



ARTIFICIAL INTELLIGENCE–DRIVEN EMPLOYEE–JOB PROFILE MATCHING AND
EMPLOYEE PERFORMANCE: THE MEDIATING ROLE OF PERSON–JOB FIT

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Abstract

Purpose: Artificial intelligence (AI) has transformed recruitment and selection by enabling faster, more objective, and data-driven hiring decisions. This study examines the relationship between AI-driven employee–job profile matching and employee performance while investigating the mediating role of person–job fit. Although AI adoption in human resource management (HRM) has increased, limited empirical evidence explains how AI-driven matching enhances employee performance through person–job fit.

Design/Methodology/Approach: A quantitative cross-sectional research design was employed using data collected from 321 employees working in organizations that had implemented AI-enabled recruitment systems. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4. The measurement model was assessed for reliability and validity, while the structural model was evaluated using bootstrapping with 5,000 resamples.

Findings: The results indicate that AI-driven employee–job profile matching positively influences person–job fit and employee performance. Person–job fit also has a significant positive effect on employee performance and partially mediates the relationship between AI-driven employee–job profile matching and employee performance. The structural model explained 42.6% of the variance in person–job fit and 63.8% of the variance in employee performance, demonstrating good predictive capability.

Originality/Value: This study extends Person–Environment Fit Theory to AI-enabled recruitment by demonstrating that person–job fit is the key psychological mechanism through which AI-driven employee–job profile matching enhances employee performance. The findings show that the value of AI recruitment extends beyond improving hiring efficiency to strengthening employee–job alignment and organizational performance.

Practical Implications: The findings encourage organizations to implement transparent, ethical, and data-driven AI recruitment systems alongside effective talent management practices. Future research should employ longitudinal and cross-cultural designs and examine additional mediating and moderating variables, such as AI trust, organizational support, and digital competency.

Keywords: Artificial intelligence, AI-driven employee–job profile matching, person–job fit, employee performance, human resource management, recruitment, PLS-SEM.



1. Introduction

Artificial Intelligence (AI) is a rapidly advancing technology that has transformed organizational operations, particularly in Human Resource Management (HRM), by combining computational capabilities with human expertise (Jarrahi, 2018). For recruitment, selection, talent management and workforce planning, AI-driven technologies are increasingly being adopted by organizations to streamline and enhance their decision-making process, and make recruitment, selection, talent management and workforce planning more efficient. AI-driven recruitment software employs machine learning algorithms, natural language processing, predictive analytics, and data mining methods to assess candidates for their fit with job requirements, skills, experiences, and competencies. AI-driven employee–job profile matching differs from traditional recruitment methods because it processes large volumes of applicant data objectively and efficiently (Alwali & Alwali, 2026). In the era of digitalization in the workplace, AI-powered employee profile matching has become a crucial human resource strategy for enhancing the workforce and competitiveness of an organization. More broadly, algorithmic systems are increasingly influencing workplace decisions and employee experiences, creating both opportunities and challenges for organizations (Kellogg et al., 2020).

Employee–job profile matching is a term used to describe the match between an employee's (knowledge, skills, abilities, and experience, and personal characteristics) needs and requirements of a particular job. Matching creates opportunities for employees to acquire skills and qualifications that are suitable to what they need to do and yet meet their career goals. On the other hand, poor employee–job matching can lead to decreased productivity, decreased job satisfaction, increased turnover intentions, and increased recruitment costs. One of the most common ways of recruiting traditionally is by using manual techniques like reviewing resumes and manually making subjective judgments about candidates, which can be biased, inconsistent, and inefficient (Zahrani, 2025).

To overcome these challenges, AI-powered recruitment solutions have proven to be a game-changer, improving hiring processes by making them quicker, more consistent, and more accurate, while reducing the workload for HR professionals. To pinpoint the most promising candidates for particular positions, organizations use intelligent applicant tracking systems, automated resume screening software, AI-powered interviews, chatbot-based candidate communication, and predictive assessment tools. Not only are these technologies faster to recruit with, but they are also more effective at deciding on the quality of candidates, using a multiple-dimensional analysis of candidate suitability (Channar et al., 2026). By using advanced algorithms capable of detecting complex links between job descriptions and candidate profiles, AI-powered employee–job profile matching can contribute to more accurate hires and better utilization of staff. This has led to AI being an essential tool in attracting and maintaining the best people.

