

Exploring the Role of Artificial Intelligence-Powered HR Practices in Shaping Employee Engagement and Retention Strategies

Gayathiri G^a, Prabu G^{*,a}

^a: Faculty of Management, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu – 603203, India

E-mail*: gp@srmist.edu.in (corresponding author mail ID)

ARTICLE INFO

Received: 17 Nov 2024

Revised: 22 Dec 2024

Accepted: 06 Jan 2025

ABSTRACT

The present research investigates the influence of AI-driven Human Resource practices on employee engagement and retention in the IT industry of Chennai, India. Employee engagement is examined as a mediating variable, whereas AI-reduced workload of employees is evaluated as a moderating factor. Data were collected by means of an organized Google Form survey from 317 valid responses, addressing IT professionals from five companies, using a quantitative, cross-sectional research design. Based on the level of employee experience (entry, mid, and senior), stratified random sampling was used. SPSS was employed for cleaning the data, while SmartPLS 4.0 was employed for structural equation modeling (PLS-SEM). The findings indicate that artificial intelligence applications in Recruitment & Selection, Training & Development, Compensation & Benefits, and Team Appropriateness greatly improve employee engagement, which in turn promotes employee retention. However, the AI-based Performance Appraisal didn't show a significant effect. Additionally, the engagement and retention relationship was positively moderated by the AI-reduced workload, which had a direct impact on retention. This research emphasizes the strategic significance of skillfully integrating AI into HR practices to cultivate a workforce that is both engaged and retained. It provides practical guidance for HR executives who are seeking to effectively integrate AI into human resource management, as well as theoretical contributions to HR technology research. Employee engagement is substantially improved, which in turn has a beneficial impact on employee retention.

Keywords: Artificial Intelligence, Human Resource Management, Employee Engagement, AI Reduced workload of employees, Employee Retention.

INTRODUCTION

Human resource management (HRM) practices are created, executed, and synchronized with business objectives via the HR system's structures, procedures, and mechanisms. In order to accomplish strategic goals, HRM practices must adhere to a framework that promotes consistency, integration, and alignment among them. Human resource management functions have undergone a significant transformation over the preceding few decades, transitioning from a solely management position to a strategic HR a part (Renkema et al., 2017). This transformation has been enabled by the integration of technology into the method of HRM (Dhamija and Bag, 2020). Currently, artificial intelligence has revolutionized every aspect of HRM. The integration and utilization of AI technologies within the discipline of HRM are referred to as artificial intelligence in HR (Alghnimi et al. 2020). AI is redefining human resource management within the Information Technology industry in response to this trend. AI-driven HRM methods may optimize HR operations, elevate the quality of personnel acquisition and retention, and facilitate superior making a decision (Muduli and Trivedi, 2020). As part of this integration, HR practices including as hiring, talent management, performance reviews,

employee engagement, and workforce planning are made automated and optimized through the use of AI algorithms and data analytics (Chowdhury et al. 2023). AI boosts the efficiency of senior executives, minimizes expenses, and promotes predictability (Buchashvili et al, 2022). The adoption of AI technology provides employees with enhanced flexibility, optimizing work time and alleviating workplace stress (Qamar et al, 2021). AI is meant to replace labor-intensive and repetitive tasks so that staff members may concentrate on the more fulfilling outcomes and data analysis (Wheeler and Buckley 2021). Employees using AI technology effortlessly and without excess human effort complete challenging tasks. For instance, HR departments interact with clients and educate staff members via chat bots (Hlee et al 2022). Daily, labor-intensive tasks are not manually monitored by staff members. They may consequently focus on essential tasks (Odugbesan et al, 2022). Technological advances are essential for companies to stay competitive and improve performance. Employers must motivate and satisfy workers to boost performance (Riyanto, et al, 2021)

Furthermore challenging the IT industry is ignorance of artificial intelligence technologies, employee opposition, and turnover of staff and adoption costs (Li et al., 2023). Workers of every generation should want to work with businesses firmly devoted to digital development and the utilization of artificial intelligence technology (Shaikh and Cruz, 2022). This study suggested that AI can change the workplace by automating routine jobs, improving decision-making, and improving communication and cooperation. While the integration of AI in HRM has obtained increasing notice in recent years, most studies have focused on the individual impact of AI applications such as recruitment, training, or performance appraisal in isolation (Rodgers et al., 2023). There is a limited holistic investigation into how the collective influence of AI-enabled HR practices including Recruitment and Selection, Training and Development, Performance Appraisal, Team Appropriateness, and Compensation and Benefits contributes to retention through the mediating role of employee engagement. Studies found that companies which utilize artificial intelligence ethically and responsibly could improve employee retention and engagement. The benefits of artificial intelligence in HR, including enhancing recruiting efficiency or lowering administrative burden, are sometimes the main emphasis of present research. This investigation would provide to the body of knowledge on AI in HRM and give practical advice for companies wishing to apply AI-powered HRM practices and retain staff. By optimizing hiring, development, assessment, and remuneration, AI can boost employee satisfaction and retention. The objectives of the study examined AI-enabled HR practices (Recruitment and Selection, Training and Development, Performance Appraisal, Compensation and Benefits, and Team Appropriateness) affect employee engagement. To examine how Employee Engagement mediates the link between AI-enabled HR practices and Employee Retention. To examine how AI-Reduced Workload moderates employee engagement and retention. The conceptual paradigm of AI implementation in HR practices to strengthen employee engagement and retention is demonstrated in Figure 1.

