



RESEARCH ARTICLE

The Impact of Artificial Intelligence on Jobs: A Study on Human Resource Professionals in Bangladesh

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Abstract: Artificial Intelligence (AI) is reshaping Human Resource Management (HRM) globally, yet empirical evidence from Bangladesh remains sparse. This study surveyed 150 HR professionals across technology, banking, manufacturing, and healthcare sectors to examine AI adoption patterns, confidence levels, and ethical awareness. An online structured questionnaire measured AI use in HR tasks, job satisfaction, organizational support, and ethical awareness; analyses included descriptive statistics, correlations, and binary logistic regression. Adoption is moderate overall—highest for résumé screening, lowest for predictive attrition modeling—with the technology sector leading. Confidence in using AI (OR = 6.21, $p < .001$) is the strongest predictor of adoption, whereas formal training shows a negative association (OR = 0.26, $p < .001$), suggesting that poorly designed training programs may impede rather than facilitate adoption. Confidence itself is shaped by training, organizational support, current adoption levels, and professional experience. These results imply that effective AI integration in HR requires more than tool exposure: it demands confidence-building, supportive organizational cultures, and ethical governance frameworks. For Bangladesh specifically, targeted training programs, managerial commitment, and national AI guidelines are essential to ensure AI augments rather than threatens HR practice.

Keywords: Artificial Intelligence, Human Resource Management, Bangladesh, Human–Machine Interaction, Task Automation, Skill Development, Ethical AI, Logistic Regression

1. Introduction

Artificial Intelligence (AI) within the business ecosystem in Bangladesh represents a novel and rapidly evolving trend across multiple industries, with human resources (HR) being a primary domain of transformation. The impending transition to AI technologies alters traditional HR roles and presupposes that new skills and business models will be required to manage organizational change effectively. Application of AI technologies appears to be one of the most promising means of workplace transformation (Al-Ayed, 2024; Qamar et al., 2021; Zhang, 2023), as it can enhance organizational efficiency, improve HR services, and strengthen decision-making procedures. HR professionals in Bangladesh operate under pressure from a fast-changing economy, requiring rapid adaptation to develop technologically competent responses to the impacts of AI (Poba-Nzaou et al., 2021; Farhan, 2023).

AI can perform repetitive tasks such as maintaining employee records and managing recruitment processes, enabling HR professionals to focus on higher-management activities (Berhil et al., 2020; Zhang, 2023; Qamar et al., 2021). However, the implementation of AI in HR also raises significant concerns. As AI systems become more prevalent, fears have emerged about traditional HR work becoming obsolete (Poba-Nzaou et al., 2021; Rathod et al., 2023; Melemuku, 2023). Although the literature suggests AI is capable of automating only a portion of available jobs, industries most affected are those where tasks are repetitive, forcing HR professionals to reexamine their skills and operational models (Melemuku, 2023; Raisch & Krakowski, 2021). The augmentation paradox—whereby AI systems not only perform activities but also enhance the work of HR practitioners—represents an important dimension requiring investigation (Raisch & Krakowski, 2021; Liu & Zhan, 2020).

This study examines the following research questions:

- Which HR tasks are being transformed by AI?
- How is AI affecting HR professionals' skills and job satisfaction?
- What barriers and ethical concerns exist in the Bangladeshi context?

2. Literature Review

2.1 Global AI and HR Trends

The application of AI to HRM is transforming traditional practices globally, particularly in recruitment, training, and performance appraisal. AI tools automate routine tasks including resume sorting and interview scheduling, reducing time-to-hire and human bias in candidate selection (Odili et al., 2024; Vasant, 2024; Rooshma et al., 2024). AI-based tools enable assessment of personal learning patterns and performance outcomes to ensure thorough skill acquisition and retention (Tambe et al., 2019; Vishwanath, 2023). AI tools provide real-time performance feedback, transforming annual review systems into continuous assessment approaches (Qamar et al., 2021; Wuisan et al., 2023). Organizations integrating AI in performance measurement report improvements in transparency, fairness, and accountability (Agustono et al., 2023).

2.2 AI in HR: Bangladesh Perspective

In Bangladesh, AI integration into HR management—particularly at the recruitment stage—is still at an initial phase but gradually gaining pace. The primary challenges are infrastructural deficiencies and insufficient training of HR personnel. Qualitative evidence suggests AI technologies will enhance recruitment efficiency and reduce bias, creating a more equitable candidate evaluation process (Sattu et al., 2024; Islam et al., 2022). Studies indicate that HR practitioners in Bangladesh who applied AI to recruitment found it improved efficiency in resume screening and reduced recruitment biases (Islam et al., 2022). Implementation requires top management endorsement, and cultural resistance, skill gaps, and inadequate technological infrastructure remain significant barriers (Singh & Pandey, 2024).