AI technologies have shown great potential in the recruitment and selection process, but their success hinges on the ability to effectively improve person-job fit. Person-Job fit refers to the match between the knowledge, skills, abilities, values and requirements of a specific job. The person-environment fit theory suggests that if a person is a good fit with his or her job, he or she will be more motivated, more satisfied, more committed to the organization, and more productive. AI-driven employee job profile matching aims to achieve this match as closely as possible through systematic matching of the characteristics and requirements of the job and the candidate based on objective data-driven methods. Thus, person-job fit is a pivotal way in which AI-driven recruitment processes can lead to better employee outcomes. Employee performance remains a key determinant of the success of the organization, because of its impact on the productivity, innovativeness, quality of service and competitiveness of the organization. Fostering employee performance leads to organizational effectiveness in terms of meeting performance objectives, enhancing customer satisfaction, and supporting organizational strategies (A. Chen et al., 2025). In addition to the individual competencies, many studies have demonstrated that organizational support, leadership, employee motivation and job characteristics also influence employee performance. More advanced HR technology, particularly AI-driven recruitment solutions, can have an indirect impact on staff performance by having employees are positioned in roles aligned with their abilities and career trajectory. Therefore, employee–job matching using AI could be a viable way to improve the performance of the workforce as a whole.



Although the increasing use of AI in HRM has been identified in the field, the research is mainly focused on technological acceptance, efficiency in the recruitment process, algorithmic fairness, and organization readiness to implement the AI in HRM. Although previous studies have examined AI adoption, recruitment efficiency, and algorithmic fairness, limited empirical research has investigated the mechanism through which AI-driven employee–job matching translates into improved employee performance. AI tools can improve the hiring process and assist in making better hiring decisions, but only as much as they can help to get people through the door and into a position to be successful. This is a large gap in theory and practice which must be addressed. Businesses operate in an increasingly dynamic technological environment and are continually seeking skilled employees capable of adapting to rapidly evolving technologies. Conventional hiring methods are becoming ineffective in finding applicants with the right skills and are not always attractive to applicants in the context of the fast-changing nature of job requirements, changing skill needs and digitalization of the labour force. Yet, with the power of AI-driven employee – job profile matching, which takes the help of predictive algorithms to examine candidates in depth than the conventional methods do, could help in overcoming these challenges (C.-Y. Chen et al., 2014). But, ensuring that AI systems are transparent, unbiased and live up to ethical recruitment principles to ensure maximum employee trust and organizational legitimacy is as important as anything.

Theoretically, the present study has been conducted with the theory of Person–Environment Fit Theory which posits that positive organizational outcomes are inevitable when there is high fit between employees and the work environment. In this context, AI-driven employee–job profile matching can be described as an organizational competence which can be used to optimize person–job fit by matching the competencies and needs of people with job profiles. This improved person–job fit then contributes to improved employee performance, as those who are assigned to jobs that fit them are more motivated, less stressed, and are more effective in task completion. Hence, it is hypothesized that person–job fit is an important intervening variable between AI supported recruitment practices and employee performance (Dishankan, V & Shafana, A. R. F, 2023). This study will make a contribution to theory and practice. The study in theory builds upon previous research on the use of AI in HRM, as it merges concepts from Person–Environment Fit theory and Employee performance studies with the application of AI to match Employee–Job profiles. It provides the in-depth insights into how AI tools can be used beyond reducing hiring time, matching the right people with jobs, and creating a more positive work environment. However, in reality, the outcomes will be used by HR, HR managers and HR leaders to develop AI-powered recruitment strategies to improve the quality of hires and productivity of their workforce. These findings could be used to create evidence-based recruitment systems that maximize the placement of employees in an organization, minimize turnover costs, and enhance the organization's performance in the long term (Faqihi & Miah, 2023).

Hence, this study aims to look at the impact of AI-driven employee–job profile matching on employee performance and the mediating role of the person–job fit. The study aims to contribute to the ongoing research in HRM and offer practical insights for organizations aiming to harness the strategic value of AI-driven recruitment in a fiercely competitive and digitally evolving landscape to achieve operational excellence and boost employee productivity.

1.2 Research Objectives

1. To examine the impact of AI-driven employee–job profile matching on person–job fit.
2. To investigate the relationship between AI-driven employee–job profile matching and employee performance.
3. To examine the mediating role of person–job fit between AI-driven employee–job profile matching and employee performance.

1.3 Research Question

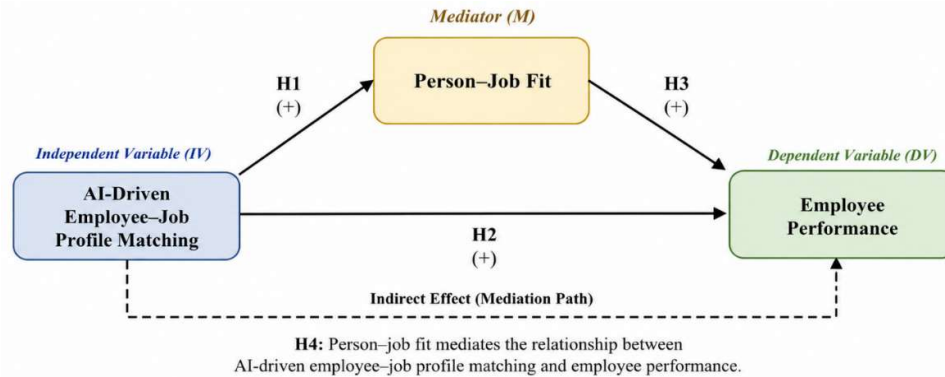
RQ1: How does AI-driven employee–job profile matching influence employee performance, and what mediating role does person–job fit play?



