

The Role of Ethical Leadership in Mediating AI-Driven Diversity, Equity, and Inclusion Initiatives

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Abstract

This study explores the influence of Artificial Intelligence Adoption (AIA) on organizational Diversity, Equity, and Inclusion (DEI), with a specific focus on the mediating role of ethical leadership. The leadership framework within which AI is implemented significantly shapes its impact on workplace equality and inclusion. AI possesses a dual capacity: while it can reduce human biases, it may also reinforce systemic inequalities if not applied responsibly. To investigate this, a quantitative approach was adopted, utilizing survey data collected from human resource professionals across pharmaceutical companies in Sialkot, Pakistan. Smart-PLS Structural Equation Modeling (SEM) was employed to analyze both direct and indirect effects, with a particular emphasis on ethical leadership as a mediator. Results reveal strong, statistically significant positive relationships among AI adoption, moral leadership, and DEI outcomes. The findings highlight ethical leadership as a crucial mediator, ensuring that AI supports fairness, transparency, and inclusivity in organizational practices.

KEYWORD:

Artificial Intelligence adoption, Diversity, Equity, Inclusion, Ethical Leadership

1 | INTRODUCTION

In recent years, the increase in Artificial Intelligence (AI) has brought comprehensive changes to the way organizations work. From restructuring operations and refining customer experience to renovating how decisions are made, AI is becoming extremely entrenched in everyday business practices (Benbya, Davenport, & Pachidi, 2020). Therefore, with all the anticipation about effectiveness and innovation, there's a mounting concern about how this technology is persuading people, mainly in terms of fairness, inclusion, and equality at work (Ozkazanc-Pan, 2021). Although AI tools have potential objectivity, they can occasionally carry hidden biases or underline systemic inequalities if not used carefully (Kimbrough, 2017). It is important to inspect not just what AI can do, but how it has an emotional impact on Diversity, Equity, and Inclusion (DEI) in organizations (Cotton et al., 2016). AI, DEI, and Ethical leadership, when utilized responsibly, improve human society. There is a societal link in sociology that explains how people's lives are addressed in the social system (Chaudhry, Nosheen, Siddiqui, & Mahmood, 2025). There is a role

of media as well in revealing governance, economic interests, and public awareness. The media must be creating environmental realities that relate to regional and national reactions to educate the public (Abrar, Mahmood, Chaudhry, & Ejaz, 2025). Moreover, it is said that there are calculated differences in work alienation among different various age groups and experience groups of people, which leads to the understanding that there is always a hope of learning and adoption of new technologies in people (Shahzad, Batool, Anjum, Mahmood, & Chauhdhry, 2024).

DEI isn't just a catchword anymore; it's a central value that many companies are resolute to insert in their culture (Beach & Segars, 2022). A truthfully inclusive workplace permits people from diverse backgrounds, genders, societies, and experiences to feel respected, heard, and sustained (Ferdman, 2013). The relation between DEI and organizational performance is also well-documented. Diverse squads often perform better, make more innovative decisions, and are more flexible to change (Hunt, Layton, & Prince, 2015). But with AI becoming a factor, there are queries about whether it supports these aims or damages them. For example, how do automated

recruitment systems impact hiring diversity? Are data-driven decisions always fair, or can they unintentionally exclude certain groups (Ferdman, 2013).

In this study, AI adoption is treated as the independent variable, which represents the extent to which an organization integrates AI technologies into its processes. DEI, the dependent variable, is the outcome we're interested in: how inclusive, equitable, and diverse a workplace becomes as a result of these changes. However, the relationship between the two is not as simple as cause and effect. There's a dynamic piece in the interior that can outline how AI affects DEI results: leadership (Ferdman, 2013). Furthermore, this research highlights the role of ethical leadership as a mediator. Ethical leadership means further than just following the instructions it's about leader's creation thoughtful, value-driven decisions that reflect both consequences and the people pretentious by them (Brown & Treviño, 2006) When organizations espouse AI, ethical leaders show a decisive role in guaranteeing that the technology is employed in a way that line up with the company's standards, particularly those associated to fairness, transparency, and inclusion (Kandasamy, 2024). A manager who enquires tough questions about favoritism in algorithms or who includes diverse voices in technology planning can make a vast difference in how AI affects DEI results (Cowls, King, Taddeo, & Floridi, 2019). Additionally, this research is especially relevant because of the growing demand for companies to balance technological progress with social responsibility. Furthermore, we're also living in a time where these issues matter more than ever. The shift to remote work, the push for digital transformation, and the ongoing conversations around workplace equity all highlight the need for organizations to get this right (Cowls et al., 2019). AI doesn't operate in a vacuum; people design it, people manage it, and people are affected by it. Understanding this dynamic is crucial if we want to create workplaces that are not only efficient but also inclusive and just (Jarrahi, 2018).