2.3 Theoretical Framework

This study employs the Human-Machine Interaction (HMI) framework to examine the interdependencies between AI systems and HR professionals. HMI provides a lens through which to understand how collaboration between human recruiters and AI-driven systems operates in practice. AI changes traditional HR roles substantially; while it can improve resume screening and candidate interviews, it simultaneously increases reliance on algorithmic decisions (Dima et al., 2024; Rathod et al., 2023). Ethical considerations are central to this framework. AI algorithms applied in recruitment may exhibit bias arising from historical training data, and left unchecked, such biases compound systemic discrimination during recruitment (Bankins et al., 2022; Nyathani, 2022). AI governance frameworks can address these risks and add value for HR professionals, workforces, and applicants (Agustono et al., 2023). Privacy—the collection, storage, and utilization of employee and applicant data—constitutes an additional ethical concern requiring regulatory compliance and ethical safeguards (Bankins et al., 2022; Agustono et al., 2023).

2.4 Gaps in Existing Research

The absence of empirical studies dedicated to unique challenges and opportunities of HR professionals in Bangladesh represents a significant gap. Most available literature concentrates on AI adoption in developed economies, which may not reflect Bangladesh's socioeconomic, cultural, and infrastructural realities (Islam et al., 2022). The ethical dimensions of AI in HR—including bias and privacy concerns—have not been adequately addressed in the local context, and ethical frameworks applicable to recruitment in Bangladesh may differ substantially from Western norms (Hunkenschroer & Luetge, 2022; Anwar, 2024).

3. Methodology

This study applied a quantitative survey research design to examine the effects of AI on HR practitioners in Bangladesh. A structured online questionnaire was distributed electronically via professional networks and HR associations. The instrument included AI adoption measures rated on a 5-point Likert scale across five HR functions: resume screening, chatbot usage, AI-driven training modules, performance appraisal analytics, and predictive attrition modeling. Job-related perceptions assessed included job satisfaction, confidence in using AI, organizational support, alignment with values, and perceived need for new skills. Ethical considerations items covered algorithmic bias awareness, existence of ethical policies, transparency of AI decision-making, and adequacy of data privacy protections.

A total of 150 HR professionals from multiple sectors participated. A purposive sampling strategy ensured participants were actively working in HR functions with some exposure to AI-related tools or discussions. Composite AI Adoption Score and Ethical Awareness Score were calculated as the mean of relevant items. Binary logistic regression analyses were conducted with 'High AI Confidence' and 'High AI Adoption' as dependent variables. Model fit was assessed using the Nagelkerke R^2 statistic. The study followed standard ethical protocols: participants were informed of study purpose, right to withdraw, and response confidentiality. No identifying information was collected.

4. Results

4.1 Participant Characteristics

A total of 150 HR professionals from Bangladesh participated. The largest age group was 51–60 years (27.3%), followed by 25–30 years (20.7%) and 41–45 years (18.0%). In terms of education, 44.0% held a Bachelor's degree, 27.3% a Master's degree, and 8.0% a PhD. Gender representation was relatively balanced: 55.3% male and 44.7% female. The technology sector dominated (32.7%), followed by manufacturing (22.0%) and banking (21.3%). Most participants worked in medium-sized organizations (39.3%). Table 1 presents the full demographic profile.

Table 1. Demographic Characteristics of Respondents (N = 150)



Category	Count	Percentage (%)
Age 25–30 years	31	20.7%
Age 31–35 years	16	10.7%
Age 36–40 years	22	14.7%
Age 41–45 years	27	18.0%
Age 46–50 years	13	8.7%
Age 51–60 years	41	27.3%
Education: Bachelor	66	44.0%
Education: Diploma	21	14.0%
Education: Master	41	27.3%
Education: PhD	12	8.0%
Education: Professional	10	6.7%
Gender: Female	67	44.7%
Gender: Male	83	55.3%
Sector: Banking	32	21.3%
Sector: Healthcare	20	13.3%
Sector: Manufacturing	33	22.0%
Sector: Other	16	10.7%
Sector: Technology	49	32.7%
Company: Small (1–50 employees)	48	32.0%
Company: Medium (51–200 employees)	59	39.3%
Company: Large (200+ employees)	43	28.7%

4.2 AI Adoption Among HR Professionals

Adoption of AI across HR functions varied by industry and organizational size. Respondents reported the highest adoption in resume screening and candidate selection, while lower levels were observed in predictive attrition modeling and AI-driven training modules. The AI Adoption Score ranged from 1.8 to 4.5, indicating moderate adoption across tasks. The Ethical Awareness Score ranged from 1.5 to 4.5, reflecting variable perceptions of fairness, transparency, and data protection. Strong positive associations were observed between organizational values alignment and confidence in using AI ($r = .70$) and job satisfaction ($r = .69$). Training on AI systems was moderately correlated with confidence ($r = .60$) and organizational support ($r = .61$). AI adoption score was positively associated with confidence using AI ($r = .40$).

4.3 Predictors of AI Confidence

A binary logistic regression identified predictors of High AI Confidence (Table 2). The model demonstrated strong explanatory power (Nagelkerke $R^2 = 0.48$). Training on AI systems (OR = 4.85, $p < .001$) and AI Adoption Score (OR = 10.38, $p = .001$) were the strongest predictors. Organizational support (OR = 3.46, $p < .001$) and professional experience (OR = 1.16, $p = .021$) also contributed significantly, suggesting that training, experience, and supportive organizational environments are critical for enhancing HR professionals' confidence in using AI.