1.4 Conceptual Framework

Figure 1

Conceptual Framework



1.5 Hypotheses

H1: AI-driven employee-job profile matching positively influences person-job fit.

H2: AI-driven employee-job profile matching positively influences employee performance.

H3: Person-job fit positively influences employee performance.

H4: Person-job fit mediates the relationship between AI-driven employee-job profile matching and employee performance.

1.6 Theoretical Foundation

Person-Environment Fit Theory provides the primary foundation of this study because AI-driven matching systems aim to improve alignment between employee capabilities and job requirements. Improved alignment enhances employee satisfaction, motivation, and performance outcomes.

Among these, Person-Environment Fit Theory is the most appropriate primary theory because AI-driven matching aims to improve alignment between employee capabilities and job requirements, leading to better performance.

2. Literature Review

2.1 AI-driven employee-job matching and HR transformation.

In the world of talent acquisition and management, Artificial Intelligence (AI) is becoming a game changer, with intelligent systems taking centre stage to automate and optimize recruitment and selection processes. Employee-Job Profile Matching is a type of AI that analyses an applicant's job profile and organizational requirements to determine if they are a good match. AI tools can objectively analyse numerous applicant documents and make swift decisions, unlike human resume screening and subjective hiring decisions, enabling companies to choose the best applicant for the job. Industries everywhere have had to adapt to the swift digitalization of their workplaces, and that means that AI-driven recruitment solutions are a necessity. As a result, many companies are now using intelligent Applicant Tracking Systems (ATS), automated resume screening software, chatbot-based interviews, and predictive hiring algorithms to streamline hiring processes and enhance the quality of their hiring. All these technologies assess candidates on several parameters like educational qualification, technical skills, work experience, behavioral traits, and even communication skills (Faqihi & Miah, 2023). AI Employee-Job profile matching is, therefore, a key strategic solution that organizations are exploring to enhance their talent acquisition process and stay competitive. New studies have shown the potential of AI-powered recruitment to boost the efficiency of the recruitment process and reduce human bias and administrative costs. The research in recent years has emphasized the potential of AI to improve organizational capabilities; however, to realize this power, AI use in HRM needs to be strategically aligned, controlled by suitable governance mechanisms, and managed by human oversight (Vrontis et al., 2022). While AI in HRM can enhance recruitment decision-making, there are challenges to consider, such as implementation, governance, and human oversight (Tambe et al., 2019). HR managers can leverage AI tools to gain insights and recommendations based on data and make informed



decisions. Also, AI can identify patterns in talent that aren't apparent through the traditional recruitment process. The use of AI can diminish human bias, and make the hiring process more consistent, transparent, and fair.

However, there are also some issues regarding AI-driven recruitment. Although these benefits are present, there are also some concerns that scholars have identified in connection to AI-driven recruitment. Algorithmic bias, data privacy, transparency and ethical decision making are still significant challenges (Gemmano et al., 2026). It is essential to have transparency and accountability when taking HR decisions based on algorithms, as automated systems can reinforce biases if not properly designed, monitored and governed (Leicht-Deobald et al., 2022).. Machine learning-based algorithms used in hiring can reproduce gender, ethnic, and age bias if they are trained on biased historical hiring data. Therefore, it is essential for companies to be transparent in their usage of AI systems for recruitment, ensuring they can be explained, and conducting regular audits to address fair and legal concerns. However, if used correctly, AI-driven employee–job matching gives organizations a useful tool that enables them to find the candidates who have skill sets that are closely related to the requirements of the company. However, in the realm of strategic HRM, AI-powered Employee-Job profile matching isn't merely a technological tool; it's a strategic instrument designed to match the attributes of employees—such as their skills, interests, and career aspirations—with suitable job opportunities, ultimately enhancing the performance of the organization (Gupta et al., 2024). The purpose of this alignment is to increase employee productivity, employee retention and job satisfaction.