Furthermore, a reason for the incomplete implementation of DEI policies in the organizations is the opposition from employees, which can be understood by the fact that there is a lack of motivation to invest the necessary time and resources into the AI Adoption (Iyer, 2022). DEI frameworks are essential for identifying equitable opportunities and dismantling systemic barriers in organizations (Coleman & Taylor, 2023). Ethical leadership goes beyond the boundaries of law and regulations, but also encompasses a commitment to moral values and ethical standards in all decision-making and behavior in organizations (Limboire et al., 2025). As AI technologies become progressively entrenched in functions like enrolment, assessment and strategic decision making, they carry

both opportunities and challenges to DEI objectives (Marabelli, 2024).

Although discussions around ethical AI and DEI are increasing, there remains a significant research gap on understanding how ethical leadership can outline and moderate AI's sound effects in this space. As AI continues to evolve, so does the responsibility to use it ethically and inclusively. That's why this research doesn't just explore whether AI affects DEI, but also how leadership can either support or hinder that impact (Ashraf, Li, Dodor, & Murad, 2018). The goal of this study is to offer practical insights for leaders, HR specialists, and legislators navigating the intersection of AI and inclusion. It's also a call for more collaboration between those developing the technology and those working to build fairer work places. By exploring the connection between AI adoption and DEI and highlighting the role of ethical leadership in shaping that relationship, this paper hopes to contribute to both academic understanding and real-world solutions.

Theoretical Evidence and Literature Review

Theoretical Framework

The adoption of AI applications in organizations has brought many positive changes and challenges as well. In order to promote DEI, where AI offers to reduce human biasness in the recruitment and evaluation process, it also emphasizes existing inequalities, reinforcing them, correcting them, if not implemented ethically. This study is grounded in primarily three theoretical perspectives. Stakeholder theory, socio-technical system theory, which collectively offer a holistic approach to a dynamic nexus of AI application adoption, DEI and ethical leadership within organizations (Hongbo et al., 2021).

Stakeholder theory (Freeman, 1999) suggests that the responsibility of performance of an organization is not only to shareholders but also shared by a broad set of stakeholders, which includes suppliers, employees, customers, and society. Gibson (2000) proposed that an organization is not only answerable to its shareholders but also to its stakeholders. In the decision-making process, AI adoption helps the leadership to work ethically and mitigates the potential threats in the form of bias and harm (Shaikh, 2025). Furthermore, we can say that ethical leadership works as a mediator between AI adoption and stakeholders' approach in the organization (Jones, 1991).

Socio-technical system theory first proposed by (Trist, Pasmore, & Sherwood, 1960). According to this theory, an organization is interdependent on its social and technical components (Jidda Jidda, Zhen, Ashraf, Nasir, & Amoako, 2025). AI plays an important role, though its success depends on its utilization, as AI is defined as the capability of non-human tangible real-world machines that are entitled to perform tasks,

communicate, act, and interact as logically as humans do (Fetzer, 1990). Therefore, AI adoption in organizations under the umbrella of ethical leadership shapes the social system to achieve growth (Li, Murad, Javed, Firdousi, & Ashraf, 2021). This theory helps us understand that DEI outcome is not a technological function but an approach of a human-centered framework (Zallio, Ike, & Chivăran, 2025).

