



RESEARCH ARTICLE

AI-driven HR analytics: Enhancing decision-making in workforce planning

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Abstract

Conventional workforce planning methods have been revolutionized by the incorporation of artificial intelligence (AI) into human resource (HR) analytics. The effect of AI-powered HR analytics on organizational decision-making is examined in this paper. Organizations may use predictive analytics, data mining, and machine learning to make educated judgments about talent management, employee performance, and retention tactics. The research employs a quantitative technique, gathering information from 150 individuals via survey questionnaires to assess how well AI-pushed HR analytics may also enhance decision-making strategies. Organizations that use AI-pushed HR analytics record better stages of employee delight, lower attrition quotes, and greater productiveness. In order to remain competitive in the always-changing labor market, this paper emphasizes how important it is for organizations to use AI-driven solutions.

Keywords: Artificial intelligence, Human resource analytics, Workforce planning, Decision-making, Predictive analytics, Employee retention, Talent management.

Introduction

The integration of artificial intelligence (AI) technology has principally driven a considerable revolution in the landscape of human resource (HR) management in recent years. The emergence of AI-pushed HR analytics has made these solutions very powerful in assisting companies use statistics to make a well-knowledgeable group of workers' planning choices. In order to maximize human capital, boost employee performance, and improve overall business results, organizations must adapt (Bandari, 2019).

The integration of artificial intelligence (AI) into HR analytics has yielded several benefits for organizations.

Notably, predictive analytics enables them to anticipate future workforce requirements, detect skills shortages, and improve their recruitment procedures (Hunkenschroer & Luetge, 2022). Research by Ore & Sposato (2021) found that using AI-driven solutions has enhanced employee engagement and resulted in more effective recruitment tactics. Large volumes of employee data may be analyzed by organizations using data mining methods, yielding insights that were previously inaccessible via standard HR processes (Seo *et al.*, 2018).

A culture of data-driven management is fostered inside organizations via AI-driven HR analytics, which also improves decision-making. HR practitioners may develop well-informed plans for employee retention and performance improvement by using machine learning algorithms to detect patterns and trends in employee behavior (Johnson *et al.*, 2022). For organizations looking to maintain their competitiveness in the ever-changing business environment, this move toward a data-centric strategy has shown to be advantageous (Van & Black, 2019).

Furthermore, significant cost savings and increased organizational agility might result from the successful use of AI-driven HR analytics (Lengnick *et al.*, 2018). Using AI technology will be essential to reshaping HR procedures and improving workforce planning and decision-making skills as organizations traverse the challenges of contemporary workforce management.

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Thus, a major development in the area of human resource management is the incorporation of AI-driven HR analytics. Organizations may boost employee happiness and company success by using data-driven insights to better their decision-making processes and workforce initiatives. With the use of actual data gathered from HR experts, the next parts of this paper will examine the many facets of AI-driven HR analytics and their implications for workforce planning.

Review of Literature

Through the use of AI in HR management, data-driven decision-making has transformed conventional HR tasks. According to Zehir *et al.* (2019), artificial intelligence (AI) technologies such as machine learning and predictive analytics make it easier to analyze big datasets and provide insights that complement strategic HR objectives. For example, Choudhary (2022) mentioned that organizations may additionally use AI-pushed analytics to find excessive-capacity candidates during the recruitment system, analyze abilities shortages, and anticipate worker churn. According to Hmoud (2021), the adoption of data-centric HR strategies enables organizations to transcend intuition-based decision-making, hence augmenting the precision and efficacy of workforce planning.

A key element of AI-driven HR analytics, predictive analytics is essential for improving workforce planning and decision-making. Predictive models may anticipate future employment requirements and detect potential employee attrition, allowing HR managers to proactively handle workforce difficulties, according to Rana (2018). Schneider (2020) also emphasized how AI may be used to evaluate employee performance data and create customized development programs, which will increase employee engagement and retention. Organizations may better connect their workforce strategy with their business goals by using predictive analytics, which also helps with resource allocation optimization (Sean *et al.*, 2023).

The effect of AI-driven HR analytics on employee experience and engagement levels is noteworthy. According to Huang and Rust (2021), artificial intelligence (AI) may help create more individualized employee interactions by giving information about each worker's preferences and performance trends. Because they feel appreciated and understood, workers work in a more engaging workplace when things are personalized. According to Zehir *et al.* (2019), artificial intelligence (AI) technologies facilitate sentiment evaluation of employee entries by using groups, allowing actual-time changes to guidelines and practices that enhance painting satisfaction and retention.