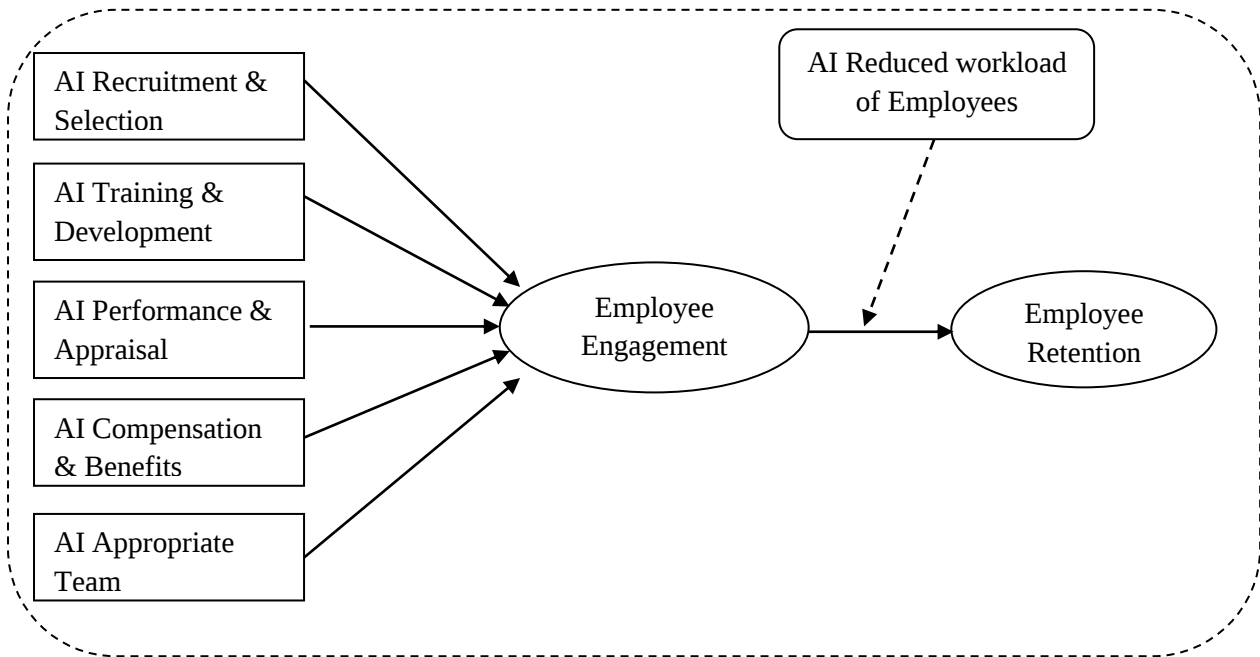


FIGURE 1. Proposed Model
Source: Prepared by Researcher (2024)

1. Literature Review and Hypotheses Development

Theoretical Background

The present investigation employs many theoretical frameworks to thoroughly examine the impact of AI-enabled HR procedures on employee engagement and retention. Initially, Blau (1964) introduced the Social Exchange Theory (SET), which provides a valuable framework for comprehending the correlation between organizational practices and employee outcomes, including engagement and retention. SET suggests that employees are more likely to behave positively when they perceive the company values their contributions and prioritizes their welfare through equal treatment, recognition, growth opportunities, and support. According to SET, the perceived balance between what employees contribute and get shapes their work experience. In the digital age, AI-enabled HR practices that improve personalization, transparency, and fairness can deepen this exchange relationship, maximizing engagement and retention (Azeem et al., 2024).

Finally, to understand workers' adoption and usage of AI technologies in HR, the Unified Theory of adoption and usage of Technology 2 (UTAUT 2) (Venkatesh et al., 2012) is used. UTAUT 2 demonstrates factors including performance expectation, effort expectancy, social impact, and beneficial circumstances modify employees' views and use of AI systems. The task-technology fit (TTF) theory has also been used to assess new technology adoption in business, healthcare, education, and other areas (Faqih and Jaradat, 2021). Drawing on the Task-Technology Fit Theory, artificial intelligence in human resources displays technology complements organizational responsibilities and processes (Goodhue and Thompson, 1995). AI-powered automation has the potential to replace many tactical HR functions (Durrani, 2024). These theories collectively establish a solid basis for the investigation of AI technology-driven HR practices that are mediated by engagement and moderated by AI. This framework benefits to employee retention in the growing digital workplace.

HYPOTHESIS DEVELOPMENT:

A detailed research study found diverse findings results on how AI-driven HR practices affect employee engagement and retention. Thus, the study's hypotheses are:

Resumes are rapidly assessed and categorized into shortlists applying filtering algorithms based on these requirements (Stoilkovska, 2015). HR professionals may filter job applications better using AI. General information about candidates' previous and present social media accounts is obtained by AI for the resume database (Geetha, 2018). Interestingly, study findings show AI recruiting issues concerning human participation in speed and fairness, among others (Mujtaba and Mahapatra, 2019). AI-based recruiting tools guarantee more accurate and relevant candidate data. Providers argue such approaches promote diversity and eliminate bias better than traditional recruitment practices (Huang et al, 2023). From this review of literature this study formulated the hypothesis,

Hypothesis 1: AI Recruitment and Selection has a substantial beneficial impact on employee engagement.

Since AI-derived data must be appealing to transform knowledge, delivering it to workers is difficult. Like AI, employees must learn (De Bruyn et al. 2020). AI can also be employed to facilitate the process of learning and development. A personalized learning program for employees can be constructed by an enterprise through the use of artificial intelligence (Soltani et al., 2020). The individual's preferences and requirements can be accommodated through the adaptability of this program, which promotes the development of up to date skills more efficiently and effectively (Maity, 2019). AI training systems must remove discrimination to be effective and equitable. AI-supported training engages participants, instructors, and employees (Chen, 2024). Derived this hypothesis from this review of literature,

Hypothesis 2: AI Training & Development generates a beneficial and significant impact on employee engagement.

HR managers may use AI-driven performance management systems to identify areas for improvement and provide tailored interventions to boost employee performance (Nyathani, 2023). AI allows for more frequent performance reviews, which improve accuracy, reduce bias, and provide immediate feedback. Organizations utilize chatbots to analyze and train staff to improve performance (Azeem, et al, 2024). Employees are more concerned about the unbiased nature of criticism than the credibility of its giver, according to studies (Reitgruber, 2023). Employees recognize computer feedback above supervisor evaluation. Performance evaluations, which observe, appraise, and respond to employee performance, boost engagement. AI-enabled performance evaluations may assist managers anticipate staff turnover (Nair and Salleh 2015). Formulate this hypothesis based on this review,

Hypothesis 3: There is an association exists between the AI Performance Appraisal and employee engagement.

AI can help offer effort-based pay. Feedback may determine employee pay and Machine learning algorithms set employee compensation. The application gives management compensation ideas (Das et al., 2020). Neural networks help pay fair wages with AI. Neural networks may be used to construct fair wage evaluation and intelligent decision support systems with large data input (Jia et al., 2018). Rather of only getting an evaluation of performance once a year, AI has set designed a system where workers can obtain feedback on a constant basis. According to this method, pay can be calculated (Goldfarb et al, 2020). AI may boost payroll and compensation accuracy, efficiency, and effectiveness when connected with HRM and FIS systems. AI-driven solutions may automate calculations, optimize pay structures, improve compliance, and give real-time financial data insights to fulfill employee expectations and regulatory requirements for employee engagement (Walter, 2021). Develop this hypothesis based on this review,

Hypothesis 4: There exists a favorable correlation between the AI Compensation Benefits and engagement with which employees are involved.

AI helps coworkers recognize their professional talents. This determines team makeup. Machine learning analyzes job description data. This data can affect machine learning algorithms and propose the best teammate. AI recognizes skills to build a high-performing team (Eubanks, 2019). (Salehi et al., 2017) found that AI-savvy team members worked twice as fast as non-AI users. It helps teams expand networks. Artificial intelligence may provide teams new opportunities and supervisor's new tools. This tech can also control team behavior. (Webber et al., 2019) observed that team members familiar with AI completed tasks twice as quickly as those unfamiliar with AI. This technology can also influence the team's behavioral processes. As a result, teams must strike a balance between conflict and harmony. As a result, teams must balance conflict with harmony. (Arslan et al., 2021) Employees can work productively with AI. Relevant topic detection and classification technology helps team members focus on project tasks. It raises expectations and worker confidence. Based on the findings of this review, formulate this hypothesis.