AI in Organizational Settings and HR Practices

Through literature analysis, countless contributions examine AI from a high-tech perspective, chiefly addressing fundamental models, algorithms, and the growth of AI tools. The theory of the technology acceptance model (TAM) presented by (Davis, 1989) made a concrete improvement regarding acceptance of new technologies, including AI. This theory suggests that employees' perceived ease of use and perceived usefulness influence AI adoption in their behavior. TAM helps us examine the context of DEI and how easily AI can be integrated into the organizational structures through which AI adoption could lead to achieving DEI goals (Chuttur, 2009). By implementing AI technologies in any organization, AI could be the driving force in creating a new environment that embraces human diversity, equity, and inclusion (EE (2024). Furthermore, as McKinsey global survey reported that 34% organizations fear to adopt AI technologies because they think that it could lead to job displacement as AI has the potential to perform specific tasks, and 31 % organizations showed concerns about potential impact of AI adoption on fairness and equity, they say that AI, if not implemented properly might create biasness and inequalities (Chui, Yee, Hall, & Singla, 2023).

Furthermore, AI's importance in Human Resource (HR) practices cannot be overstated in this modern era. The integration of AI application adoptions and HR is revolutionary in terms of actual practices as they are streamlining the traditional practices with cutting-edge technologies (Madanchian, Taherdoost, & Mohamed, 2023). Automated resume tracking, data collecting, and making a pool of candidates help organizations to track suitable candidates for future concerns (Afzal, Shohan, Siddiqui, & Tasnim, 2023). The Applicant tracking system (ATS) has brought a revolution with ease for HR managers (Gagua, 2015). In the selection process, AI plays an important role by reducing the time and effort required for posting job ads, organizing resumes, scheduling interviews, ensuring background checks, and assisting the process (Meshram, 2023). Moreover, AI also helps in payroll management of employees, their leave records, claims, resolutions, reconciling benefits, and invoices approved for payments (Chukwuka & Dibia, 2024). AI helps in conflict resolution in HR practices as well, by providing AI applications with different conflict scenarios and receiving feedback and solutions based on its readings

and instructions, which could help employees and management in resolving issues. (ATTHOS, Iftikhar, Imtiaz, Azim, & Bangash, 2025). Moreover, employees can receive immediate response on their performance on a weekly, monthly, quarterly, or annual basis for their satisfaction and consideration. This could help the organizations a lot in order to review their performances as well (Oladele, 2023).

Diversity, Equity, and Inclusion (DEI) Framework

In the early 90s era, Franke (1995) proposed the equity, diversity, and inclusion framework according to which a workplace is safe if free from discrimination, harassment, and intimidation. A wide range of researchers defines diversity; the common understanding of diversity is that it is the quality and the practice of involving and including those people who belong to different social, cultural and ethnic backgrounds, different genders and sexual orientations (Gardenswartz, Cherbosque, & Rowe, 2010; Leach, 2014; Washington, 2008). Previously, Lee Gardenswartz (1994) proposed a model of diversity they adding four layers of diversity. Furthermore, several writers describe both mechanism knowledge and unfathomable education as significant tools of AI, which are frequently pragmatic in amalgamation with further AI technologies, such as usual philological acknowledgement (Cope, Kalantzis, & Sears, 2021; Guthrie, 2016; Luckin & Holmes, 2016). Although auspicious areas aimed at AI submission previously occur in numerous realms, such as marketing, procurement, supply chain management, or innovation management, the incorporation of AI into manufacturing processes also offers significant predictive abilities, predominantly in the areas of maintenance, quality control, and production forecasting and management (Li et al., 2021). Nevertheless, AI adoption needs important technological fundamentals, such as the endowment of data and the essential infrastructure, which must be guaranteed (Heimberger, Horvat, & Schultmann, 2024). Furthermore, according to (Gama & Magistretti, 2025) AI is considered a critical technology that affects innovation capabilities, foremost to augmentation or computerization in the management process, product and service development, and deductive perception. Yet, the influence of AI is not restricted to internal abilities, but is also critical in simplifying human-centeredness and instantaneous interactions. The usage of AI can enhance human innovation in group activities by making discussions and deviations in the design intellectual processes (Gama & Magistretti, 2025). Moreover, according to (Corsino & Fuller, 2021), Diversity, equity, and inclusion (DEI) are primarily important concepts for evolving clinical and translational science (CTS) teaching. DEI work in CTS education needs a deliberate focus on those previously

practicing in CTS, as well as an emphasis on the training and education for the next generation of specialists and investigators (Murad, Cai, Javed, Firdousi, & Ashraf, 2019).