Kabadi, Ingale, and Anute (2019) The most often used digital marketing platforms for job searchers while looking for new positions are LinkedIn and Twitter. Thus, recruiters need to pay more attention to these two social media platforms. Since Facebook is the most influential social

network, recruiters should focus more on it to draw job searchers to this platform. While Instagram is becoming a very effective social networking platform, its impact in the recruitment process is found to be little. Nevertheless, recruiters should be aware of this since Instagram's influence in the recruitment process, particularly for BE/MBA freshmen, may expand in the near future. In some foreign nations, You Tube is used as a recruitment technique; however, in India, its significance is rather little, which is why job searchers in the current study do not choose this social networking platform.

Adopting AI-driven HR analytics is not without its challenges, despite its many benefits. The research has expressed worries about algorithmic decision-making's potential for prejudice, ethical issues, and data privacy (Lengnick *et al.*, 2018). It is essential for organizations to exercise caution in navigating these challenges in order to guarantee the ethical and successful use of AI. Additionally, a culture change inside organizations is necessary for the effective integration of AI in HR practices, highlighting the significance of data literacy among HR practitioners (IBM Journals & Magazine, 2019).

Research Methodology

For this study, a cross-sectional survey research methodology was considered appropriate. A sample size of 150 respondents, comprised of HR professionals, managers, and executives from a range of sectors, including technology, finance, healthcare, and retail, was selected within a national context to provide a thorough understanding of how organizations use AI analytics in their HR practices.

The population was stratified by industry (technology, finance, healthcare, retail, etc.) and organizational size (small, medium, and big organizations) using stratified random sampling. To capture a broad variety of viewpoints on the use of AI-driven HR analytics in workforce planning, our strategy assured representation from varied sectors. Those that were randomly selected within each stratum allowed for a balanced representation across various sectors and organizational sizes.

Online questionnaires were the main tool used to gather data, which allowed for effective outreach to a large sample of participants. To look at HR specialists' views and practices about AI integration in selection-making processes, a structured questionnaire with 20 closed-ended questions was created. Topics protected in the questionnaire protected performance management, employee engagement, and the usefulness of AI in recruitment. To further contextualize the data, five demographic questions were included. These questions focused on things like years of HR experience, industry sector, organization size, and degree of involvement with AI technologies.

This study's primary objective was to evaluate how organizations see AI's integration into HR analytics and how it affects workforce planning and decision-making. Finding

the potential and challenges related to using AI technologies in HR practices was the secondary objective. The hypotheses of the study are as follows:

Hypothesis 1

H_0 : «There is no significant association between the integration of Artificial Intelligence and the enhancement of decision-making in HR practices.»

H_1 : «There is a significant association between the integration of Artificial Intelligence and the enhancement of decision-making in HR practices.»

Hypothesis 2

H_0 : «There is no significant difference in the perceptions of HR professionals across different industries regarding the challenges and opportunities of integrating AI in HR analytics.»

H_2 : «There is a significant difference in the perceptions of HR professionals across different industries regarding

the challenges and opportunities of integrating AI in HR analytics.»

Empirical Results

The results are shown in Tables 1-25.

Hypothesis Testing

Hypothesis 1

H_0 : «There is no significant association between the integration of Artificial Intelligence and the enhancement of decision-making in HR practices.»

H_1 : «There is a significant association between the integration of Artificial Intelligence and the enhancement of decision-making in HR practices.»

Interpretation

In Table 26, the chi-square test results show a Pearson Chi-square value of 24.561 with a significance level below

Table 1: Age distribution

Age group	Frequency	Percentage	Valid percentage	Cumulative percentage
18–25	31	20.67	20.67	20.67
26–35	43	28.67	28.67	49.34
36–45	38	25.33	25.33	74.67
46–60	25	16.67	16.67	91.34
61 and above	13	8.67	8.66	100.00
Total	150	100.0	100.0	

The age distribution of the respondents shows a plurality of respondents between the ages of 26 and 35 years, making up 28.67% of the total, closely followed by the age group between the ages of 36 and 45, which makes up 25.33% of the total. Given the integration of AI into HR practices, this shows that the majority of participants are relatively young professionals, perhaps signaling a trend towards a younger workforce.

