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Artificial Intelligence–Driven Transformation of Human Resource Management: Enhancing Operational Efficiency, Strategic Decision-Making, and Employee Well-Being — Evidence from the Tidjani Group Industrial Case Study

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Abstract

The accelerating diffusion of artificial intelligence (AI) technologies has profoundly reshaped organizational structures and managerial practices, positioning AI as a strategic driver of efficiency, innovation, and competitiveness. Within this context, human resource management (HRM) has emerged as one of the most dynamic domains for AI adoption, as organizations seek data-driven, intelligent solutions to address complex workforce challenges. This study investigates the impact of artificial intelligence applications on enhancing operational efficiency in human resource management, drawing empirical evidence from a case study of the Tidjani Group of Industries. Using a quantitative research design, data were collected from 63 managerial officials across different organizational levels. Structural equation modeling was employed to examine the relationships between AI applications and HRM performance across four core dimensions: big data analytics, knowledge extraction, expert systems, and machine learning. The findings reveal that AI adoption significantly improves recruitment accuracy, supports continuous training and skills development, enhances performance appraisal systems, and positively influences employee well-being. Moreover, the results indicate that AI-driven HRM contributes to higher organizational efficiency by reducing administrative costs, improving decision-making speed and quality, and aligning human capital strategies with organizational objectives. The study provides empirical validation of AI's strategic role in modern HRM and highlights its capacity to balance organizational performance with employee satisfaction. It offers practical insights for managers and policymakers by emphasizing the importance of integrating AI solutions into HR processes to foster sustainable innovation and long-term competitive advantage in industrial organizations.

JEL Classification Codes: O33; M12; M54

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Introduction

In recent years, the world has witnessed an unprecedented acceleration in technological development, with artificial intelligence (AI) technologies becoming a fundamental component of digital transformation across various sectors. Amid the increasing challenges faced by industrial companies, AI has emerged as a critical tool for enhancing operational efficiency and improving organizational performance, including the ability to anticipate problems and make more accurate and effective decisions.

AI holds particular significance in the field of human resource management, as it can bring about a transformative change in how employees are recruited, their performance is managed, and their skills are trained and developed, in addition to improving their well-being and overall work experience. Human resource management has evolved beyond traditional functions such as recruitment and employee supervision to become a strategic element that contributes to improving institutional performance, fostering innovation, and increasing productivity.

With the growing volume of data and the increasing complexity of daily operations, it has become essential for industrial companies to adopt intelligent solutions for big data analysis and knowledge extraction, enabling them to enhance decision-making, reduce costs, and respond more rapidly to market demands. In this context, AI represents an effective tool for improving the efficiency of operational and functional processes, achieving a balance between organizational performance and employee satisfaction, and ultimately supporting the long-term competitiveness of the organization.

Research Problem

In this context, the study raises the following research question: How can artificial intelligence enhance the efficiency of human resource management in industrial companies? The study aims to provide a systematic perspective on the relationship between AI technologies and organizational HR performance, with a focus on improving operational processes, enhancing decision-making efficiency, and achieving a balance between employee satisfaction and organizational performance effectiveness.

Research Hypotheses

- ✓ The use of artificial intelligence technologies has a positive impact on the efficiency of employee recruitment processes in industrial companies.
- ✓ Artificial intelligence can play an effective role in enhancing training programs and developing employees' skills.
- ✓ AI applications have a direct effect on improving performance management and increasing the effectiveness of employee evaluations.
- ✓ Artificial intelligence contributes to enhancing employee well-being and improving their overall work experience in the workplace.

Research Objective

The study aims to analyze the role of artificial intelligence in enhancing the efficiency of employee recruitment in industrial companies and to explore its impact on improving training programs and developing employees' skills. It also seeks to examine the effect of AI applications on performance management and increasing the effectiveness of employee evaluations, in addition to investigating its role in enhancing employee well-being and improving their overall experience within the organization.

Literature Review

In recent years, there has been a significant expansion in studies examining the applications of artificial intelligence (AI) in human resource management (HRM), with research focusing on a range of practical and strategic dimensions. For instance, Mer (2023) highlighted that AI can reduce costs, limit employee turnover, and enhance productivity, while also contributing to improved recruitment processes, fostering diversity and inclusion, increasing employee engagement, and promoting mental well-being, proposing a conceptual model for contemporary trends in HRM (Mer, 2023, p. 31).

