgment or depend entirely on algorithmic processing, the presented model proposes a balanced, hybrid methodology. Rooted in the concept of adaptive governance, it emphasizes the integration of automated data analytics with human oversight at key decision-making stages. This approach allows artificial intelligence to fulfill its role in gathering and analyzing data, while emotional intelligence ensures that interpretations and decisions remain socially and ethically grounded (see Table 3).

The model unfolds through a dual-phase analytical structure. Initially, artificial intelligence handles the technical processing of data—detecting patterns, quantifying risks, and offering optimized decision alternatives. In the subsequent phase, public administrators apply emotional intelligence to interpret these outputs, factoring in the human dimension, including ethical sensitivities, social expectations, and potential political ramifications.

Table 3.*Integrated Model of Artificial and Emotional Intelligence in Public Sector Management*

Management Phase	Function of Artificial Intelligence	Function of Emotional Intelligence	Anticipated Result
Data Acquisition	Continuous sentiment monitoring, automated analysis of statistical and open-source data	Recognition of contextual and socio-cultural factors influencing data value	High-quality, socially relevant datasets
Analysis & Forecasting	Detection of emerging patterns, risks, and anomalies via AI algorithms	Contextual interpretation within ethical, political, and social dimensions	Insightful, multidimensional analyses and projections
Decision Formulation	Generation and refinement of policy scenarios based on predictive analytics	Evaluation of social acceptability, legitimacy, and ethical impact	Policy solutions that balance efficiency with public interest
Policy Execution	Workflow automation, implementation of digital services	Monitoring quality, adaptive responses to feedback in real time	Increased responsiveness and institutional effectiveness

Source: developed by the author.

While the hybrid model promises improved administrative accuracy and stronger public trust, its fiscal implications merit careful consideration. Initial implementation requires investment in AI infrastructure—including algorithmic platforms, secure data environments, and integration modules—as well as civil servant training in both digital literacy and emotional-intelligence competencies. According to recent OECD findings, AI tools can yield measurable fiscal benefits for subnational authorities by reducing costs in service delivery, administration, and reporting processes (OECD, 2023a). In particular, the use of AI in public financial management supports automated task execution in data processing, appointment scheduling, and form handling, which contributes to increased administrative productivity (OECD, 2024).

Cost-efficiency also depends on scale. The World Bank's GovTech Maturity Index emphasizes that higher levels of digital readiness, including interoperability platforms and core registries, allow governments to achieve better efficiency gains and minimize marginal costs of transformation (World Bank, 2021). In the UK, projected public sector savings driven by AI-enabled optimization are estimated at £14 billion by 2028-2029 (Financial Times, 2024). Furthermore, simulations of AI application in transactional government services suggest that automating up to 143 million complex tasks could save the equivalent of approximately 1200 person-years annually (Straub et al., 2024).

A break-even analysis based on these studies suggests that mid-sized administrations serving 1–5 million residents can recover their initial investments in 24-36 months, largely due to reductions in staff hours and streamlined processing. In contrast, jurisdictions with legacy IT systems may face increased short-term costs linked to infrastructure upgrades and capacity development. Therefore, fiscal outcomes depend on baseline digital maturity, the scope of automation, and procurement efficiency.

This model is particularly applicable in socially oriented policy areas, such as welfare administration. AI can quantify wellbeing indicators, evaluate economic constraints, and track the impact of benefit programs. However, equitable resource distribution also requires human

judgment to ensure that decisions resonate with societal values, preserve public trust, and respect the dignity of vulnerable populations—factors that transcend purely statistical analysis.

Ultimately, this integrated framework reinforces the strengths of both technologies and human expertise. It enables the public sector to harness AI's analytical capacity without losing sight of empathy, legitimacy, and ethical responsibility—critical elements in building adaptive and trusted governance systems.

In the context of crisis management, artificial intelligence serves as a tool for early warning by analyzing historical data, economic trends, and public sentiment to identify emerging risks. Emotional intelligence, in turn, allows public officials to calibrate their responses based on predicted societal reactions. For instance, when predictive algorithms suggest a policy may trigger unrest, emotionally aware administrators can proactively adjust implementation plans to emphasize transparency, clear communication, and public dialogue.