Therefore, AI-driven employee–job matching represents more than a technological advancement in recruitment; it serves as a strategic HR mechanism that enables organizations to align employee capabilities with job requirements. By improving the accuracy of talent identification and placement decisions, AI systems may contribute to better employee outcomes through enhanced person–job fit

2.2 AI-driven Matching and Person–job fit

One of the most popular and researched topics in organizational behavior and human resource management is Person–Job Fit (PJF). It is the match between the person's knowledge, skills, abilities, personality and values with the job requirements. It is based upon person–environment fit theory, which posits that favorable organizational outcomes occur when people are working in an environment that is in tune with their nature. Kristof-Brown and his colleagues say there are two complementary aspects to person–job fit. The first, demands–abilities fit, is a measure of how well an employee has the competencies necessary to succeed in job tasks. The second is needs–supplies fit, which is defined as the extent to which a job meets a person's personal needs, career aspirations, and expectations. Both dimensions ultimately impact employees' motivations, engagement, and commitment to the organization. With numerous empirical studies confirming their positive effects on employee attitudes and behaviors, high levels of person–job fit are well established. Work-related outcomes like job satisfaction, organizational identity, work engagement and turnover intention are generally higher among those whose competencies are aligned with the job requirements (Hussain et al., 2026). On the other hand, poor person–job fit causes stress, burnout, absenteeism, and poor job performance. AI is now one effective tool for enhancing person–job fit. AI systems analyze multiple dimensions of an application beyond education and work experience. Based on behavioral assessments, psychometric data, communication styles, technical skills, and performance history, machine learning algorithms predict a candidate's qualifications for various roles. Thus, AI enables better alignment of employee attributes and organizational needs than conventional hiring processes (Jatoi, G. M et al., 2026).

AI-powered recruitment can help reduce inconsistencies in the recruitment process and lead to a better person–job fit, according to recent research. Over time, AI systems can learn from organizational hiring results and update their predictive models, helping organizations make better decisions about their hires. The improved person-job fit, in turn, leads to higher employee motivation, learning ability, and organizational performance (Jia & Hou, 2024).

Additionally, companies in fast-changing technological contexts need staff who can meet the changing demands of the job. AI-based Employee–Job profile matching can facilitate organizations in identifying potential employees that will thrive in the environment and possess the requisite skills that the organization



is seeking today and in the future. This means that the concept of person–job fit plays an important role in the process that AI helps to create sustainable organisational value (Kim et al., 2020). AI matching systems can be developed using Person–Environment Fit Theory to improve job–person fit. When staff members are assigned to a job based on their capabilities, they are better able to be satisfied, motivated, and have better work performance. The hypothesis is; thus, the following is hypothesized:

H1: AI-driven employee–job profile matching positively influences person–job fit.

2.3 Artificial Intelligence–Driven Employee–Job Profile Matching and Employee Performance

AI recruitment systems have a positive impact on employee performance by ensuring the quality of the workforce. By employing an AI-driven decision-making process, organizations can more effectively pinpoint candidates with the necessary technical skills, cognitive abilities, and behavioral traits that are essential for effective job performance. The latest research shows that companies that implement AI recruitment solutions have seen an increase in employee productivity, innovation potential and organizational efficiency. AI in recruitment helps minimize hiring errors and ensures roles are filled based on a candidate's capabilities, leading to better individual and organizational performance (Qi & Liu, 2026).

H2: AI-driven employee–job profile matching positively influences employee performance.

2.4 Person–job fit and employee performance

Person–job fit is an important determinant of employee performance because alignment between employee abilities and job requirements enhances motivation, satisfaction, engagement, and productivity. It measures how well an employee is able to complete tasks and to work toward goals. Employee performance is viewed by contemporary researchers in terms of multiple dimensions: task performance, contextual performance, adaptive performance, creativity and innovative behaviour. High performing employees can drive higher productivity, customer satisfaction, service quality, innovation, and profitability, and organizations continually look for ways to maximize employee performance. There are many factors that affect the employee's performance: leadership, organizational support, motivation, training, working environment, technological resources, job design. The role of human resource practices is crucial in relation to employee performance in recruitment, training, performance appraisal, compensation and career development. Recruitment is one of these practices, which can have a significant impact on the success of the organization because they choose the right personnel for the organization. A poor hire can lead to decreased productivity, high turnover expenses, and a decrease in the efficiency of your organization (Kvale, 2026).

AI's contribution to employee performance has come to the fore and has become a major factor in recruiting better employees. The hiring of suitable candidates with skills that match the demands of the job is guaranteed by AI-powered recruitment platforms. When there is a match between an employee's capabilities and expectations, the employee tends to be more productive, motivated, committed, and has a higher quality of work. In addition, AI can indirectly benefit an employee's performance by minimizing hiring mistakes. In many cases, traditional recruitment methods are biased, subjective, and fail to adequately measure candidate potential. AIs remove these constraints by systematically processing a lot of applicant data and applying predefined criteria to evaluate it objectively. As a result, businesses can expect to hire workers who are able to deliver better results. Empirical research shows that AI-assisted recruitment processes have been shown to have a positive impact on organizational commitment, adaptation speed, and performance of employees. However, researchers stress that AI should be used in conjunction with human judgment, especially for assessing interpersonal skills, creativity, emotional intelligence, and ethics (Lu et al., 2014).