Hypothesis 5: A positive correlation exists between AI appropriate Team and employee engagement

Engagement motivates workers to work hard and achieve corporate goals. Engaged employees have lower attrition, higher retention, better talent acquisition, more expertise, and a competitive edge (Albrecht et al 2015). Employee engagement is crucial to organizational effectiveness and helps the company achieve more goals. Training and development opportunities, such as learning new skills, boost employee engagement (Naufer and Kumar, 2020). Firms prioritize employee retention, both financially and non-financially. Engaging these people should help the company. HR factors including candidate screening, employee-management interactions, salary & benefits, business culture, and career progression might affect retention strategy (Gorde, 2019). Formulate this hypothesis based on the review's findings.

Hypothesis 6: Employee Engagement and Employee Retention has a favorable association with one another.

Mediation Hypothesis

AI-driven recruitment systems may analyze resumes, job ads, and other data to find the best candidates for open positions. A better and more effective applicant screening procedure might boost staff engagement, retention, and recruiting quality (Kulkarni, and Che, 2019). Candidate selection may create a good workplace. Employee recognition and support boost engagement and reduce turnover in this the environment. Chatbots can provide real-time application status updates and quickly answer to inquiries (Soutar, 2019).

AI powered training systems may adapt training programs employees may get more involved in their own career advancement as a result, which might boost engagement and retention category (Seo et al, 2021). AI can detect areas where staff members want further support and instruction, and it can provide specific suggestions for development that satisfy those requirements (Sanyaolu and Atsaboghena, 2022). Using AI-powered performance evaluation methods can provide more intention, data-driven evaluations of performance of employees, thereby decreasing prejudice & maximizing the degree of equality attained. More accurate performance assessments resulting from this might help to increase employee engagement and retention by means of recognition and reward for distinct efforts (Madhani, 2020). The retention rates can be raised by promoting employee motivation and satisfaction, which can result in improved fulfillment (Sari et al, 2020). Develop these hypothesis based on this review.

Hypothesis 7a: There is a substantial correlation between the mediating impacts Engagement of Employee on AI Recruitment & Selection and Employee Retention.

Hypothesis 7b: Engagement of Employee mediates the association among AI Training & Development and Employee Retention.

Hypothesis 7c: Employee engagement acts as the connection among AI performance appraisal and Retention of employees.

Hypothesis 7d: The relationship between AI Compensation Benefits and Retention of employees is mediated by Employee Engagement.

Hypothesis 7e: With the relation between AI Appropriate Team and Employee Retention, Employee Engagement acts as a mediator.

Moderator effects

According to (Wang 2021), Workers might get assistance from artificial intelligence in jobs that are regularly and time-consuming, which would, in turn, reduce the amount of work they must complete, boost their productivity. The strain and effort required in the job are consequently greatly reduced by AI. Task automation provides employees with additional time to engage in alternative responsibilities (Lee and Chen, 2022). AI can also write meeting transcripts, letting staff focus on the discussion instead of taking notes. Engaged employees are passionate about their professions and the company's values (Agarwal, 2022). Employee engagement has a huge influence on the profitability of the firm, which might be dramatically enhanced by implementing creative working conditions that make use of artificial intelligence (Sundaresan and Zhang, 2022). Develop this theory from this assessment,

Hypothesis 8a: AI Reduced workload of employees moderates the interaction among Employee Engagement and Employee Retention.

Hypothesis 8b: There is a favorable interaction within AI reduced workload of Employees and Employee Retention

RESEARCH METHODOLOGY:

2.1 Data and sample

The current study implements a cross-sectional research strategy and involves a thorough evaluation of existing literature to determine the key components of the research framework. This study's population of interest consists of IT employees who currently are employed in Chennai, India. Data were acquired directly from persons working in the IT field via a structured survey prepared and delivered by the researchers utilizing Google Forms. To provide enough representation at different levels of organizational experience, a stratified random sampling approach was used. Participants were divided into four categories based on their level of experience: less than 5 years, 5-10 years, 11-15 years, and more than 15 years. Collected data from three hundred sixty participants using the ten times rule (Kock, P. Hadaya). A total of 360 survey questionnaires were delivered to five IT businesses in Chennai, with respondents proportionally assigned to match the actual worker distribution in these strata. Following data collection, replies were thoroughly inspected before being cleaned and validated with SPSS software. This method includes removing incomplete replies and identifying irregularities or outliers. As a result, 317 actual and useful replies were kept for additional analysis. The cleaned data was then analyzed with Smart PLS (Version 4.0), which used the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. This approach was used to investigate the fundamental structure of the interactions between the research variables. The study was carried out between November 2024 and February 2025. The impact of artificial intelligence (AI) on many HR procedures, including Recruitment and selection, training and development, performance appraisal, compensation benefits, and team fit, on employee retention, was investigated in this study utilizing a quantitative research methodology. The model also looked at AI-reduced workload as a moderating variable and employee engagement as a mediating variable. Each item in the questionnaire was scored on a five-point Likert scale, with 1 denoting "strongly disagree" and 5 denoting "strongly agree."

Table 1 Demographic detail of respondents.		
Respondents	Frequency	%
Gender		
Men	206	65%
Female	111	35%
Age		
Below 25	10	3%
26 -30	85	27%
31 -35	70	22%
36 - 40	101	32%
Above 40	51	16%
Experience		
Less than 5 Years	31	10%
5-10 years	128	40%
11-15 years	95	30%
Above 15 years	63	20%
Source: Developed by authors		

2.2 Measures

S.No	Name of the Variable	Scale Adopted	No. of items	Cronbach's alpha
1	AI Recruitment & Selection	Kambur E and Akar C (2022)	5	0.834
2	AI Training & Development	Rožman M et al. (2022)	4	0.871
3	AI Performance Appraisal	Wijayati, D.T. et al. (2022)	5	0.861
4	AI Compensation Benefits	Kambur E. and Akar C. (2022)	4	0.853
5	AI Appropriate Team	Mikalef and Gupta (2021)	4	0.919
6	Employee Engagement	Wijayati et al. (2022)	5	0.851
7	AI Reduced workload of employees	Qiu H et al. (2022)	4	0.853
8	Employee Retention	Ghani B et al. (2022)	5	0.873

The present investigation employed the scale modified from prior research conducted by earlier scholars. Measurement scales for the examined variables were chosen on an assumption of their reliability and validity. Statistical analysis is carried out with the help of the PLS-SEM tool, which also enables us to conduct the sample (Hossain et al. 2024; Malik et al. 2021). Cronbach's alpha evaluates a scale's internal consistency or dependability, demonstrating how effectively its items measure the same notion. Cronbach's alpha above 0.70 is usually good (Bland and Altman, 1997). All constructs in this study had good internal consistency, with Cronbach's alpha values from 0.834 to 0.919. These results show that all measuring scales employed in the study are reliable and acceptable for SEM and hypothesis testing.