AI and Ethical Leadership

The importance of the ethical angle in the leadership traits is highly admissible and appreciated. Organizations, regardless of their size, can survive on the phenomenon of ethics, and its essence in leadership multiplies the performance, feedback, and satisfaction among the employees and all the stakeholders. Ethical leadership can be defined as “the qualities to do the right things, not to do the things right in a leader.” (Lashway, 1996). Another researcher proposed another angle of the definition of ethical leadership as “an approach in leadership that focuses on social vs self-oriented use of power, the morality and means of power differentiate unethical and ethical leadership.” (Den Hartog, Koopman, & Van Muijen, 1995). AI application adoption positively affects ethical leadership. Furthermore, Janjua, Shah, Khan, and Rashid (2025) proposed that ethical leadership ensures that AI is applied in a way that meets ethical procedures. They highlighted the importance of ethical leadership in nurturing a culture of making the right choices. Flores and Zacarias (2024) conversed that when workforces are treated equally and respectfully by their front-runners (Li, Ashraf, Amin, & Safdar, 2023). They are expected to think about their relationship with mutuality. Employees are expected to respond by putting additional effort into their work through boosted job devotion (Tian et al., 2025).

Hypothesis Development

AI Application adoption and DEI

Several studies have been conducted in order to address the relationship between AI Applications adoption and DEI in organizations. Through conducting survey interviews, using a sample size of 100 employees of Indian companies that adopted AI (Choudhary & Pandita, 2023) found that during the process of fostering DEI through the adoption of AI, AI effectively helped in building the comprehensive framework of the decision-making process. Another study conducted by (van Esch, Cui, & Heilgenberg, 2024) found that if AI adoption is ensured effectively, then DEI goals and marketing strategies can be implemented effectively to achieve goals. Moreover, a recent study by (Musthafa, Walker, Mehta, Bordbar, & Malhotra, 2025) When it is conducted, they stated that the integration of AI application with human resource management practices promises increased productivity and performance; there are some risks as well, and managers must manage these risks effectively. Previous studies have found a relationship between AI and DEI, thus we pose our first hypothesis.

H1: AI Application adoption has a significant impact on DEI

AI Application Adoption and Ethical Leadership

There is a wide range of literature available on the importance of ethical leadership, and this study emphasizes the relationship between the adoption of AI applications and ethical leadership. Uddin (2023) study was conducted investigating the significance of ethical dilemmas in the process of fostering AI adoption in organizations. The study found that ethical leadership influences the employees' well-being and decision-making process in an AI environment. A recent study conducted by (Ucheagwu-Okoye, 2025) stated that ethical leadership becomes more critical when it entails helping organizations with integrity and fostering a culture of AI that leads to innovation and efficiency. Using a sample size of 17 leaders across the various industries (Kumar, 2025) The study investigated the relationship between AI adoption and Ethical leadership, and the study found that senior management is actively working and developing strategies to address risks and challenges posed by AI. They also mentioned that AI should be human-centric, and they also focused on the ethical development of AI applications (Ashraf, Li, Wattoo, Murad, & Mahmood, 2024). These and other literature show the relationship between AI adoption and ethical leadership; thus we pose our second hypothesis;

H2: AI application adoption has a significant relationship with ethical leadership

AI, DEI, and Ethical Leadership

A wide range of literature on the importance of AI, DEI, and Ethical leadership is available; this study investigates the direct relationship between DEI and ethical leadership. A recent interesting study conducted by (Clay, Castro, & Hewko, 2025) They investigated whether black students or leaders are neglected in K-12 public schools or if DEI reforms are implemented. They found that ethical leaders are trying to play two different roles: first, adopting existing norms at the cost of culture, and second, protecting differences through implementing DEI, which challenges the existing system. Another recent study conducted by (Limboire et al., 2025) found that by prioritizing DEI in organizations, ethical leader create an environment where everyone is putting their effort to achieve goals, which helps in decision making and behavioral change also. Buzzanell and Pyatovskaya (2025) in recent times, researchers have studied the relationship between leadership and DEI and found that to implement DEI effectively, managers should be mentally prepared for the challenges because it could backfire as well. So, leadership needs to adopt DEI ethically and give full attention and commitment to this practice.