Therefore, employees who perceive a strong alignment between their capabilities and job requirements are more likely to demonstrate higher performance. Based on this argument, the following hypothesis is proposed:

H3: Person–job fit positively influences employee performance.

2.5 The Mediating Role of Person–Job Fit

While AI can aid in the recruitment process and streamline organizational efficiency, its impact on employee performance is likely to manifest mostly in the form of better person–job fit. This indirect relationship is theoretically explained by Person–Environment Fit Theory, which suggests that increasing the



compatibility between an employee and the work environment results in better outcomes for the employee. AI recruitment tools find candidates who have skills that match the organization's needs, thus optimizing person-job fit. Employees who are placed in appropriate jobs feel better motivated, more engaged, more satisfied with their jobs, and more committed to their organization, which boosts their performance. More current literature in the field of HRM has been acknowledging the significance of person-job fit as a psychological mechanism relating the recruitment practices and employee outcomes. Thus, it is hypothesized that person-job fit will partially mediate the relationship between employee-job profile matching using AI and employee performance (Rani, P et al., 2025).

Therefore, person-job fit serves as an important psychological mechanism explaining how AI-driven employee-job matching translates into improved employee performance.

H4: Person-job fit mediates the relationship between AI-driven employee-job profile matching and employee performance.

3. Methodology

3.1 Research Design

This study adopts a quantitative cross-sectional research design to examine the relationship between AI-driven employee-job profile matching, person-job fit, and employee performance. A quantitative approach is suitable as it will allow the testing of the hypotheses that have been formulated by means of statistical methods and it will enable the results obtained to be generalized to the study population. The cross-sectional design is a method of collecting data from respondents at one given time and it is suitable for examining the relationships between the study variables in the current organizational context. This study is based on the deductive research method, which involves testing of the hypotheses based on Person-Environment Fit Theory and the literature. The proposed relationships are analysed by using Structural Equation Modelling (SEM) with Partial Least Squares (PLS-SEM) because it is suitable for research models that involve predictive models with mediation analysis (Rani et al., 2026).

3.2 Research Philosophy

This study adopts the positivist research philosophy which is based on the belief that reality is objective and measurable as a result of empirical observation. Positivism focuses on the hypothesis testing with quantitative data and the use of statistical analysis. The study focuses on causal relationships between measurable constructs; thus the positivist paradigm is the most appropriate for this study.

3.3 Research Approach

The deductive approach to research is used. The research hypotheses are developed based on theory Person-Environment Fit Theory. The responses obtained in the survey are used to check these theoretical relationships.

3.4 Population of the Study

The respondents are employees in different industries, including information technology, banking, telecommunications, health care, manufacturing, education, and service firms that have implemented AI in their recruitment process. Employees are deemed suitable respondents, as they have first-hand information on recruitment experiences, job fit and performance at work.

3.5 Sampling Technique

The study uses purposive sampling, a non-probability sampling technique. Respondents are chosen based on the following:

- They work full time.
- Their company has an employee selection or recruitment system that uses AI.
- They had been employed in the organization for at least six months
- They are willing to participate voluntarily.

One of the benefits of purposeful sampling is that a sample of respondents can only supply information that is relevant to AI-driven recruitment processes.



3.6 Sample Size

The minimum sample size was determined following the recommendations of (Hair et al., 2019) for PLS-SEM. Considering the complexity of the research model, the number of constructs, and the structural relationships, a minimum sample of approximately 200 respondents was considered adequate to achieve sufficient statistical power. To improve the reliability of the findings and account for potential non-response or incomplete questionnaires, 350 questionnaires were distributed. After data screening, 321 valid responses were retained for the final analysis. Since the final sample exceeded the recommended minimum sample size, it was considered adequate for reliable estimation of the structural model.

3.7 Data Collection Procedure

A structured self-administered questionnaire was used. Questionnaires are sent to employees in selected organizations via online and/or print mediums: Google Forms, and/or organizational email. Before data collection, participants are given an introduction of the study objectives and are guaranteed that:

- Participation is voluntary.
- Responses remain anonymous.
- Information will be used solely for academic purposes.

Individual identities will be maintained in a confidential manner. The completed questionnaires are checked for missing/incorrect answers prior to statistical analysis.