Similarly, Murugesan (2023) focused on HR's capacity to adapt to the changes imposed by AI, reviewing five key AI applications for enhancing HR efficiency, along with three core elements of HR readiness, emphasizing that organizational adaptability is a crucial factor for achieving sustainable development and improving occupational health and safety (Murugesan, 2023, p. 1).

Morandini et al. (2023) highlighted AI's role in enhancing professional skills and the importance of a multidisciplinary approach to understanding AI applications across sectors, emphasizing the development of soft skills and employee reskilling to address challenges associated with digital transformation while ensuring equality and inclusivity (Morandini, 2023, p. 39).

Rathore (2023) focused on qualitative bibliometric analysis to evaluate the evolution of AI applications in HRM over an 18-year period, noting continuous improvement in deploying new technologies that support organizational sustainability and create a competitive advantage through enhanced employee performance (Rathore, 2023, p. 78).

From a practical perspective, Ganatra (2024) demonstrated that AI improves the accuracy of administrative processes such as recruitment, training, performance evaluation, and workforce planning. The study also emphasized the use of predictive analytics to optimize resource allocation and strategic decision-making, highlighting the importance of integrating big data and statistical analysis before and after AI implementation to provide actionable insights for practitioners (Ganatra, 2024, p. 182).

Basnet (2024) indicates that AI-powered predictive analytics can enhance employee retention strategies, identify skill gaps, and support succession planning, while addressing ethical challenges and data protection (Basnet, 2024, p. 50). Similarly, Yanamala (2024) emphasizes the need for transparency in AI applications within the workplace to ensure responsible and effective use of these technologies (Yanamala, 2024, p. 1).Finally, Rao et al. (2024) highlighted the growing role of AI in reshaping HR functions across sectors, including retail, healthcare, and finance, by improving productivity and efficiency in workforce planning and supporting strategic decision-making (Rao, 2024, p. 2).

1 Theoretical Framework

The current era is witnessing rapid advancements in artificial intelligence (AI), which has become a key element in human resource management, contributing to improved organizational efficiency, enhanced employee experience, and faster decision-making. This section of the study aims to provide an overview of modern AI applications in HR and their role in enhancing human performance within organizations.

1.1 Concept of Artificial Intelligence

Artificial intelligence (AI) is a branch of computer science that aims to develop systems capable of simulating human cognitive abilities, including learning from data (Shagufta Quazi, 2022, p. 212), decision-making, problem-solving, and interacting with the environment (He, 2019, p. 31). AI encompasses several key areas, most notably machine learning, which focuses on developing systems that can learn from data and improve their performance automatically without explicit programming, using prior experiences to identify patterns and make decisions (Buch, 2018, p. 143). It also includes deep learning, a subset of machine learning that relies on deep neural networks to process complex data, characterized by its ability to handle vast amounts of information and transfer knowledge across different operational units, making it particularly effective for feature extraction and advanced data analysis (Bouhadra, 2024, p. 2). Furthermore, AI applications include expert systems, which aim to emulate the reasoning and evaluation processes of human experts in specific domains. These systems rely on knowledge engineering to provide accurate and efficient solutions, offering manufacturing companies a competitive advantage by reducing product development time, improving quality, and lowering costs (Nguyen, 2017, p. 137).

1.2 Artificial Intelligence in Human Resource Management

Artificial intelligence contributes to human resource management by enhancing internal processes and improving overall human performance (Khashman, 2022, p. 2320). AI enables the optimization of all aspects of HR management, from recruitment and employee selection to skills development and training programs, as well as performance management and career planning. It also enhances the employee experience, increases engagement, and supports more accurate and strategic decision-making, thereby improving overall organizational performance and strengthening the competitiveness of institutions.

1.3 Core Applications of Artificial Intelligence in Human Resource Management

The core applications of artificial intelligence in human resource management encompass a range of tools and systems designed to enhance efficiency and facilitate decision-making within organizations. In the recruitment process, AI serves as a pivotal tool for improving employee selection, as it can replace manual resume screening and face-to-face interviews, allowing organizations to attract the most suitable talents more quickly and accurately, thereby enhancing the quality of hires (Torres, 2017, p. 6). AI also contributes to automating routine administrative

processes, including attendance tracking and payroll management, which reduces human errors, saves time and effort, and generally supports the efficiency of HR management.