3. RESULTS

3.1 Statistical analysis and hypothesis testing

Factor Analysis results and Reliability & Convergent Validity

Table 3 Reliability, Construct Validity Indices of Model and Factor analysis

Construct	Indicators	Loadings	Composite Reliability	AVE	Cronbach's Alpha
AI Recruitment and Selection	AI_RS1	0.750	0.959	0.626	0.834
	AI_RS 2	0.751			
	AI_RS 3	0.779			
	AI_RS 4	0.699			
	AI_RS 5	0.812			
KMO = (0.879), p < 0.000.					
AI Training & Development	AI_TD1	0.822	0.875	0.622	0.871
	AI_TD 2	0.822			
	AI_TD 3	0.874			
	AI_TD 4	0.878			
KMO = (0.800), p < 0.000.					
AI Performance Appraisal	AI_PA1	0.736	0.889	0.607	0.861
	AI_PA 2	0.876			
	AI_PA 3	0.868			
	AI_PA 4	0.867			
	AI_PA 5	0.649			
KMO = (0.860), p < 0.000.					
AI Compensation Benefits	AI_CB1	0.815	0.857	0.585	0.853
	AI_CB2	0.816			
	AI_CB3	0.885			
	AI_CB4	0.814			
KMO = (0.760), p < 0.000.					
AI Appropriate Team	AI_AT1	0.896	0.920	0.574	0.919
	AI_AT 2	0.917			
	AI_AT 3	0.887			
	AI_AT 4	0.887			
KMO = (0.810), p < 0.000.					
Employee Engagement	EMP_EN1	0.810	0.857	0.569	0.851
	EMP_EN 2	0.724			
	EMP_EN 3	0.732			
	EMP_EN 4	0.816			
	EMP_EN 5	0.771			
KMO = (0.892), p < 0.000.					
AI reduced work load of employees	AI_RW1	0.762	0.868	0.524	0.853
	AI_RW2	0.811			
	AI_RW3	0.891			
	AI_RW4	0.863			
KMO = (0.810); p < 0.000.					
Employee Retention	EMP_ER1	0.788	0.892	0.516	0.873
	EMP_ER2	0.859			

	EMP_ER3	0.910			
	EMP_ER4	0.813			
	EMP_ER5	0.695			
KMO = (0.857); p < 0.000.					

Source: Author's calculation

Initially, owing to the “Kaiser–Meyer–Olkin” measure of sample adequacy ($KMO \geq 0.5$) and “Bartlett’s test of sphericity” ($p < 0.05$) (Kaiser, 1958). The findings in Table 3 suggest that factor analysis is indicated. The factor analysis results demonstrated that all communalities above 0.40 (Costello and Osborne, 2019), suggesting that no variables required elimination.

3.4 Measurement model

Construct validity and reliability were investigated in order to test the model. The convergent validity of constructs is checked using factor loadings, ‘composite reliability’ (CR), and ‘average variance extract’ (AVE), as viewed in Table 3. If the factor loading of the items on the measuring scale is 0.50 or greater, the scale is said to have convergent validity. (Hair, 2011). All of the items in Table 3 were over the acceptable range of 0.7 or closer to. Since it is constantly possible to remove 20% of the total items, these things were removed. Figure 2 displays the factor loadings of the retained items. We assessed the composite reliability (CR) and AVE using the subsequent criteria as part of the validity assessment: The average value of all variables as per the specified standards, an AVE of 0.50 or higher seems acceptable shown in Table 3. Convergent validity was demonstrated by the CR reaching above 0.8 and the AVE value for each variable being above 0.50.

3.5 Discriminant Validity:

Table 4: *Discriminant Validity

	AI_R S	AI_T D	AI_P A	AI_C B	AI_A T	EMP_EN G	AI_R W	EMP_RE T
AI_RS	0.791							
AI_TD	0.727	0.789						
AI_PA	0.744	0.736	0.779					
AI_CB	0.748	0.721	0.794	0.764				
AI_AT	0.714	0.707	0.712	0.612	0.757			
EMP_EN G	0.727	0.742	0.793	0.677	0.759	0.754		
AI_RW	0.678	0.735	0.722	0.767	0.659	0.717	0.723	
EMP_RE T	0.756	0.729	0.768	0.715	0.743	0.641	0.721	0.718

Source: Author's calculation

Table 4 shows the Fornell-Larcker Criterion Matrix, which shows the variables used in this study. This study used the Fornell-Larcker criteria, a respected approach for assessing discrimination validity. As noted by (Kaushal et al., 2017), this exercise compares the square root of the average variance extracted (AVE) and the correlation values for each structural model construct. For each construct evaluated in this study, the square root of the AVE values exceeds the other constructs. According to (Voorhees et al., 2016), the Fornell-Larcker Criterion shows that this study has discriminating validity.