Furthermore, several studies emphasize the mediation role of ethical leadership. Parchment (2025) studied the mediation effect of ethical leadership between implementing AI employee engagement, where they found that due to ethical leadership, AI implementation helps in reducing conflicts and motivating employees towards their work. Another study conducted by (Abositta, Adedokun, & Berberoğlu, 2024) Using the sample of 385 employees from manufacturing, construction, and IT firms in Turkey, they found that there is a significant mediating role of AI adoption in the management decision-making process. Analyzing the literature regarding DEI and ethical leadership, we pose our third and fourth hypotheses.

H3: DEI has a significant relationship with Ethical Leadership

H4: Ethical Leadership mediates between AI and Ethical leadership

Research Methodology and Framework

The goal of this study is to develop a conceptual framework that links AI Adoption to organizational DEI outcomes, highlighting the mediating role of ethical leadership. The proposed framework builds on the interactional model of technology-driven change and its impact on organizational culture and equity. It emphasizes the importance of conducting a thorough organizational needs assessment, specifically evaluating the ethical climate and DEI readiness, before implementing AI-driven initiatives.

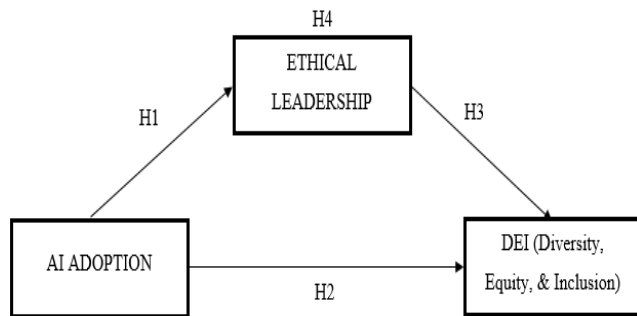


Fig 1: Conceptual framework

Research Design:

This study employed a quantitative, cross-sectional research design to analyze the relationship among AI adoption, DEI, and Ethical Leadership. The approach

allows for statistical examination of hypothesis and the detection of mediating effects.

Population and Sample

The population for this study comprised of 310 HR managers across various industries in both private and public sectors. A purposive sampling technique was used to select participants who had direct experience with AI technologies in HR functions. The sample was diverse in terms of industry, organizational size, and years of professional experience.

Data Collection Instruments

A structured questionnaire was developed to assess three primary constructs: AI Adoption, Diversity, Equity, & Inclusion (DEI), and Ethical Leadership. The instrument included a series of statements rated on a 5-point Likert Scale (1= Strongly Disagree to 5 = Strongly Agree). The questionnaire was Pilot tested to ensure clarity and reliability. Questions are adapted from validated scales in the literature to maintain construct validity.

Data Analysis Techniques

The collected data were evaluated using SPSS. The analysis involved Descriptive Statistics to summarize the demographic characteristics of respondents, Reliability analysis using Cronbach's Alpha to test internal consistency of scales, Pearson Correlation analysis to examine bivariate relationships among variables, and Regression.

Descriptive Statistics

Collected data from HR professionals from various sectors and analyzed the affiliation among the Artificial Intelligence (AI) Adoption, Diversity, Equity, and Inclusion (DEI), and Ethical Leadership. Collected data were scrutinized using the statistical package for the social sciences (SPSS). This examination includes Descriptive statistics, Reliability Analysis, Pearson correlation analysis, and regression analysis. Descriptive statistics were calculated to summarize the central tendency, dispersion, and distributional characteristics of the study variables: Artificial Intelligence (AI) Adoption, Diversity, Equity, and Inclusion (DEI), and Ethical Leadership (EL). The results are accessible in Table 1.