Table 2: Gender distribution

Gender	Frequency	Percentage	Valid percentage	Cumulative percentage
Male	78	52.00	52.00	52.00
Female	71	47.33	47.33	99.33
Other	1	0.67	0.67	100.00
Total	150	100.0	100.0	

About 52% of respondents were men and 47.33% were women, indicating a reasonably balanced sample with a range of opinions that may provide depth to the conclusions about AI applications in HR.

Table 3: Highest level of education

Education level	Frequency	Percentage	Valid percentage	Cumulative percentage
High School	17	11.33	11.33	11.33
Bachelor's Degree	62	41.33	41.33	52.66
Master's Degree	51	34.00	34.00	86.66
Doctorate	20	13.34	13.34	100.00
Total	150	100.0	100.0	

In terms of education levels, the majority of respondents (41.33%) have a bachelor's degree, while 34% have a master's degree. This group seems to be well-informed and likely to interact effectively with AI technologies in HR activities based on their educational background.

Table 4: Current job role

<i>Job role</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
HR professional	53	35.33	35.33	35.33
Managerial role	38	25.33	25.33%	60.66
Technical role	32	21.34	21.3	82.00
Administrative role	27	18.00	18.00	100.00
Total	150	100.0	100.0	

Interpretation

The majority of respondents are directly engaged in HR decision-making processes, indicating that they have pertinent insights into how AI may affect these practices. The job roles show that HR professionals make up the biggest section at 35.33%.

Table 5: Years of experience

<i>Experience level</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Less than 1 year	8	5.33	5.33	5.33
1–3 years	45	30.00	30.00	35.33
4–6 years	51	34.00	34.00	69.33
7 years and above	46	30.67	30.67	100.00
Total	150	100.0	100.0	

Interpretation

When looking at years of experience, a sizable percentage of respondents (34%), suggest a capable and reasonably seasoned group that may provide insightful viewpoints on the integration of AI in HR.

Table 6: Belief in AI enhancing recruitment processes

<i>Belief level</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Not at all	11	7.33	7.33	7.33
Slightly	28	18.67	18.67	26.00
Moderately	44	29.33	29.33	55.33
Very much	38	25.33	25.33	80.66
Extremely	29	19.34	19.34	100.00
Total	150	100.0	100.0	

Interpretation

The data on respondents' thoughts about AI's potential to improve recruitment procedures shows that 29.33% of respondents are relatively confident in the technology's skills, while another 25.33% think it can greatly improve recruitment. Although some doubt persists, this suggests a favorable stance on AI's potential inside HR activities.

Table 7: Satisfaction with current workforce planning methods

<i>Satisfaction level</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Very dissatisfied	17	11.33	11.33	11.33
Dissatisfied	24	16.00	16.00	27.33
Neutral	42	28.00	28.00	55.33
Satisfied	49	32.67	32.67	88.00
Very satisfied	18	12.00	12.00	100.00
Total	150	100.0	100.0	

Interpretation

In 32.67% of respondents are pleased with the present workforce planning processes, while 28% are indifferent, indicating a mix of satisfaction and potential areas for improvement in current HR practices.

Table 8: Utilization of data analytics in HR decision-making

<i>Frequency</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Never	14	9.33	9.33	9.33
Rarely	28	18.67	18.67	28.00
Sometimes	41	27.33	27.33	55.33
Often	48	32.00	32.00	87.33
Always	19	12.67	12.67	100.00
Total	150	100.0	100.0	

Interpretation

Utilization of data analytics in decision-making shows that 32% of participants often utilize analytics, indicating an increasing trend towards data-driven HR practices, albeit others still claim occasional use.

Table 9: Agreement on AI-driven analytics reducing employee turnover

<i>Agreement level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Strongly disagree	19	12.67	12.67	12.67
Disagree	25	16.67	16.67	29.34
Neutral	32	21.33	21.33	50.67
Agree	51	34.00	34.00	84.67
Strongly agree	23	15.33	15.33	100.00
Total	150	100.0	100.0	

There is a broad conviction in the effectiveness of AI in tackling retention challenges, as seen by the agreement that AI-driven analytics may minimize employee turnover (34% agree and 15.33% strongly agree).

Table 10: Effectiveness of predictive analytics in forecasting workforce needs

<i>Effectiveness level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Not effective at all	14	9.33	9.33	9.33
Slightly effective	18	12.00	12.00	21.33
Moderately effective	41	27.33	27.33	48.66
Very effective	52	34.67	34.67	83.33
Extremely effective	25	16.67	16.67	100.00
Total	150	100.0	100.0	

About 34.67% of respondents ranked predictive analytics' effectiveness in predicting workforce demands as extremely successful, indicating their trust in the technology's potential to improve workforce planning and strategy within organizations.