Structural equation modeling

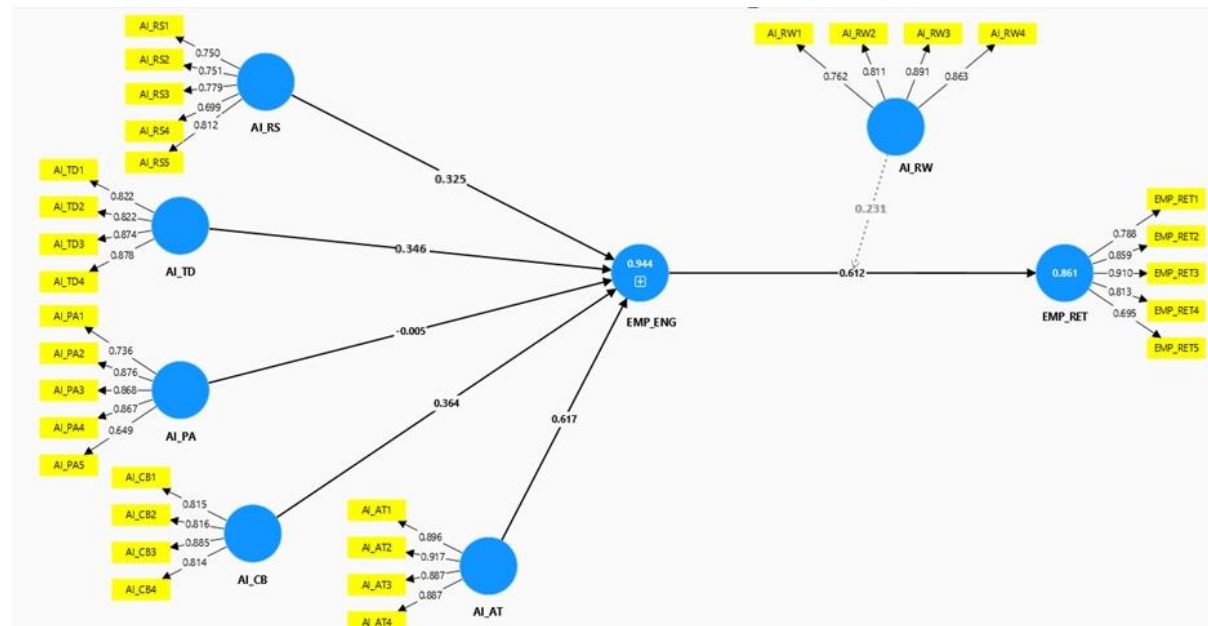


Figure 2 PLS Results

Source: Author's calculation

Figure 2 delivers a structural model that illustrates the associations between several dimensions and the impact of various AI-powered HR strategies on employee engagement (EMP_ENG) and retention (EMP_RET). All Factor loadings are close to or exceeding 0.7 indicate that the indicator possesses strong measurement reliability. The factor loadings for all variables are approximately 0.7 or greater, indicating strong reliability of the items as illustrated in Figure 2. AI-driven recruiting (0.325), training and development (0.346), and remuneration benefits (0.364) all positively influence employee engagement. Nonetheless, AI-driven performance evaluations have a marginal negative impact (-0.005), indicating a potential decrease in interest. The appropriateness of the AI team exerts a significant positive impact (0.617), suggesting that employees experience heightened engagement when AI enhances team productivity. The impact of AI on effort reduction is moderate (0.231). Ultimately, employee engagement significantly impacts retention (0.612), demonstrating that efficient AI-driven HR processes enhance both engagement and retention.

3.7 Hypothesis Testing

Table 6: Direct effects

Hy	"Relationship"	"Beta (O)"	"(STDEV)"	"T -stat"	"P val"	"Decision"
H1	AI_RS->EMP_ENG	0.325	0.142	2.600	0.000	Supported
H2	AI_TD->EMP_ENG	0.346	0.139	2.168	0.000	Supported
H3	AI_PA->EMP_ENG	-0.005	0.082	0.059	0.953	Not Supported
H4	AI_CB->EMP_ENG	0.364	0.101	3.613	0.000	Supported
H5	AI_AT->EMP_ENG	0.617	0.086	7.162	0.000	Supported
H6	EMP_ENG->EMP_RET	0.612	0.082	7.513	0.000	Supported
H8a	AI_RWxEMP_ENG->EMP_RET	0.231	0.133	4.941	0.000	Supported
H8b	AI_RW->EMP_RET	0.322	0.077	4.181	0.000	Supported

Source: Author's calculation

The structural model results provide significant insight into the connection between AI-enabled HR practices and employee engagement, as well as the influence on staff retention. AI Recruitment & Selection (H1: $\beta = 0.325$, $p < 0.001$), AI Training & Development (H2: $\beta = 0.346$, $p < 0.001$), AI

Compensation & Benefits (H4: $\beta = 0.364$, $p < 0.001$), and AI Team Appropriateness (H5: $\beta = 0.617$, $p < 0.001$) all had a positive and statistically significant influence on Employee Engagement (EMP_ENG). However, AI Performance Appraisal (H3: $\beta = -0.005$, $p = 0.953$) did not demonstrate a significant association, indicating that this dimension may not contribute considerably to boosting employee engagement in this setting. Additionally, Employee Engagement (H6: $\beta = 0.612$, $p < 0.001$) was shown to strongly impact Employee Retention (EMP_RET), validating its mediation role in the model. The moderation analysis revealed that AI-Reduced Workload (AI_RW) had a direct positive influence on Employee Retention (H8b: $\beta = 0.322$, $p < 0.001$) and substantially increased the relationship between Employee Engagement and Employee Retention (H8a: $\beta = 0.231$, $p < 0.001$). These findings illustrate AI's critical role in altering HR practices, as well as how successful AI integration may enhance engagement and retention, particularly when it contributes to reduce employee workload.

3.8 Indirect effects

Table 7 Indirect effects

Hy	“Relationship”	beta (O)	(STDEV)	T statistic s	“P val”	“Decision”
H7a	AI_RS->EMP_ENG->EMP_RET	0.316	0.026	2.596	0.000	Supported
H7b	AI_TD->EMP_ENG->EMP_RET	0.306	0.085	3.068	0.000	Supported
H7c	AI_PA->EMP_ENG->EMP_RET	-0.003	0.050	0.058	0.954	Not Supported
H7d	AI_CB->EMP_ENG->EMP_RET	0.223	0.070	3.183	0.002	Supported
H7e	AI_AT->EMP_ENG->EMP_RET	0.378	0.061	6.193	0.000	Supported

Source: Author's calculation

The mediation study provides insight on the indirect impacts of AI-enabled HR practices on employee retention (EMP_RET) and engagement (EMP_ENG). AI Recruitment & Selection (H7a: $\beta = 0.316$, $p < 0.001$), AI Training & Development (H7b: $\beta = 0.306$, $p < 0.001$), AI Compensation & Benefits (H7d: $\beta = 0.223$, $p = 0.002$), and AI Team Appropriateness (H7e: $\beta = 0.378$, $p < 0.001$) all have significant positive indirect effects on employee retention through employee engagement. These data suggest that employee engagement is an important mediating element, increasing the impact of AI-driven HR strategies on retention outcomes.

However, the mediation effect of AI Performance Appraisal (H7c: $\beta = -0.003$, $p = 0.954$) on employee retention through employee engagement was determined to be insignificant. This suggests that performance appraisal practices driven by AI may not be effectively contributing to improved engagement or retention in the studied context. Overall, our findings emphasize the necessity of carefully implementing AI technologies in specific HR areas, notably those related to recruiting, development, remuneration, and team dynamics, in order to drive engagement and ultimately retain talent inside IT companies.

DISCUSSION:

The structural model shows how AI-enabled HR practices affect IT staff engagement and retention. AI-driven HR strategies studied AI Recruitment & Selection (H1), AI Training & Development (H2), AI Compensation & Benefits (H4), and AI Team Appropriateness (H5) positively and statistically significantly affected employee engagement. This supports the idea that AI may improve employee satisfaction and meaning when used in HR operations (Gayathri and Bella, 2024). AI Team Appropriateness had the greatest impact, demonstrating that AI-facilitated team dynamics, collaboration tools, and compatibility algorithms can improve employee-worker relationships. Additionally, AI Performance Appraisal (H3) did not affect employee engagement. These show AI-

driven assessment systems may lack transparency, trust, or fairness. Employees may believe that automated evaluations lack depth and humanity, especially in judgment and tailored feedback areas. This supports previous studies that performance management is a sensitive area where AI technologies should be utilized cautiously and with human oversight (Zehir et al. 2020). Furthermore, the fact that employee engagement and retention have a positive connection (H6) indicates that engagement plays a key mediating role in the relationship between AI-driven HR practices and retention. Engaged workers are more likely to support the company's goals, feel valued, and be committed to sticking around for a long time. AI-Reduced Workload is highlighted in the moderation analysis for additional details. Reduced workload enhanced retention and engagement. This shows that when AI decreases routine and repetitive activities, people may focus on more important, high-value work, improving happiness and retention. Enhancing the literature previous research investigations have demonstrated a substantial association between AI and successful HRM (Guenole and Feinzig, 2018). The findings demonstrate that AI, when carefully incorporated into HR practices, may boost engagement and retention. However, AI efficacy varies by HR function, so firms should monitor employee attitudes, especially in sensitive procedures like performance review. The mediation examine strongly suggests that employee engagement mediates the association between AI-enabled HR practices and employee retention. The results show that AI Recruitment & Selection, AI Training & Development, AI Compensation & Benefits, and AI Team Appropriateness positively increase employee engagement and retention. AI Team Appropriateness (H7e) had the highest indirect influence on employee retention ($\beta = 0.378$), emphasizing the significance of aligning team structures and dynamics with AI technologies. This shows that AI-formed, well-balanced teams engage employees and make them more inclined to remain. AI Training & Development (H7b) and AI Recruitment & Selection (H7a) both increased engagement and retention. This validates the assumption that AI technologies that tailor training routes or improve recruiting accuracy improve employee engagement. Employee engagement also mediated the AI Compensation & Benefits (H7d)-retention route. This suggests that fair and data-driven remuneration systems assisted by AI satisfy employees' physical and financial expectations and strengthen their emotional and psychological attachment to the firm. Unexpectedly, AI Performance Appraisal (H7c) did not indirectly affect employee retention through engagement. This shows that existing AI-enabled assessment methods may appear impersonal reducing employee engagement. These accords with research indicating AI systems without human-centric design may be distrusted, especially in sensitive areas like performance appraisals. These findings emphasize the need for intentional, employee-focused AI tool use. AI has great potential to improve HR operations, but its impact on employee experience and engagement strongly influences retention. Employers must incorporate AI technology but also ensure that they improve employees' feeling of worth, fairness, and connection at work.

IMPLICATIONS:

Theoretical Implications

This research makes a valuable contribution to the expanding corpus of literature that exists at the intersection of Human Resource Management (HRM) and Artificial Intelligence (AI), with a particular emphasis on employee engagement and retention. The research empirically supports the notion that AI-enabled HR practices can cultivate reciprocal value relationships between the employees since they are in accordance with employees' expectations and job requirements by incorporating concepts from Social Exchange Theory and Task-Technology Fit Theory. These findings strengthen the significance of engagement as a mediating part in turning AI-driven HR initiatives into retention results. The addition of AI-reduced workload as a moderating variable shows how engagement improves retention when employees perceive less repetitive and administrative duties.

Practical Implications

The findings provide several practical insights for HR leaders and IT firms from the perspective of management. Organizations have to concentrate on utilizing AI in domains where it clearly improves engagement, including recruiting, training, remuneration, and team building. AI solutions that

customize employee experiences and link positions with competencies are expected to produce improved engagement and retention results. Given that AI-driven performance evaluations did not enhance engagement, organizations ought to implement a hybrid strategy integrating AI analytics with human discernment to uphold openness, equity, and trust. Companies must prioritize employee engagement due to its powerful mediation function. Long-term talent retention requires engaging work environments and smart HR procedures. Employee engagement and productivity are increased by automating monotonous jobs. Employees feel closer to the company when AI helps them. After stratified sampling across experience levels, HR managers may create AI-based interventions for entry-level, mid-level, and senior personnel. In conclusion, AI adoption in HRM requires connecting technology with employee requirements and perceptions to create a more engaged and loyal workforce.

6. LIMITATIONS AND FUTURE STUDIES

While this study gives useful insights into the impact of AI-enabled HR practices in improving employee engagement and retention, certain limits must be noted, paving the way for further research. Firstly, the study is geographically confined to IT enterprises in Chennai, India, which may limit the findings' applicability to other areas, industry, or cultural situations. Future research should include comparison studies across other industries and regions to confirm and build on these findings. Second, the research is cross-sectional, collecting data at one time. To study how AI-enabled HR practices affect engagement and retention over time, longitudinal or experimental approaches are advised for future research.

The study uses self-reported data. Future research should triangulate findings and increase validity with objective measurements, HR performance data, or blended techniques. This research examines five AI-enabled HR services. AI-based workforce analytics, digital onboarding, and behavioral prediction technologies are untapped. Including such features would help explain AI's impact on HRM. The mediating variable is employee engagement, while the moderator is AI-reduced workload. Trust in AI, perceived justice, company culture, and leadership style are future study might examine these characteristics. This work provides a solid basis for understanding AI's strategic position in HR, but future research should use larger, longitudinal, and more varied methodologies to build on and confirm its findings.

CONCLUSION:

This study provides emphasis on AI-enabled HR practices affect IT employee engagement and retention in Chennai, India. The results show that AI applications in recruiting & selection, training & development, remuneration & benefits, and team suitability boost employee engagement, which helps retain employees. AI Team Appropriateness was the most impactful element, highlighting the necessity of strategically developing and maintaining AI teams. Most AI-driven HR tasks increased engagement, while AI Performance Appraisal did not, underlining the need for care and refinement when using AI in evaluation procedures. Employee engagement was also found to be a key mediating element, confirming its importance in transforming good HR policies into long-term employee commitment. The moderating role of AI-reduced workload showed that AI increases operational efficiency and work life. AI reduces monotonous activities so employees can focus on more important work, improving engagement and retention. This study shows that strategic and ethical AI implementation may change HRM. AI and employee-centric strategies must be used to create a motivated, engaged, and resilient workforce to retain top talent.

REFERENCES

- [1] Agarwal, A. (2022). AI adoption by human resource management: a study of its antecedents and impact on HR system effectiveness. *foresight*, 25(1), 67-81.
- [2] Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H., & Saks, A. M. (2015). Employee engagement, human resource management practices and competitive advantage: An integrated approach. *Journal of organizational effectiveness: People and performance*, 2(1), 7-35.