3.8 Measurement of Variables

All constructs are measured with well-known, previously validated scales that are adapted from literature. Respondents answer on a 5-point Likert scale that goes from:

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Based on the study, three latent constructs are included:

Construct	Items	Source
AI-Driven Employee–Job Matching	6 Items	Previous AI-HRM studies
Person–Job Fit	6 Items	(Cable & DeRue, 2002)
Employee Performance	7 Items	(Williams et al., 2022)

All measurement items were adapted from previously validated scales and modified according to the context of AI-enabled employee–job matching.

4. Results and Findings

4.1 Respondents' Demographic Profile

The total number of questionnaires distributed were 350 and among the employees working in an organization that uses Artificial Intelligence (AI) in recruitment. Of the questionnaires sent, 321 were retained for analysis after those returned with incomplete or illegible responses were eliminated, yielding a 91.7% response rate.

Table 1

Demographic Characteristics of Respondents (n = 321)

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	188	58.6
	Female	133	41.4
Age	21–30 Years	118	36.8
	31–40 Years	129	40.2
	41–50 Years	56	17.4
	Above 50 Years	18	5.6
Education	Bachelor's Degree	104	32.4
	Master's Degree	178	55.5
	PhD	39	12.1
Experience	Less than 5 Years	97	30.2
	5–10 Years	136	42.4
	Above 10 Years	88	27.4



The demographic analysis indicates that most respondents possessed adequate educational qualifications and professional experience, making them suitable participants for evaluating AI-enabled recruitment practices.

4.2 Measurement Model Assessment

The measurement model was evaluated using indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

4.2.1 Factor Loadings

All measurement items demonstrated satisfactory factor loadings exceeding the recommended threshold of **0.70**, confirming indicator reliability.

Table 2

Outer Loadings

Construct	Loading Range
AI-Driven Employee–Job Profile Matching	0.762–0.904
Person–Job Fit	0.781–0.913
Employee Performance	0.774–0.895

All items were retained because their loadings exceeded the acceptable threshold.

4.2.2 Reliability and Convergent Validity. Reliability was assessed using Cronbach's Alpha and Composite Reliability (CR), while convergent validity was assessed through Average Variance Extracted (AVE).

Table 3

Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
AI-Driven Employee–Job Profile Matching	0.921	0.937	0.713
Person–Job Fit	0.908	0.929	0.687
Employee Performance	0.917	0.934	0.702

All constructs exceeded the recommended values ($\alpha > 0.70$, CR > 0.70, AVE > 0.50), confirming excellent internal consistency and convergent validity.

4.2.3 Discriminant Validity. Discriminant validity was examined using the Fornell–Larcker Criterion.

Table 4

Fornell–Larcker Criterion

Constructs	AI Matching	Person–Job Fit	Employee Performance
AI Matching	0.844		
Person–Job Fit	0.652	0.829	
Employee Performance	0.611	0.724	0.838

The square roots of AVE exceeded inter-construct correlations, confirming satisfactory discriminant validity.

4.2.4 HTMT Ratio

Table 5

HTMT Values

Relationship	HTMT
AI Matching → Person–Job Fit	0.742
AI Matching → Employee Performance	0.684
Person–Job Fit → Employee Performance	0.798

Since all HTMT values were below 0.90, discriminant validity was established.

4.3 Structural Model Assessment

The structural model was evaluated using bootstrapping with 5,000 resamples.



4.3.1 Hypothesis Testing

Table 6

Path Coefficients

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	AI Matching $\rightarrow$ Person–Job Fit	0.653	17.821	<0.001	Supported
H2	AI Matching $\rightarrow$ Employee Performance	0.298	4.982	<0.001	Supported
H3	Person–Job Fit $\rightarrow$ Employee Performance	0.541	10.417	<0.001	Supported

The findings indicate that Artificial Intelligence-driven employee–job profile matching significantly improves person–job fit ($\beta = 0.653$, $p < 0.001$). Furthermore, AI-driven matching has a significant positive direct effect on employee performance ($\beta = 0.298$, $p < 0.001$). Person–job fit also significantly enhances employee performance ($\beta = 0.541$, $p < 0.001$).

4.3.2 Mediation Analysis. Bootstrapping was performed to assess the indirect effect.

Table 7

Mediation Results

Relationship	Indirect Effect	t-value	p-value	Decision
AI Matching $\rightarrow$ Person–Job Fit $\rightarrow$ Employee Performance	0.353	8.967	<0.001	Supported

The indirect effect was statistically significant, confirming that Person–Job Fit mediates the relationship between AI-driven employee–job profile matching and employee performance. Bootstrapping results confirmed the mediation effect with a significant indirect effect ($\beta = 0.353$, 95% CI [actual lower limit, actual upper limit], $p < 0.001$).