Moreover, AI plays a crucial role in predictive analytics and data analysis, enabling organizations to forecast employee performance by examining past behaviors, such as performance evaluations, participation in training programs, and working hours (Marler, 2017, p. 4). These analytical capabilities allow organizations to make data-driven decisions, improve employee retention strategies, and identify training and development needs. In terms of employee experience, AI helps measure employee satisfaction, respond to their sentiments, and provide tailored solutions to enhance the work environment, thereby boosting motivation and productivity (Davenport, 2018, p. 111).

Furthermore, AI can transform continuous learning and professional development by offering adaptive and personalized training programs based on performance analysis and the identification of individual strengths and weaknesses. Smart tools also track employee progress along learning paths and provide periodic reports on professional growth, supporting skill enhancement and achieving career development objectives (Khan, 2024, p. 327). Through these integrated applications, AI enables organizations to improve all aspects of human resource management, from recruitment to professional development, enhancing organizational efficiency and creating a more supportive and motivating employee experience

1.4 Challenges Facing the Implementation of Artificial Intelligence in Human Resource Management

Despite the significant benefits that artificial intelligence offers in enhancing human resource management, its implementation faces several challenges that may affect its effectiveness and sustainability within organizations.

The main challenges include:

- **Resistance to change:** Some employees may struggle to adapt to new technologies or may reject their use due to fear of change and loss of control over certain processes.
- **Algorithmic bias:** Algorithms may contain unintended biases that impact fairness in decisions related to recruitment or performance evaluation.
- **Privacy concerns:** The collection and analysis of employees' personal data may raise issues regarding confidentiality and security, necessitating compliance with legal and ethical standards to protect sensitive information.

Therefore, it is essential to develop comprehensive strategies to address these challenges, including employee training, algorithm review to ensure fairness, and the enhancement of privacy policies, in order to maximize the benefits of artificial intelligence in human resource management while maintaining fairness and trust within the workplace.

1.5 The Future Prospects of Artificial Intelligence Applications in Human Resource Management

With the continuous advancement of artificial intelligence technologies, AI applications in human resource management are expected to expand significantly, enabling organizations to improve the effectiveness and efficiency of workforce management. AI will continue to provide innovative solutions that enhance the employee experience through customized training programs, personalized professional development recommendations, and data-driven insights to improve both individual and team performance. These technologies will also accelerate and streamline recruitment processes by analyzing big data more accurately and effectively, reducing human errors and traditional biases. Moreover, advanced predictive analytics and AI tools will enable objective and precise evaluations of employee performance, supporting strategic decision-making based on reliable and accurate data. By overcoming traditional HR challenges such as resistance to change and human biases, AI can contribute to creating a more efficient, fair, and sustainable work environment. In light of these developments, organizations will be able to enhance their competitiveness, foster innovation, and support long-term growth and sustainability.

2 Method and Tools

2.1 Sample Selection

A random sample of 63 managerial staff from Tidjani Group of Companies was selected based on specific criteria, including their experience in human resource management and familiarity with the applications of artificial intelligence in their work. The sample was also ensured to represent all the main departments within the companies, to capture a comprehensive range of perspectives and professional experiences.

2.2 Defining the Variables and Their Measurement

Four main variables were identified to study the impact of artificial intelligence applications on improving the efficiency of human resource management, which are:

- **Big Data Analytics**: This variable was measured by evaluating the extent to which artificial intelligence is used to analyze large volumes of data to improve strategic decisions.

- **Knowledge Extraction**: This variable was measured based on the ability of artificial intelligence to extract patterns and knowledge from big data that can be used to improve administrative performance.
- **Expert Systems**: This variable was measured through the use of intelligent systems in making administrative decisions based on pre-established rules and inputted information.
- **Machine Learning**: This variable was measured by the ability of systems to learn from data and improve their performance over time.

2.3 Data Collection Method

The data were collected using a carefully designed questionnaire aimed at accurately measuring all four variables. The questionnaire included items related to each of the four studied aspects of artificial intelligence and consisted of a mix of closed-ended and optional questions, allowing participants to express their opinions and assessments objectively. The questionnaire was distributed to the selected sample, and the data were collected electronically to ensure ease of access and accuracy.

2.4 Statistical and Measurement Tools

Structural Equation Modeling (SEM) was employed to examine the relationship between artificial intelligence applications and human resources performance. This method was used to test the research hypotheses and to identify both the direct and indirect effects among the various variables. SEM is particularly suitable due to its capability to handle complex and interrelated relationships between multiple variables simultaneously.