- [3] Alghnimi, A. A. W. M., Habeeb, L. M., &Kadhimi, R. I. (2020). The mediating effect of employee engagement between sustainable hrm practices and job performance. *International Journal of Innovation, Creativity and Change*, 13(6), 643-659.
- [4] Arslan, A., Cooper, C., Khan, Z., Golgeci, I., & Ali, I. (2022). Artificial intelligence and human workers interaction at team level: a conceptual assessment of the challenges and potential HRM strategies. *International Journal of Manpower*, 43(1), 75-88.
- [5] Azeem, M. M., Febriyanto, U., Nurhadi, F. A., &Halid, H. (2024). Unlocking the Values of Artificial Intelligence (AI) in Human Resource Management (HRM) in Enhancing Employee Retention. *Global Business & Management Research*, 16(2).
- [6] Bland, J. M., & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *Bmj*, 314(7080), 572.
- [7] Blau, P. M. (1964). *Exchange and power in social life*. New York: John Wiley and Sons.
- [8] Buchashvili, G., Djakeli, K., &Kazaishvili, A. (2022). Leadership challenges and the role of education in forming leaders in VUCA world. In *Agile Management and VUCA-RR: Opportunities and Threats in Industry 4.0 towards Society 5.0* (pp. 161-168). Emerald Publishing Limited.
- [9] Voorhees, C. M., Brady, M. K., Calantone, R., & Ramirez, E. (2016). Discriminant validity testing in marketing: an analysis, causes for concern, and proposed remedies. *Journal of the academy of marketing science*, 44, 119-134.
- [10] Chen, Z. (2024). Responsible AI in Organizational Training: Applications, Implications, and Recommendations for Future Development. *Human Resource Development Review*, 23(4), 498-521.
- [11] Chowdhury, S., Dey, P., Joel-Edgar, S., Bhattacharya, S., Rodriguez-Espindola, O., Abadie, A., & Truong, L. (2023). Unlocking the value of artificial intelligence in human resource management through AI capability framework. *Human resource management review*, 33(1), 100899.
- [12] Costello, A. B., & Osborne, J. (2019). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical assessment, research, and evaluation*, 10(1), 7.
- [13] Das, S., Barik, R., & Mukherjee, A. (2020). Salary prediction using regression techniques. *Proceedings of Industry Interactive Innovations in Science, Engineering & Technology (I3SET2K19)*.
- [14] De Bruyn, A., Viswanathan, V., Beh, Y. S., Brock, J. K. U., & Von Wangenheim, F. (2020). Artificial intelligence and marketing: Pitfalls and opportunities. *Journal of Interactive Marketing*, 51(1), 91-105.
- [15] Dhamija, P., & Bag, S. (2020). Role of artificial intelligence in operations environment: a review and bibliometric analysis. *The TQM Journal*, 32(4), 869-896.
- [16] Durrani, R., Iqbal, A., & Akram, H. (2024). Artificial Intelligence (AI) in Early Childhood Education, Exploring Challenges, Opportunities and Future Directions: A Scoping Review. *Qlantic Journal of Social Sciences*, 5(2), 411-423.
- [17] Eubanks, B. (2022). *Artificial intelligence for HR: Use AI to support and develop a successful workforce*. Kogan Page Publishers.
- [18] Faqih, K. M. S., & Jaradat, M.-I. R. M. (2021). Integrating TTF and UTAUT2 theories to investigate the adoption of augmented reality technology in education: Perspective from a developing country. *Technology in Society*, 67, 101787. <https://doi.org/10.1016/j.techsoc.2021.101787>.
- [19] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- [20] Gayathri, K., & Bella, K. M. J. (2024). Impact of latest innovation in artificial intelligence on employee's job satisfaction and performance. *Alochana Journal*, 13(2), 370-378.
- [21] Geetha, R., & Bhanu, S. R. D. (2018). Recruitment through artificial intelligence: a conceptual study. *International Journal of Mechanical Engineering and Technology*, 9(7), 63-70.
- [22] Ghani, B., Zada, M., Memon, K. R., Ullah, R., Khattak, A., Han, H., ...& Araya-Castillo, L. (2022). Challenges and strategies for employee retention in the hospitality industry: A review. *Sustainability*, 14(5), 2885.

- [23] Goldfarb, A., Taska, B., & Teodoridis, F. (2020, May). Artificial intelligence in health care? Evidence from online job postings. In AEA Papers and Proceedings (Vol. 110, pp. 400-404). 2014 Broadway, Suite 305, Nashville, TN 37203: American Economic Association.
- [24] Goodhue, D. L., & Thompson, R. L. (1995). Task-Technology Fit and Individual Performance. *MIS Quarterly*, 19(2), 213. <https://doi.org/10.2307/249689>.
- [25] Gorde, S. U. (2019). A study of employee retention. *Journal of Emerging Technologies and Innovative Research*, 6(6), 331-337.
- [26] Guenole, N., & Feinzig, S. (2018). The business case for AI in HR. With Insights and Tips on Getting Started. Armonk: IBM Smarter Workforce Institute, IBM Corporation.
- [27] Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
- [28] Hlee, S., Park, J., Park, H., Koo, C., & Chang, Y. (2023). Understanding customer's meaningful engagement with AI-powered service robots. *Information Technology & People*, 36(3), 1020-1047.
- [29] Hossain, M. A., Quaddus, M., Hossain, M. M., & Gopakumar, G. (2024). Data-driven innovation development: an empirical analysis of the antecedents using PLS-SEM and fsQCA. *Annals of Operations Research*, 333(2), 895-937.
- [30] Huang, X., Yang, F., Zheng, J., Feng, C., & Zhang, L. (2023). Personalized human resource management via HR analytics and artificial intelligence: Theory and implications. *Asia Pacific Management Review*, 28(4), 598-610.
- [31] Jia, Q., Guo, Y., Li, R., Li, Y., & Chen, Y. (2018). A conceptual artificial intelligence application framework in human resource management.
- [32] Kaiser, H. F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, 23(3), 187-200.
- [33] Kambur, E., & Akar, C. (2022). Human resource developments with the touch of artificial intelligence: a scale development study. *International Journal of Manpower*, 43(1), 168-205.
- [34] Kulkarni, S. B., & Che, X. (2019). Intelligent software tools for recruiting. *Journal of International Technology and Information Management*, 28(2), 2-16.
- [35] Lee, J. C., & Chen, X. (2022). Exploring users' adoption intentions in the evolution of artificial intelligence mobile banking applications: the intelligent and anthropomorphic perspectives. *International Journal of Bank Marketing*, 40(4), 631-658.
- [36] Li, P., Bastone, A., Mohamad, T. A., & Schiavone, F. (2023). How does artificial intelligence impact human resources performance? Evidence from a healthcare institution in the United Arab Emirates. *Journal of Innovation & Knowledge*, 8(2), 100340.
- [37] Madhani, P. M. (2020). Effective rewards and recognition strategy: Enhancing employee engagement, customer retention and company performance. *The Journal of Total Rewards*, 29(2), 39-48.
- [38] Maity, S. (2019). Identifying opportunities for artificial intelligence in the evolution of training and development practices. *Journal of Management Development*, 38(8), 651-663.
- [39] Malik, M. A. A., Mustapha, M. F., Sobri, N. M., AbdRazak, N. F., Zaidi, M. N. M., Shukri, A. A., & Sham, M. A. L. Z. (2021). Optimal reliability and validity of measurement model in confirmatory factor analysis: different likert point scale experiment. *Journal of Contemporary Issues and Thought*, 11, 105-112.
- [40] Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management*, 58(3), 103434.
- [41] Muduli, A., & Trivedi, J. J. (2020). Recruitment methods, recruitment outcomes and information credibility and sufficiency. *Benchmarking: An International Journal*, 27(4), 1615-1631.
- [42] Mujtaba, D. F., & Mahapatra, N. R. (2019, November). Ethical considerations in AI-based recruitment. In 2019 IEEE International Symposium on Technology and Society (ISTAS) (pp. 1-7). IEEE.