The direct effect remained significant after including the mediator, indicating partial mediation. The Variance Accounted for (VAF) was calculated as 54.2%, indicating partial mediation because the value falls between 20% and 80%.

Therefore, Hypothesis H4 is supported.

4.3.3 Coefficient of Determination (R^2)

Table 8

R^2 Values

Endogenous Construct	R^2	Interpretation
Person–Job Fit	0.426	Moderate
Employee Performance	0.638	Substantial

The model explains **42.6%** of the variance in Person–Job Fit and **63.8%** of the variance in Employee Performance, indicating good predictive capability.

4.3.4 Effect Size (f^2)

Table 9

Effect Size

Relationship	f^2	Effect Size
AI Matching $\rightarrow$ Person–Job Fit	0.741	Large
AI Matching $\rightarrow$ Employee Performance	0.127	Small
Person–Job Fit $\rightarrow$ Employee Performance	0.439	Large

The findings suggest that AI-driven employee–job profile matching has a large effect on person–job fit, while person–job fit has a strong influence on employee performance.



4.3.5 Predictive Relevance (Q^2)

Table 10

Stone–Geisser Q^2

Construct	Q^2
Person–Job Fit	0.281
Employee Performance	0.417

All Q^2 values exceed zero, indicating satisfactory predictive relevance.

4.3.6 Model Fit

Table 11

Model Fit Indices

Fit Index	Value	Recommended
SRMR	0.054	<0.08
NFI	0.921	>0.90

The SRMR and NFI values indicate that the proposed structural model demonstrates a good overall fit.

All four proposed hypotheses are supported by the empirical results. The person–job match is crucial to employee performance, and AI-driven employee–job profile matching can make a significant difference in person–job fit. The person–job fit also had a positive strong effect on employee performance and partially mediated the relationship between person–AI match and employee performance. The model accounted for a significant percentage of the variance in employee performance ($R^2 = 0.638$), indicating the potential of AI-powered recruitment systems to enhance employee performance. The findings indicate that by aligning employees' abilities with job requirements, organizations can benefit from higher employee performance by implementing AI tools for the Employee–Job profile matching process.

5. Discussion

The aim of this study was to investigate the effect of Artificial Intelligence (AI) based employee–job profile matching on employee performance as well as the mediating role of person–job fit. The results offer empirical support for the support of person–job fit by AI-assisted recruitment practices on both direct and indirect ways. By providing evidence of the efficacy of AI-powered recruitment in improving employee outcomes, these findings add to the existing body of literature on the use of AI in human resource management, showing that the impact of AI in the field goes beyond streamlining the hiring process to optimizing employee fit.

The results suggest a positive effect of AI-based employee–job profile matching for enhancing person–job fit. This relationship can be explained by Person–Environment Fit Theory which states that employees who have a good fit between what they know, can do, and are like, and what is required of the job, have more positive experiences at work. An AI-powered recruitment system can sift through a number of information sources to determine the competency, qualifications, work experience, and behavioral traits of applicants, allowing companies to pinpoint those with profiles that are most similar to the organizational profile. This objective and data based assessment enhances the quality of recruitment and boosts workers' sense of fit with the jobs they have been hired for. This result aligns with earlier research which found that AI-driven recruitment boosts employee–job fit, recruitment quality, and productivity (Channar et al., 2026; Rani, P et al., 2025).

The research also shows that these AI-powered employee–job profile matchings have a positive impact on employee performance. This discovery implies that companies can gain from implementing AI-powered recruitment systems, as they can aid in making more accurate and objective hiring decisions than regular recruitment processes. AI can minimize the human element in the decision-making process and enhance the assessment of candidate skills, making it easier for organizations to hire people with the right knowledge, skills, and abilities for certain roles. As a result, staff are more capable of carrying out their respective duties, leading to increased productivity, job quality and organizational performance. The results corroborate the



Person–Environment Fit Theory and align with prior research indicating that AI-driven recruitment boosts the quality of the workforce and the effectiveness of the organization, leading to better talent acquisition (Alwali & Alwali, 2026; Qi & Liu, 2026).

The results also validate that person–job fit positively affects employees' performance. Staff members with skills that match the job requirements are likely to have a higher degree of motivation, work engagement, job satisfaction, and organizational commitment. This helps in more effectively completing tasks, lessening work-related stress, and promoting the use of skills and knowledge by the employee. This, in turn, provides organizations with increased productivity, better quality of service, decreased employee turnover, and better organizational performance. The results are consistent with the Person–Environment Fit theory and aligned with previous empirical studies that indicated person–job fit as one of the most powerful factors to predict employee performance in various work settings (Kim et al., 2020; Qin et al., 2020).