The descriptive statistics for the study variables: AI adoption, DEI, and Ethical Leadership (EL) indicate

Table 1: Descriptive Statistics:

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
AI	310	3.33	5.00	4.3000	.53498	-.202	.427	-1.180	.833
DEI	310	3.25	5.00	4.3083	.47653	-.326	.427	-.646	.833
EL	310	2.67	5.00	3.9111	.70539	-.202	.427	-.909	.833
Valid N	310								

generally high mean scores across all three constructs, suggesting that respondents tend to perceive AI Adoption (M= 4.30), DEI (M= 4.31), and Ethical Leadership (M= 3.91) positively. The standard deviations are relatively low, indicating moderate variability in responses, with EL showing slightly higher variability (SD 0.71) compared to AI adoption and DEI. Overall, the data appear approximately normal, with no extreme deviations in distribution, supporting the suitability of these variables for further parametric analysis such as correlation and regression, etc.

Data Analysis

Reliability Test

The reliability analysis of the study constructs AI adoption, diversity, equity, and inclusion (DEI), and Ethical Leadership (EL) was assessed using Cronbach's Alpha, whose acceptable range is between 0.60 and 0.70. In Table 2, the results indicate that all three constructs demonstrate acceptable to excellent internal consistency (Benbya et al., 2020). The AI adoption scale, consisting of 7 items, yields a Cronbach's Alpha of 0.82, suggesting good reliability. The DEI scale, comprising seven items, reported a Cronbach's Alpha of 0.79, which is also within an acceptable range for research purposes. Notably, the Ethical Leadership scale with seven items, achieved a Cronbach's Alpha of 0.90, demonstrating outstanding consistency. The standardized alpha values were slightly higher across all scales, further supporting the internal consistency of the dimension instruments used in this study. These findings confirm that the items within each construct reliably measure the intended concept (Chukwuka & Dibia, 2024).

Table 2: Reliability

Construct	Number of Items	Cronbach's Alpha	AVE	CR
AI Adoption	7	0.825	0.65	0.87
DEI	7	0.798	0.61	0.85
Ethical Leadership(EL)	7	0.907	0.76	0.92

Discriminant Validity

Table 3 represents the validity test. The Fornell-Larcker criterion was applied; the value of the square root of Average variance extracted should be greater than its correlation with other constructs, which shows that all the values are greater than inter-construct correlations, which means that no construct overlaps with any other (Nagwovuma, Maiga, & Nakakawa, 2024). The table shows that AI Adoption 0.81, DEI 0.78, and Ethical Leadership 0.87 are greater and exceed their respective construct, such as AI Adoption 0.58, DEI 0.78, and Ethical Leadership 0.60; these values are lower than their AVE square root values.

Table 3: Discriminant Validity: Fornell-Larcker Criterion

Construct	AI Adoption	DEI	Ethical Leadership
AI Adoption	0.81		
DEI	0.58	0.78	
Ethical Leadership	0.52	0.60	0.87

Correlation Analysis

To examine the strength and direction of the relationships among the key variables, including AI adoption, Diversity, Equity, and Inclusion (DEI), and Ethical Leadership. A Pearson associations crutiny was conducted. The analysis assessed whether these constructs are significantly associated with one another in the context of organizational practices involving AI.

In Table 3, the results revealed statistically significant and strong positive correlations among all three constructs at the 0.01 level (2-tailed). Specifically, AI Adoption was strongly correlated with DEI ($r = .752$, $p < .001$) and even more strongly with Ethical Leadership ($r = .875$, $p < .001$). Additionally, DEI was also strongly and positively correlated with Ethical Leadership ($r = .828$, $p < .001$). These findings suggest that as AI adoption increases within organizations, both DEI outcomes and ethical leadership practices also tend to improve. Moreover, the strong association between ethical leadership and DEI underscores the potential mediating or reinforcing role of leadership in ensuring equitable AI integration.