3 Results and Discussion

3.1 Validity and Reliability Testing

3.1.1 Internal Consistency

Validity and reliability testing are fundamental in scientific research to ensure the quality of research instruments and the accuracy of their results. Validity aims to verify that the instrument measures the theoretical concepts it was designed to assess, while reliability reflects the stability and consistency of the instrument's results when applied under similar temporal or contextual conditions. Combining both aspects enhances the scientific credibility of the findings and minimizes the influence of biases or random measurement errors.

In this context, **Cronbach's Alpha** was used to measure internal consistency, as it is one of the most widely used statistical indicators for assessing the correlation among questionnaire items within each dimension and their homogeneity in measuring the same construct. High alpha values indicate that the items within each dimension work harmoniously and accurately reflect the intended theoretical construct.

The following table presents the internal consistency results for both AI dimensions and HR dimensions:

Table (1): Cronbach's Alpha for AI and HR Dimensions

Dimension	Cronbach's Alpha	Sig. (Two-tailed)
Big Data Analytics	0.86	0.000
Knowledge Discovery	0.84	0.000
Expert Systems	0.81	0.000
Machine Learning	0.87	0.000
Employee Experience Management	0.88	0.000
Continuous Performance Management	0.83	0.000
Continuous Learning & Personal Development	0.86	0.000
Employee Well-being	0.89	0.000
Overall Dimensions	0.86	0.000

The table values indicate that all Cronbach's Alpha coefficients exceed the minimum accepted threshold (0.70), demonstrating a high level of internal consistency among items within each dimension. For instance, the Big Data Analytics dimension scored 0.86, reflecting strong coherence among its items and their ability to represent the construct accurately. The Employee Well-being dimension achieved the highest score of 0.89, indicating clarity in its items and stable responses from participants.

Other dimensions ranged between 0.81 and 0.88, reflecting good to excellent internal consistency, confirming item homogeneity and suitability for measuring the theoretical constructs of the study. The statistical significance values (Sig. = 0.000) indicate that the reliability coefficients are statistically significant and not due to chance. The overall internal consistency value of 0.86 indicates that the research instrument has a high degree of reliability and stability, capable of consistently and accurately measuring the AI and HR dimensions. Therefore, this instrument can be confidently used for hypothesis testing and advanced statistical analyses, such as multiple regression and structural equation modeling.

3.1.2 Test-Retest Reliability

Test-retest reliability is one of the fundamental statistical methods used to verify the stability of a research instrument over time. It involves administering the same questionnaire to the same sample at two different time points and then calculating the correlation between the two sets of results. This procedure aims to ensure that the instrument measures the study variables consistently and that the results are not influenced by random or situational factors, thereby enhancing the reliability of the instrument and its suitability for advanced statistical analysis.
The table below presents the reliability coefficients for both the artificial intelligence dimensions and the human resources dimensions, calculated by measuring the correlation between the first and second applications for each dimension separately.

Table (2): Test-Retest Reliability Coefficients for Artificial Intelligence and Human Resources Dimensions

Dimension	Reliability Coefficient	Sig. (Two-tailed)
Big Data Analytics	0.87	0.000
Knowledge Discovery	0.83	0.000
Expert Systems	0.82	0.000
Machine Learning	0.86	0.000
Employee Experience Management	0.85	0.000
Continuous Performance Management	0.81	0.000
Continuous Learning & Personal Development	0.84	0.000
Employee Well-being	0.88	0.000
Overall Dimensions	0.85	0.000

The values reported in the table indicate that all reliability coefficients exceed the minimum acceptable threshold of 0.70, reflecting a high level of temporal stability and measurement consistency across all dimensions. The highest reliability value was observed for the Employee Well-being dimension (0.88), suggesting strong clarity of the associated items and stable respondent perceptions. Moreover, all significance values are below the 0.05 level, confirming that the reliability coefficients are statistically significant.

Based on the overall reliability coefficient of 0.85, the research instrument demonstrates a high degree of consistency and stability over time. This confirms its suitability for hypothesis testing and for analyzing causal relationships using multiple regression and structural equation modeling, while ensuring accurate and reliable measurement of all studied dimensions.

3.2 Testing the Basic Assumptions of the Statistical Model

It is necessary to verify that the fundamental assumptions of the statistical model are satisfied before proceeding with the interpretation of results, in order to ensure the accuracy of the estimates and the validity of the conclusions. This process includes examining multicollinearity among the independent variables to confirm the absence of high correlations that could affect the stability and interpretability of the coefficients. It also involves testing the normality of data distribution to assess whether the variables conform to the statistical assumptions required by many inferential methods. In addition, homoscedasticity and the absence of influential outliers are evaluated, along with verifying the independence of error terms, thereby ensuring the reliability of the results, the robustness of the model, and its ability to generate scientifically sound and generalizable conclusions.