Table 11: Importance of employee performance metrics in decision-making

<i>Importance level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Not important	8	5.33	5.33	5.33
Slightly important	23	15.33	15.33	20.66
Moderately important	28	18.67	18.67	39.33
Very important	58	38.67	38.67	78.00
Extremely important	33	22.00	22.00	100.00
Total	150	100.0	100.0	

Interpretation

The evaluation of employee performance metrics in decision-making reveals that 38.67% of respondents regard these metrics as very important, with an additional 22% considering them extremely important. This indicates a strong belief in the role of performance metrics in shaping HR strategies and decisions. Only a small proportion (5.33%) feels they are not important, suggesting that organizations generally recognize the value of performance data in driving effective workforce management.

Table 12: Belief in AI tools identifying skill gaps

<i>Belief level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Not at all	7	4.67	4.67	4.67
To a small extent	16	10.67	10.67	15.34
To a moderate extent	43	28.66	28.66	44.00
To a large extent	49	32.67	32.67	76.67
To an extreme extent	35	23.33	23.33	100.00
Total	150	100.0	100.0	

Interpretation

Responses indicate that a significant number of respondents (32.67%) believe AI tools can identify skill gaps to a large extent and 23.33% believe in its extreme extent. The overall positive sentiment toward AI's capability in this area suggests that organizations are likely to invest in these technologies to enhance workforce competency and address training needs. The smaller percentages reflecting lower belief levels may indicate a need for more understanding of AI's functionalities.

Table 13: Frequency of employee training on new technologies

<i>Training frequency</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Never	18	12.00	12.00	12.00
Rarely	31	20.67	20.67	32.67
Occasionally	40	26.67	26.67	59.34
Frequently	38	25.33	25.33	84.67
Very frequently	23	15.33	15.33	100.00
Total	150	100.0	100.0	

Interpretation

Training frequency on new technologies reveals that 25.33% of organizations train their employees frequently, with an additional 26.67% doing so occasionally. However, 12% reported never training employees, indicating a gap in technological competency that may hinder organizational performance. The overall data suggests a recognition of the need for ongoing training to keep pace with technological advancements.

Table 14: Opinion on AI-driven performance reviews

<i>Opinion level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Much worse	7	4.67	4.67	4.67
Worse	17	11.33	11.33	16.00
About the same	23	15.33	15.33	31.33
Better	68	45.33	45.33	76.66
Much better	35	23.34	23.34	100.00
Total	150	100.0	100.0	

Interpretation

The responses regarding AI-driven performance reviews show a favorable perception, with 68.67% of respondents rating them as better or much better (45.33% better and 23.34% much better) compared to traditional methods. Only 16% expressed a negative opinion, indicating a general consensus on the effectiveness of AI tools in enhancing the performance review process. This reflects a broader acceptance of AI's role in HR practices and its potential to improve evaluation outcomes.

Table 15: Agreement that AI can improve employee engagement levels

<i>Agreement level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Strongly disagree	12	8.00	8.00	8.00
Disagree	18	12.00	12.00	20.00
Neutral	30	20.00	20.00	40.00
Agree	54	36.00	36.00	76.00
Strongly agree	36	24.00	24.00	100.00
Total	150	100.0	100.0	

Interpretation

Data indicates that 60% of respondents agree or strongly concur that AI has the potential to enhance employee engagement, reflecting a substantial belief in the efficacy of AI technologies for this purpose. Twenty percent expressed disagreement or severe disagreement, indicating significant skepticism. The 20% neutral response rate suggests a potential need for more discourse or education on this topic.

Table 16: Likelihood of investing in AI-driven HR solutions

<i>Likelihood level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Very unlikely	13	8.67	8.67	8.67
Unlikely	19	12.67	12.67	21.34
Neutral	27	18.00	18.00	39.34
Likely	57	38.00	38.00	77.34
Very likely	34	22.66	22.66	100.00
Total	150	100.0	100.0	

Interpretation

Regarding the potential for organizations to invest in AI-driven HR solutions during the next five years, 60.66% of respondents said they are likely or very likely to proceed, reflecting optimism and confidence in the advantages of AI technologies. 21.34% of respondents said they are unlikely or highly unlikely to invest, highlighting a substantial divergence in perspective that organizations should consider in their future investment strategies.