Table 3: Pearson Correlation Matrix (2-tailed)

Variables	AI Adoption	DEI	Ethical Leadership
AI Adoption	1.00	.752**	.875**
DEI	.752**	1.00	.828**
Ethical Leadership	.875**	.828**	1.00

Note: N = 310 $p < .01$ (2-tailed) ** indicates a statistically significant correlation at the 0.01 level.

Regression Analysis

To examine the predictive power of AI Adoption on Diversity, Equity, and Inclusion (DEI), a simple linear regression analysis was conducted. The results determine that AI Adoption is a momentous prognosticator of DEI within the organizational context.

In Table 4, the model summary indicates that AI Adoption explains approximately 56.5% of the variance in DEI ($R^2 = .565$, Adjusted $R^2 = .550$), which is considered a strong effect size.

a. Dependent variable: DEI

b. Predictors (constant), AI

In Table 5, the ANOVA table confirms the model's overall significance, with $F(1, 28) = 36.402$, $p < .001$, suggesting that the prototypical model is an appropriate fit for the data.

Table 4: Model Summary

Model	R	R square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R square Change	F change	df1	df2	Sig. F Change
1.	.752 ²	.565	.550	.31977	.565	36.402	1	28	.000

Table 5: ANOVA

Model	Sum of squares	df	Mean square	F	Sig
Regression	3.7222	1	3.722	36.402	0.000 ^b
Residual	2.863	28	.102		
Total	6.585	29			

a. Dependent variable: DEI

In Table 6, the unstandardized regression coefficient for AI Adoption is B 0.670 with a standard error of 0.111, and the relationship is statistically significant ($t = 6.033$, $p < .001$). This means that for every one-unit increase in AI Adoption, DEI scores are expected to increase by 0.670 units, holding all else constant. The 95% confidence interval for the coefficient series from 0.442 to 0.897, reinforcing the reliability of the estimate. The standardized coefficient ($\beta = .752$) has a strong positive effect.

The analysis revealed strong, positive, and statistically significant relationships among AI Adoption, Diversity, Equity, and Inclusion (DEI), and Ethical Leadership. AI Adoption significantly predicts DEI, explaining its variance. These findings underscore the vital role of AI and leadership in encouraging inclusive organizational performance.

Mediation and Path Analysis

Mediation analysis was conducted using PROCESS Macro (Model 4) in SPSS (Wang et al., 2025). Results showed that AI application adoption significantly impacted ethical leadership ($\beta = 0.875$, $p < 0.001$) and also significantly predicted DEI values ($\beta = .656$, $p < .001$). The indirect effect of AI on DEI through EL is also reported to be significant ($\beta = .656$, 95% CI: .552, .772), which shows the partial mediation. The direct effect is also reported as significant ($\beta = .219$, $p = .001$), supporting the partial mediation.

Path a: AI → EL

Coefficient (β)	SE	t	p	95% CI
0.875	0.034	25.74	<.001	[0.808, 0.942]

Path b: EL → DEI

Coefficient (β)	SE	t	p	95% CI
0.750	0.042	17.86	<.001	[0.667, 0.833]

Path c: Direct Effect - AI → DEI

Coefficient (β)	SE	t	p	95% CI
0.219	0.067	3.27	.001	[0.087, 0.351]

Path d: Indirect Effect: AI → EL → DEI

Effect	Boot SE	Boot LLCI	Boot ULCI
0.656	0.055	0.552	0.772

2 | DISCUSSION

The consequences of this study proposal will provide influential confirmation of the optimistic and intersected connections among AI adoption, ethical leadership, and DEI outcomes in organizations. The strong correlation between AI adoption and DEI suggests that when applied solicitously, AI can be an implementer for encouraging fairness, approachability, and inclusivity in workplace systems and processes. Additionally, the considerable mediating role of ethical leadership highlights that technology alone is not suitable; leadership must observe its application through a values-driven, people-centered lens. Front-runners who model ethical decision-making and climax equity can confirm that AI tools are aligned with DEI objectives, assuaging potential favoritisms and cultivating trust among employees. This team work highlights the idea that technology and leadership evolve together for organizational transformation to be inclusive. Moreover, the results emphasize that ethical leadership meaningfully enhances DEI results, establishing the idea that the presence of strong moral and ethical values at the leadership level contributes to transforming technological tools into unbiased practices. Ethical leaders are expected to question the fairness of AI procedures, champion diversity in technology enlargement teams, and promote transparency and responsibility. As a result, ethical leadership acts not only as a mediator but as a safety measure, guaranteeing that AI-driven modernisms contribute meaningfully to generating diverse, equitable, and comprehensive workplaces. This outcome emboldens a shift in emphasis not only on what technologies organizations implement but also on how and by whom they are implemented.