3.2.1 Multicollinearity Test

Table (3): VIF and Tolerance Values for Artificial Intelligence Dimensions

Dimension	VIF	Tolerance
Big Data Analytics	2.3	0.43
Knowledge Discovery	2.9	0.35
Expert Systems	1.7	0.59
Machine Learning	2.1	0.48

The Variance Inflation Factor (VIF) is used to assess the presence of multicollinearity among the independent variables. Values above 10 indicate serious multicollinearity. In this model, all VIF values are below 5, which suggests that the level of correlation among the AI dimensions is acceptable and does not threaten the stability of the regression estimates.
The Tolerance values for all dimensions exceed the minimum threshold of 0.10, indicating that each independent variable explains a sufficient amount of unique variance and does not strongly overlap with the others.
Overall, these results confirm that multicollinearity is not a concern in the model, thereby enhancing the reliability and robustness of the regression analysis and supporting the validity of the estimated relationships.

3.2.2 Normality Test

Testing for normality is a fundamental step in statistical analysis to ensure the validity of assumptions related to data distribution. The conformity of the data to a normal distribution was assessed using skewness, kurtosis, and the Shapiro-Wilk test, which is considered a precise tool for analyzing small to medium-sized datasets. The results for all studied variables are presented in the following table:

Table (4): Normality Test

Dimension	Skewness	Kurtosis	Shapiro-Wilk W	p-value
Big Data Analytics	0.31	1.12	0.974	0.142
Knowledge Discovery	0.38	-0.19	0.976	0.150
Expert Systems	0.53	0.87	0.980	0.105
Machine Learning	0.47	1.10	0.982	0.089
Employee Experience Management	0.41	0.82	0.975	0.160
Continuous Performance Management	0.36	1.00	0.971	0.198
Continuous Learning & Personal Development	0.33	1.75	0.981	0.094
Employee Well-being	0.28	0.93	0.979	0.118

Skewness values range from 0.28 to 0.53, indicating only a slight right skew. This suggests that the data do not deviate significantly from a normal distribution, which supports the reliability of statistical analyses assuming normality.

Kurtosis values range from -0.19 to 1.75, showing that most variables have a moderate distribution. Some dimensions display slight positive or negative kurtosis, meaning the data are slightly more or less peaked around the mean. This does not pose a major issue for analysis.

Shapiro-Wilk test results show that all p-values are above 0.05 and W statistics are close to 1, indicating no strong evidence that the data deviate from normality.

The results indicate that the data for all studied dimensions are very close to a normal distribution. Therefore, these data can be confidently used in advanced statistical analyses such as multiple regression and structural equation modeling without concern for major deviations or outliers.

3.3 Constructing a Structural Model for the Variables

3.3.1 Estimating the coefficients between variables

The relationships between independent and dependent variables were estimated and the results were as follows:

Table (5): Estimating the coefficients between variables

Relationship Between Variables	Coefficient
Big Data Analytics → Recruitment Strategies Improvement	0.75
Knowledge Extraction → Continuous Training Improvement	0.70
Expert Systems → Performance Management Improvement	0.57
Machine Learning → Employee Well-being Improvement	0.63

The table shows that all coefficients between independent and dependent variables are statistically significant, indicating that artificial intelligence applications positively influence all the studied dimensions.

The strong relationship between Big Data Analytics and Recruitment Strategies Improvement (coefficient 0.75) indicates that the use of AI and advanced data analytics effectively enhances recruitment strategies. By analyzing large datasets, companies can identify the best candidates based on precise criteria, improving efficiency and reducing recruitment-related costs.

The relationship between Knowledge Extraction and Continuous Training Improvement (coefficient 0.70) highlights the role of knowledge extracted from data in accurately identifying training needs. Knowledge extraction techniques enable organizations to detect skill gaps and design customized training programs, improving employee performance and supporting organizational efficiency and continuous innovation.

The relationship between Expert Systems and Performance Management Improvement (coefficient 0.57) suggests that using these systems in performance evaluation contributes to providing accurate and objective assessments of employee performance. These tools facilitate strategic decisions regarding professional development and promotions, thereby enhancing overall productivity.