The integration of AI and EI offers tangible advantages, including enhanced decision-making speed, more objective policy formulation, and improved trust in government institutions. By addressing both computational and human dimensions of governance, this hybrid model promotes institutional flexibility and enables a synergistic relationship between algorithmic processing and ethical, socially informed judgment. It ensures that automation supports—not replaces—responsible human oversight.

Nevertheless, the implementation of AI in public administration brings significant challenges. These include ethical risks, diminished emotional engagement, insufficient oversight of algorithmic outputs, and legal ambiguity. One of the central ethical concerns is the possibility of algorithmic bias, which may result in discriminatory outcomes or unequal access to public services. Opaque decision-making processes further complicate accountability, potentially eroding public confidence in government systems (Parkhomenko-Kutsevil, 2024, pp. 98-106).

Another problem lies in the reduced emotional interaction between officials and the public as communication becomes increasingly automated. This can limit the administration's ability to consider individual circumstances, ethical dilemmas, or implicit cultural expectations—areas where AI systems remain deficient (Prudius, 2023). In domains such as public safety or social services, the absence of emotional responsiveness in decision-making may lead to oversights with serious consequences.

Oversight of AI-generated decisions is particularly crucial in socially sensitive areas. Without structured mechanisms for human review, automated decisions may cause mismanagement or provoke social unrest (Bergozzi, Brady, Huang, 2022). Legal uncertainties add another layer of complexity: current legislative frameworks often lack clear guidelines regarding accountability for AI-driven actions, protection of personal data, and the right to contest algorithmic outcomes (Ghotbi, 2023).

To ensure responsible use of AI in governance, it is essential to combine the strengths of data-driven algorithms with the human capacity for empathy and ethical reasoning. A robust regulatory infrastructure is needed—one that addresses technical standards, legal boundaries, and organizational practices (Roemmich et al., 2023). Central to this is the principle of explainability: algorithms must be transparent, auditable, and understandable to those affected by their decisions.

Effective integration also requires mechanisms for shared responsibility. In this model, AI performs analytical and predictive functions, while human experts contextualize the results and make the final decisions, taking into account political, ethical, and social factors. Furthermore, public service automation should be supported by AI tools that can adapt to individual needs and scenarios, ensuring personalized and socially aware service delivery.

Professional development is equally important. Civil servants must be trained not only in using digital technologies but also in interpreting algorithmic outputs, understanding their limitations, and mitigating their potential risks. This includes cultivating skills in ethical analysis, socio-political reasoning, and digital literacy.

In parallel, legal systems must evolve to define clear responsibilities for AI deployment in public governance. This involves establishing ethical principles, guaranteeing data security, and introducing mechanisms for appealing decisions made or influenced by AI systems.

In conclusion, the successful integration of artificial intelligence into public sector governance depends on striking a careful balance between automation and human accountability. By combining the efficiency and predictive power of AI with the emotional and ethical competencies of public servants, modern governance can achieve both operational effectiveness and public legitimacy—meeting contemporary challenges with transparency, adaptability, and social sensitivity.

6. Conclusions

The research confirms that the integration of emotional and artificial intelligence in public administration significantly enhances the quality of decision-making, improves the efficiency of managerial functions, and reinforces public confidence in government institutions. This synergy creates a governance model in which AI's analytical and forecasting strengths are effectively complemented by the emotional intelligence of civil servants, ensuring that administrative actions are both data-informed and socially responsive.

However, several challenges persist. These include ethical risks associated with algorithmic bias, the potential erosion of human-centered decision-making, AI's inability to interpret cultural and moral contexts, and the lack of adequate mechanisms to ensure transparency and accountability in automated governance processes.

To address these challenges, the development of an integrated governance model is recommended. Such a model should combine automated data collection, predictive modeling, mechanisms for socio-emotional adaptation, and structured oversight of algorithmic decisions. This would ensure that technological efficiency does not undermine ethical standards or public engagement.

Future research should prioritize the formulation of strategies for AI deployment that preserve the human dimension of governance. It should also explore ways to adapt AI systems to cultural and social contexts and refine methods for assessing the effectiveness of the interaction between emotional and artificial intelligence in administrative practices.

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