Table 2. Logistic Regression Predicting High AI Confidence (N = 150)

Predictor	β	OR	95% CI for OR	p-value
Training on AI Systems	1.579	4.85	2.65 – 8.89	<0.001
AI Adoption Score	2.340	10.38	2.68 – 40.17	0.001
Organizational Support	1.242	3.46	1.94 – 6.17	<0.001
Experience Level	0.150	1.16	1.02 – 1.32	0.021
Constant	-18.702	7.55e-09	7.65e-12 – 7.0e-06	<0.001

Note. Nagelkerke $R^2 = 0.48$ (strong explanatory power).

4.4 Predictors of AI Adoption



A second logistic regression examined predictors of High AI Adoption (Table 3). The model had moderate explanatory power (Nagelkerke $R^2 = 0.26$). Confidence using AI (OR = 6.21, $p < .001$) emerged as the strongest predictor. Interestingly, training on AI systems showed a negative relationship (OR = 0.26, $p < .001$), suggesting that insufficient or poorly designed training programs may discourage adoption. Ethical awareness ($p = .059$) and organizational support ($p = .074$) were marginally significant but did not reach conventional thresholds.

Table 3. Logistic Regression Predicting High AI Adoption (N = 150)

Predictor	β	OR	95% CI for OR	p-value
Confidence Using AI	1.827	6.21	3.08 – 12.57	<0.001
Training on AI Systems	-1.332	0.26	0.16 – 0.45	<0.001
Ethical Awareness Score	0.733	2.08	0.97 – 4.45	0.059
Organizational Support	-0.377	0.69	0.45 – 1.04	0.074
Constant	-3.569	0.028	0.002 – 0.40	0.008

Note. Nagelkerke $R^2 = 0.26$ (moderate explanatory power).

5. Discussion

The results indicate that AI adoption in HR is progressing unevenly across Bangladeshi industries, with stronger uptake in the technology sector. Training, organizational support, and prior adoption levels are highly influential in building HR professionals' confidence in AI. However, actual adoption behaviors are better predicted by confidence than by training, underscoring a potential discontinuity between AI tool exposure and the benefits of integration into HR practice. This finding may reflect inadequacy or poor design of current training programs in Bangladesh, noted as a structural barrier to AI readiness (Islam et al., 2022; Singh & Pandey, 2024).

The negative association between training and actual adoption is counterintuitive but may reflect that training, unless hands-on, context-specific, and sustained, fails to translate into meaningful behavioral change. The results confirm that confidence in using AI is the most robust predictor of adoption, aligning with global research linking perceived ease of use and self-efficacy with technology uptake (Qamar et al., 2021; Rooshma et al., 2024). Ethical considerations, while quantified, did not influence adoption as strongly as expected, consistent with international evidence that ethical apprehensions take a back seat to organizational efficiency targets (Bankins et al., 2022; Mehrotra & Khanna, 2022).

On the theoretical level, findings revive the Human-Machine Interaction framework's insights on the interdependence of technological tools and human agency (Raisch & Krakowski, 2021; Dima et al., 2024). AI does not merely automate HR processes but changes the nature of professional identity, imposing on practitioners the need to develop higher-order skills—critical thinking, moral oversight, and strategic assimilation. This augmentation paradox, where routine jobs are transformed while strategic opportunities expand, is evident in Bangladesh where HR workers navigate between fear of obsolescence and excitement about new skills (Melemuku, 2023; Rathod et al., 2023).

6. Conclusion and Recommendations

This study examined the implications of AI on HR professionals in Bangladesh regarding adoption levels, confidence, ethical awareness, and organizational support. AI adoption remains unequal, with technology-intensive industries leading. Training and organizational support are strong predictors of confidence, and confidence is the most dominant predictor of adoption. The negative relationship between training and adoption indicates that more effective, situation-specific training programs are necessary. Several recommendations emerge. First, organizations should implement detailed and practical training programs extending beyond technical showcases to instill confidence, critical analysis, and ethical competence (Islam et al., 2022; Tambe et al., 2019). Second, organizational facilitation and managerial commitment are critical for AI implementation environments that are perceived as opportunities rather than threats (Hmoud & Várallyai, 2022; Panwar, 2023). Third, AI policies and ethical practices in HR should be formalized to enable transparency of algorithmic decisions and safeguard employee privacy (Bankins et al., 2022; Hunkenschroer & Luetge, 2022). Fourth, national guidelines on ethical AI usage in HR are urgently needed in Bangladesh to promote responsible use in the developing economy context (Islam et al., 2022; Singh & Pandey, 2024).

Declarations

Data Availability: Data are available from the corresponding author upon reasonable request. Data are not publicly available due to privacy considerations.

Competing Interests: The author reports there are no competing interests to declare.

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