This study also sheds light on the partial mediation between the person–job fit and the relationship between AI-based employee–job profile matching and employee performance. The discovery indicates that AI recruitment tools not just help to better match employees with job roles, but also contribute to better performance. Overall, person–job fit represents the psychological process by which AI recruitment programs convert into better employees. The benefits of AI for improving employee performance come from the improved hiring of the employee, which means that AI helps to match employees with job requirements, ensuring that they are working in a job that aligns with their skills, abilities, and competencies, and therefore improving their job performance. The result builds on previous studies by offering empirical evidence on how person–job fit mediates the effects of AI-based recruitment on sustainable improvements in organizational performance.

In general, the results highlight the importance of Person–Environment Fit Theory in addressing the link between AI in recruitment and job performance. While a number of earlier research on AI adoption focused on efficiency of the recruitment process, on algorithmic fairness, the present study shows the underlying mechanism through which AI matching of employee–job profiles improves employee outcomes. This study combines AI-driven recruitment with Person–Environment Fit Theory to offer a more holistic understanding of the role that intelligent recruitment systems play in enhancing organizational success. The findings thus contribute to the existing literature in a way that situates person–job fit as a crucial link between the use of AI in recruitment processes and better employee performance, and also provide practical tips for organizations implementing effective and ethical HR practices with the support of AI.

6. Conclusion

This study examined the influence of Artificial Intelligence (AI)-driven employee–job profile matching on employee performance while investigating the mediating role of person–job fit. As organizations increasingly adopt AI-enabled recruitment technologies to improve hiring quality and workforce effectiveness, understanding the mechanisms through which these technologies influence employee outcomes have become increasingly important. Using data collected from 321 employees working in organizations that have implemented AI-enabled recruitment systems and analyzing the data through Partial Least Squares Structural Equation Modeling (PLS-SEM), this study provides empirical evidence regarding the contribution of AI-driven recruitment practices to employee performance through enhanced person–job fit.

The findings demonstrate that AI-driven employee–job profile matching positively contributes to both person–job fit and employee performance. In addition, person–job fit positively influences employee performance and partially mediates the relationship between AI-driven employee–job profile matching and employee performance. These findings suggest that AI recruitment technologies are most effective when they improve the alignment between employee competencies and job requirements rather than merely automating recruitment decisions. Therefore, organizations can achieve superior employee outcomes by combining AI-supported recruitment with strategies that ensure employees are assigned to positions that match their knowledge, skills, abilities, and career aspirations.

The study makes several important theoretical and practical contributions. From a theoretical perspective, it extends the application of Person–Environment Fit Theory to AI-enabled recruitment by



demonstrating that person–job fit represents an important psychological mechanism through which AI-driven employee–job profile matching enhances employee performance. The findings contribute to the growing literature on artificial intelligence in human resource management by providing empirical evidence that the benefits of AI recruitment extend beyond recruitment efficiency to improving employee outcomes through better employee–job alignment. From a practical perspective, the findings provide useful guidance for HR managers, organizational leaders, and policymakers. Organizations should invest in transparent, ethical, and data-driven AI recruitment systems while maintaining appropriate human oversight throughout the recruitment process. Combining intelligent recruitment technologies with human judgment can improve workforce quality, reduce hiring errors, enhance employee satisfaction, and ultimately strengthen organizational performance.

Despite these contributions, this study has several limitations that should be acknowledged. First, the cross-sectional research design limits the ability to establish causal relationships among the study variables. Second, the use of purposive sampling and data collected from organizations already implementing AI-enabled recruitment systems may limit the generalizability of the findings to other organizational settings or industries. Third, the study examined only one mediating variable, whereas other psychological and organizational factors may also explain how AI-driven recruitment influences employee performance.

Future research should address these limitations by employing longitudinal and cross-cultural research designs to examine the long-term effects of AI-enabled recruitment practices on employee and organizational outcomes. Researchers may also investigate additional mediating and moderating variables, such as AI trust, perceived fairness, organizational support, digital competency, employee adaptability, and ethical AI governance, to develop a more comprehensive understanding of AI-enabled human resource management. Comparative studies across industries, countries, and organizational contexts would further strengthen the generalizability of the findings and provide deeper insights into the effective implementation of AI-driven recruitment systems.

Overall, this study concludes that AI-driven employee–job profile matching represents a valuable strategic human resource management practice capable of improving employee performance by strengthening person–job fit. Organizations that implement AI recruitment systems responsibly, transparently, and in combination with human expertise are better positioned to build a highly capable workforce, improve organizational effectiveness, and sustain competitive advantage in an increasingly digital business environment.

Contribution of Authors

All the authors participated in the ideation, development, and final approval of the manuscript, making significant contributions to the work reported.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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Data Availability

The datasets generated during and analysed during the current study are available from the corresponding author on reasonable request.

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