- [43] N. Kaushal, R.E. Rhodes, J.T. Meldrum, J.C. Spence, The role of habit in different phases of exercise, *Br. J. Health Psychol.* 22 (2017) 429–448, <https://doi.org/10.1111/BJHP.12237>.
- [44] N. Kock, P. Hadaya, Minimum sample size estimation in PLS-SEM: the inverse square root and gamma-exponential methods, *Inf. Syst. J.* 28 (2018) 227–261, <https://doi.org/10.1111/ISJ.12131>.
- [45] Nair, M. S., &Salleh, R. (2015). Linking performance appraisal justice, trust, and employee engagement: A conceptual framework. *Procedia-Social and Behavioral Sciences*, 211, 1155-1162.
- [46] Naufer, F. Z., & Kumar, P. D. A. S. (2020). Impact of Employee Engagement on Turnover Intention: Study of Third Space Global (Pvt) Limited. *Kelaniya Journal of Human Resource Management*, 15(1), 71-88.
- [47] Nyathani, R. (2023). AI in performance management: redefining performance appraisals in the digital age. *Journal of Artificial Intelligence & Cloud Computing*. SRC/JAICC-146. DOI: [doi.org/10.47363/JAICC/2023\(2\),134,2-5](https://doi.org/10.47363/JAICC/2023(2),134,2-5).
- [48] Odugbesan, J. A., Aghazadeh, S., Al Qaralleh, R. E., &Sogeke, O. S. (2023). Green talent management and employees' innovative work behavior: the roles of artificial intelligence and transformational leadership. *Journal of Knowledge Management*, 27(3), 696-716.
- [49] Qamar, Y., Agrawal, R. K., Samad, T. A., &ChiappettaJabbour, C. J. (2021). When technology meets people: the interplay of artificial intelligence and human resource management. *Journal of Enterprise Information Management*, 34(5), 1339-1370.
- [50] Qiu, H., Li, M., Bai, B., Wang, N., & Li, Y. (2022). The impact of AI-enabled service attributes on service hospitableness: the role of employee physical and psychological workload. *International Journal of Contemporary Hospitality Management*, 34(4), 1374-1398.
- [51] Reitgruber, T. (2023). Transforming Learning & Development: The Impact of Artificial Intelligence and Automation on Employee Motivation to Learn (Master's thesis, UniversidadeCatolica Portuguesa (Portugal)).
- [52] Renkema, M., Meijerink, J., &Bondarouk, T. (2017). Advancing multilevel thinking in human resource management research: Applications and guidelines. *Human resource management review*, 27(3), 397-415.
- [53] Riyanto, S., Endri, E., &Herlisha, N. (2021). Effect of work motivation and job satisfaction on employee performance: Mediating role of employee engagement. *Problems and Perspectives in Management*, 19(3), 162.
- [54] Rodgers, W., Murray, J. M., Stefanidis, A., Degbey, W. Y., &Tarba, S. Y. (2023). An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes. *Human resource management review*, 33(1), 100925.
- [55] Rožman, M., Oreški, D., &Tominc, P. (2022). Integrating artificial intelligence into a talent management model to increase the work engagement and performance of enterprises. *Frontiers in psychology*, 13, 1014434.
- [56] Salehi, N., McCabe, A., Valentine, M., & Bernstein, M. (2017, February). Huddler: Convening stable and familiar crowd teams despite unpredictable availability. In *Proceedings of the 2017 ACM conference on computer supported cooperative work and social computing* (pp. 1700-1713).
- [57] Sanyaolu, E., & Atsaboghena, R. (2022). Role of Artificial Intelligence in Human Resource Management: Overview of its benefits and challenges. *ResearchGate*, (December), 1-8.
- [58] Sari, R. E., Min, S., Purwoko, H., Furinto, A., & Tamara, D. (2020). Artificial Intelligence for a Better Employee Engagement. *International Research Journal of Business Studies*, 13(2).
- [59] Seo, K., Tang, J., Roll, I., Fels, S., & Yoon, D. (2021). The impact of artificial intelligence on learner–instructor interaction in online learning. *International journal of educational technology in higher education*, 18, 1-23.
- [60] Shaikh, S. J., & Cruz, I. F. (2023). AI in human teams: effects on technology use, members' interactions, and creative performance under time scarcity. *AI & SOCIETY*, 38(4), 1587-1600.
- [61] Soltani, Z., Zareie, B., Rajabiun, L., & Agha MohseniFashami, A. (2020). The effect of knowledge management, e-learning systems and organizational learning on organizational intelligence. *Kybernetes*, 49(10), 2455-2474.

- [62] Soutar, K. (2019). How chatbots can be used to re-engage with applicants during recruitment (Master's thesis).
- [63] Stoilkovska, A., Ilieva, J., & Gjakovski, S. (2015). Equal employment opportunities in the recruitment and selection process of human resources. *UTMS Journal of Economics*, 6(2), 281-292.
- [64] Sundaresan, S., & Zhang, Z. (2022). AI-enabled knowledge sharing and learning: redesigning roles and processes. *International journal of organizational analysis*, 30(4), 983-999.
- [65] Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178.
- [66] Walter, H. (2021). Optimizing Payroll and Compensation with AI: Integrating HRM and Finance Information Systems for Improved Efficiency.
- [67] Wang, Y. (2021). Artificial intelligence in educational leadership: a symbiotic role of human-artificial intelligence decision-making. *Journal of Educational Administration*, 59(3), 256-270.
- [68] Webber, S. S., Detjen, J., MacLean, T. L., & Thomas, D. (2019). Team challenges: Is artificial intelligence the solution?. *Business Horizons*, 62(6), 741-750.
- [69] Wheeler, A. R., & Buckley, M. R. (2021). The current state of HRM with automation, artificial intelligence, and machine learning. In *HR without People?* (pp. 45-67). Emerald Publishing Limited.
- [70] Wijayati, D. T., Rahman, Z., Rahman, M. F. W., Arifah, I. D. C., & Kautsar, A. (2022). A study of artificial intelligence on employee performance and work engagement: the moderating role of change leadership. *International Journal of Manpower*, 43(2), 486-512.
- [71] Zehir, C., Karaboğa, T., & Başar, D. (2019). The transformation of human resource management and its impact on overall business performance: big data analytics and AI technologies in strategic HRM. In *Digital business strategies in blockchain ecosystems: Transformational design and future of global business* (pp. 265-279). Cham: Springer International Publishing.