Finally, the relationship between Machine Learning and Employee Well-being Improvement (coefficient 0.63) shows that machine learning applications can enhance workplace environment and employee psychological well-being. By analyzing data related to employee behavior and satisfaction, machine learning can help design supportive and healthy work environments, increasing employee satisfaction and reducing stress and workplace pressure.

3.3.2 Testing the significance of the coefficients

The significance of each path coefficient was examined using **T-values** and **P-values**. The results, presented in the table below, indicate that all coefficients are statistically significant, suggesting that the relationships between variables are not random but reflect a real effect.

Table (6): Testing the significance of the coefficients

Relationship Between Variables	T-value	P-value	Interpretation
Big Data Analytics → Recruitment Strategies Improvement	7.84	0.000	Statistically significant, indicating a strong positive effect of Big Data Analytics on improving recruitment strategies.
Knowledge Extraction → Continuous Training Improvement	6.47	0.000	Significant relationship, showing that knowledge extraction positively influences continuous training enhancement.
Expert Systems → Performance Management Improvement	6.05	0.000	Significant impact, suggesting expert systems contribute to better performance management.
Machine Learning → Employee Well-being Improvement	6.72	0.000	Statistically significant, indicating machine learning applications enhance employee well-being.

All T-values are above the critical threshold (typically 1.96 for a 95% confidence level), and all P-values are below 0.05, confirming that the effects of the independent variables on the dependent variables are statistically significant. This supports the conclusion that the use of artificial intelligence applications in human resource management has a measurable and meaningful impact on recruitment, training, performance management, and employee well-being.

3.3.3 Model validity verification

After estimating the relationships between variables in the structural model, the model's validity was assessed using key fit indices: GFI, CFI, and RMSEA. These indices are standard metrics for determining how well the model fits the actual data, reflecting the quality of the model in representing the hypothesized relationships between variables.

Table (7): Validity Assessment

Index	Value	Interpretation
GFI	0.92	Indicates good fit between the model and the data, as GFI values above 0.90 are considered acceptable.
CFI	0.95	Reflects excellent fit between the model and the data, indicating strong explanatory power of the model regarding variable relationships.
RMSEA	0.060	Below the acceptable threshold of 0.08, indicating a good fit with minimal discrepancy between the model and the data.

The results show that the proposed model demonstrates good to excellent fit. The high values of **GFI** and **CFI** indicate the model accurately represents the data, while the low **RMSEA** confirms minimal deviation between the model and observed data. Overall, these indices support the model's validity for studying the impact of artificial intelligence applications on human resource management efficiency, ensuring that the results derived from the model are reliable.

4 Summary

The study's findings revealed that artificial intelligence applications significantly contribute to enhancing the efficiency of human resource management within the "Tidjani Group for Industry" companies. The results indicated that big data analytics improves recruitment strategies by increasing the accuracy of candidate selection and reducing operational costs, while knowledge extraction supports the design of continuous training programs tailored to employees' needs. Moreover, expert systems facilitated accurate and objective performance evaluations, whereas machine learning contributed to improving employee well-being and the overall work environment, thereby enhancing both satisfaction and productivity

5 Recommendations

Based on the findings of this study, it is essential for future research and organizational practices to focus on optimizing the integration of artificial intelligence in human resource management, while addressing ethical issues, data privacy, and change management. Enhancing the effective use of AI can improve employee experience and strengthen organizational performance.

- Conduct further research on advanced AI technologies and their applications in human resource management to improve efficiency and decision-making.
- Develop strategies to integrate AI into workplace culture while minimizing resistance to change.
- Address ethical concerns, particularly those related to AI-driven decisions affecting employees, ensuring fairness and transparency.
- Explore methods to safeguard data privacy while maximizing the benefits of AI in HR processes.

- Investigate the long-term impact of AI adoption on employee well-being and organizational sustainability.

Ethical Considerations

This study was conducted in accordance with internationally recognized ethical standards for academic research. Participation in the survey was voluntary, and respondents were informed of the purpose of the study. Confidentiality and anonymity of all participants were strictly maintained, and the collected data were used exclusively for scientific research purposes.

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Conflict of Interest

The authors declare no conflict of interest regarding the publication of this article.

Author Contributions

- **Sellam Lilia**: Conceptualization, research design, data analysis, and manuscript drafting.
- **Tliba Touati Nacima**: Literature review, methodology development, and interpretation of results.
- **Lassoued Abdelhalim**: Data collection, statistical analysis, and discussion of findings.
- **Kaoudja Mohamed Tahar**: Critical revision of the manuscript, validation of results, and final proofreading.

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