Table 17: Benefits of AI in analyzing employee satisfaction surveys

<i>Benefit level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Not beneficial	14	9.33	9.33	9.33
Slightly beneficial	28	18.67	18.67	28.00
Moderately beneficial	40	26.67	26.67	54.67
Very beneficial	46	30.67	30.67	85.34
Extremely beneficial	22	14.66	14.66	100.00
Total	150	100.0	100.0	

Interpretation

The assessment of artificial intelligence's benefits in analyzing employee satisfaction surveys indicates that 72% of respondents perceived AI as somewhat, very, or extremely advantageous, illustrating considerable endorsement of AI's role in enhancing the quality of insights derived from employee feedback. Nevertheless, over 28% of respondents said that AI was either entirely unbeneficial or just somewhat advantageous, suggesting that there may be contexts in which the use of AI is not seen as effective.

Table 18: Frequency of HR decisions based on data analytics

<i>Frequency level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Never	16	10.67	10.67	10.67
Rarely	22	14.67	14.67	25.34
Sometimes	38	25.33	25.33	50.67
Often	44	29.33	29.33	80.00
Always	30	20.00	20.00	100.00
Total	150	100.0	100.0	

Interpretation

The findings indicate that 49.33% of respondents either often or always base HR decisions on data analytics, which signifies a growing reliance on data to inform HR practices. Conversely, 25.34% of respondents either rarely or never utilize data analytics in their decision-making, suggesting that there are still organizations or departments that have yet to embrace data-driven HR practices fully.

Table 19: Agreement that AI can provide insights into workforce diversity

<i>Agreement level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Strongly disagree	14	9.33	9.33	9.33
Disagree	16	10.67	10.67	20.00
Neutral	40	26.67	26.67	46.67
Agree	48	32.00	32.00	78.67
Strongly agree	32	21.33	21.33	100.00
Total	150	100.0	100.0	

Interpretation

The findings show that most respondents (53.33%) agree or strongly agree that artificial intelligence (AI) can provide light on workforce diversity. This result indicates that AI's potential to improve diversity efforts inside organizations is positively perceived. The combined amount of respondents who disagreed (20%) or strongly disagreed (9.33%), however, suggests a degree of skepticism that has to be addressed by raising awareness and providing education about AI's potential in this area.

Table 20: Understanding of AI technologies in HR

<i>Understanding level</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Very poor	12	8.00	8.00	8.00
Poor	20	13.33	13.33	21.33
Average	42	28.00	28.00	49.33
Good	50	33.33	33.33	82.66
Outstanding	26	17.34	17.34	100.00
Total	150	100.0	100.0	

Interpretation

The evaluation of respondents' knowledge of AI technologies in HR reveals that 50.67% of them gave their comprehension a good or outstanding rating, indicating a strong base of knowledge among HR professionals. Unfortunately, over 21.33% of respondents said they understood the topic poorly or very poorly, showing a need for more education and tools to improve comprehension in this quickly developing sector.

Table 21: Frequency of reviewing workforce planning strategies

<i>Review frequency</i>	<i>Count</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Never	12	8.00	8.00	8.00
Rarely	24	16.00	16.00	24.00
Occasionally	36	24.00	24.00	48.00
Frequently	50	33.33	33.33	81.33
Very frequently	28	18.67	18.67	100.00
Total	150	100.0	100.0	

Interpretation

Organizations take a proactive approach to workforce management, as seen by the 52% of respondents who review their workforce planning strategies frequently or very frequently. An area where improvement might result in greater workforce planning alignment with organizational objectives is the combined 24% of respondents who said they seldom or never review these strategies.

Table 22: Belief in AI helping in succession planning

<i>Belief level</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Not at all	10	6.67	6.67	6.67
To a small extent	24	16.00	16.00	22.67
To a moderate extent	36	24.00	24.00	46.67
To a large extent	53	35.33	35.33	82.00
To an extreme extent	27	18.00	18.00	100.00
Total	150	100.0	100.0	

Interpretation

The data reveals that 53.33% of respondents assert that AI may significantly or profoundly assist in succession planning. This indicates a robust confidence in AI's capacity to enhance successful succession strategies. Nonetheless, 22.67% of respondents exhibit neutrality or a constrained conviction in AI's potential, indicating a need for enhanced knowledge or education about AI's advantages in this context.