4.2. Limitations and Future Recommendations

Although the study delivers valuable insights, several limitations must be considered when interpreting the outcomes. The sample size was comparatively small and concentrated wholly on HR professionals, which may limit the generalizability of the outcomes across larger organizational contexts. HR specialists, while supporting DEI and AI initiatives, represent just one standpoint within a multidimensional

ecosystem that comprises leadership, technology creators, and frontline employees. Future studies should contain a more varied participant pool, encompassing opinions from diverse departments, organizational levels, and industries, as well as diverse geographical regions, to account for cultural and regulatory transformations.

Moreover, the study employed a cross-sectional design, which limits the ability to infer causation. Longitudinal studies are suggested to explain how the relationships among AI adoption, ethical leadership, and DEI grow over time, particularly as AI technologies and organizational DEI strategies mature. Integrating qualitative methods, such as in-depth interviews, case studies, or focus groups, might also add depth and context to the quantitative outcomes, illuminating the nuanced proficiencies of employees circumnavigating AI-driven change. Future research might further discover which particular AI tools and ethical leadership actions are most effective in augmenting DEI outcomes. In conclusion, organizations are stimulated to develop organized frameworks for ethical readiness and DEI audits preceding AI implementation, guaranteeing that technology improves rather than deters comprehensive progress. This study provides a foundation for an emerging discussion on accountable innovation that core values people, equity, and honesty. Likewise, qualitative means such as interviews or focus groups bring richer ideas into the persistent experiences overdue the data. As organizations struggle to direct digital transformation, it is recommended that they posture ethical readiness evaluations, include in wide-ranging design procedures, and capitalize on leadership enlargement that focuses on equity to guarantee AI benefits as a force for good.

Conclusion

The deductions of this study suggest that Artificial Intelligence (AI), when applied considerately and ethically, can significantly contribute to developing Diversity, Equity, and Inclusion (DEI) in organizations. Meaningfully, ethical leadership is established as a dynamic mediator in this association. Leaders who highlight transparency, fairness, and accountability can decree AI implementations toward outcomes that are broader and impartial. This emphasizes the essential role of leadership, not solely in management technology but in determining its human result. This study appeals for a thoughtful configuration of AI governance with wide-ranging leadership rehearses, heartening for proactive procedures, such as ethical readiness assessments and DEI inspections. Finally, to comprehend the whole future of AI in developing equitable workplaces, technological necessity must be absorbed by leaders who are enthusiastic about fairness, empathy, and social responsibility. To total on

these findings, organizations would contribute to leadership development agendas that highlight ethical awareness, DEI information, and responsible AI governance. By expanding a culture where invention is related to veracity and inclusion, companies can effectively navigate the challenges of digital transformation. This approach not only raises organizational trust and worker commitment but also positions businesses as reformist and socially responsible in a rapidly developing technological landscape.

Acknowledgment:

We sincerely appreciate the anonymous reviewers, the editor, and the editorial board of the Journal for their consideration, valuable feedback, and constructive suggestions, which greatly enhanced the quality of our manuscript.

Author Contributions:

Dr. Basit Raza, Fahad Sheikh, and Richard Bio were involved in conceptual development and also contributed to the methodology, software implementation, data analysis, and writing.

Disclosure of Potential Conflict:

The authors confirm that they have no conflict of interest regarding the study, authorship, and publication of this work

Data Availability Statement:

As this study did not include the generation or analysis of any datasets, data sharing is not relevant to this study.

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