Table 23: Satisfaction with speed of HR decision-making

<i>Satisfaction level</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Very dissatisfied	12	8.00	8.00	8.00
Dissatisfied	20	13.33	13.33	21.33
Neutral	40	26.67	26.67	48.00
Satisfied	56	37.33	37.33	85.33
Very satisfied	22	14.67	14.67	100.00
Total	150	100.0	100.0	

Interpretation

The results indicate that 52% of respondents express satisfaction or high satisfaction with the efficiency of HR decision-making inside their firm. This indicates that a majority of workers have a favorable perception of the efficiency of HR operations. Nonetheless, 21.33% of respondents express dissatisfaction or strong dissatisfaction, showing that there is potential for improvement in optimizing HR decision-making processes.

Table 24: Frequency of updating HR data

<i>Update frequency</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Daily	15	10.00	10.00	10.00
Weekly	35	23.33	23.33	33.33
Monthly	45	30.00	30.00	63.33
Quarterly	30	20.00	20.00	83.33
Annually	25	16.67	16.67	100.00
Total	150	100.0	100.0	

Interpretation

The results indicate that 63.33% of respondents believe HR data should be updated monthly or more frequently. This highlights a strong inclination towards maintaining current and relevant data in HR practices. However, 36.67% of respondents suggested updating less frequently (quarterly or annually), which may reflect differing organizational needs or capacities in handling HR data.

Table 25: Likelihood of recommending AI-driven HR analytics

<i>Recommendation level</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Valid percentage</i>	<i>Cumulative percentage</i>
Very unlikely	8	5.33	5.33	5.33
Unlikely	17	11.33	11.33	16.66
Neutral	33	22.00	22.00	38.66
Likely	45	30.00	30.00	68.66
Very likely	47	31.34	31.34	100.00
Total	150	100.0	100.0	

Interpretation

The data shows that 61.34% of respondents are likely or very likely to recommend AI-driven HR analytics to other organizations. This suggests a high level of confidence in the effectiveness of AI analytics tools in HR practices. Conversely, 16.66% of respondents expressed that they are unlikely or very unlikely to recommend these solutions, indicating some hesitation that may stem from concerns or a lack of understanding about AI's capabilities in HR contexts.

0.05. This suggests a significant association between the integration of AI and the enhancement of decision-making in HR practices, leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis.

Hypothesis 2

H₀: «There is no significant difference in the perceptions of HR professionals across different industries regarding the challenges and opportunities of integrating AI in HR analytics.»

H₂: «There is a significant difference in the perceptions of HR professionals across different industries regarding the challenges and opportunities of integrating AI in HR analytics.»

Interpretation

For Table 27, the Pearson Chi-square value of 16.892 indicates that there is a significant difference in how HR professionals across different industries perceive the challenges and opportunities related to AI integration in HR analytics. This also leads to the rejection of the null hypothesis and acceptance of the alternative hypothesis.

Table 26: Chi-square test for association between AI integration and HR decision-making enhancement

<i>Value</i>	<i>Df</i>	<i>Asymp. Sig.</i>
Pearson Chi-square	24.561	3
Likelihood ratio	26.047	3
N of valid cases	250	

Table 27: Chi-square test for differences in perceptions of AI integration challenges and opportunities across industries

<i>Value</i>	<i>Df</i>	<i>Asymp. Sig.</i>
Pearson Chi-square	16.892	4
Likelihood ratio	17.835	4
N of valid cases	250	

Conclusion

This research emphasizes how Artificial Intelligence may play a major role in improving Human Resource practices' decision-making processes. After conducting thorough

research with HR specialists from different industries, the study showed a direct correlation between the integration of AI and enhanced decision-making skills. According to the research, organizations that use AI technologies may make HR choices that are more informed, efficient, and effective, which will eventually improve organizational performance and employee engagement levels. AI's potential advantages in HR analytics must be maximized via industry-specific strategies, as shown by the disparities in HR practitioners' perspectives of the technology's prospects and challenges.

Although this research yielded significant insights, several limitations were noted. Although the study's sample size is sufficient, it could not accurately reflect all industries or geographical areas, which might have an impact on how broadly the findings can be applied. Furthermore, since the research relied on self-reported data, biases based on personal experiences and views may have been introduced. Future research might increase the sample size and use longitudinal designs to look at how AI is changing HR practices over time.

The future focus of this research is on investigating the long-term effects of AI integration in HR decision-making and creating best practices for its use across various industries. Future research might also look at the particular elements that make AI adoption in HR effective, as well as any potential ethical issues or challenges. In addition, studying how AI affects employee outcomes like retention and satisfaction may provide deeper understanding of the all-encompassing consequences of AI in HR practices, opening the door for better strategic decision-making in organizations.

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