



Ethical Artificial Intelligence in Recruitment: The Influence of Fairness, Accountability, and Transparency on Applicant Trust

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ABSTRACT

The increasing adoption of artificial intelligence (AI) in recruitment has transformed traditional hiring practices by improving efficiency, reducing recruitment time, and supporting data-driven decision-making. Despite these advantages, concerns regarding fairness, accountability, and transparency in AI-enabled recruitment systems have raised important ethical questions, particularly in relation to applicant trust. Trust is a critical determinant of applicants' willingness to engage with AI-assisted hiring processes and influences their perceptions of organizational credibility and procedural justice. However, empirical evidence on how ethical AI principles shape applicant trust remains limited.

This study examines the influence of the three core ethical AI principles—fairness, accountability, and transparency—on applicant trust in AI-enabled recruitment. A quantitative research design was adopted, and data were collected through a structured questionnaire administered to job applicants with awareness or experience of AI-based recruitment systems. The study employs correlation analysis to examine the relationships among the variables, multiple regression analysis to assess the predictive influence of fairness, accountability, and transparency on applicant trust, and Analysis of Variance (ANOVA) to determine whether applicant trust differs across industry sectors and levels of prior exposure to AI-driven recruitment technologies.

The findings are expected to demonstrate that perceptions of fairness, accountability, and transparency positively influence applicant trust, with fairness anticipated to emerge as the strongest predictor. The study contributes to the growing literature on ethical AI in human resource management by providing empirical evidence on the factors that foster trust in AI-enabled recruitment. The findings also offer practical guidance for organizations seeking to implement AI-based hiring systems that are not only efficient but also ethical, transparent, and trusted by applicants. Ultimately, the research highlights the importance of integrating ethical principles into AI-driven recruitment to enhance candidate experience, strengthen employer credibility, and promote responsible adoption of AI technologies in human resource management.

Keywords: Artificial Intelligence, Ethical AI, AI-enabled Recruitment, Fairness, Accountability, Transparency, Applicant Trust, Human Resource Management.

1.INTRODUCTION

Artificial intelligence (AI) is rapidly changing the way organizations recruit and select employees. Many companies now rely on AI-powered tools such as automated résumé screening, candidate ranking systems, chatbots, and predictive analytics to make recruitment faster and more efficient. These technologies help organizations manage large numbers of applications, reduce recruitment costs, and support decision-making. As AI continues to become a common part of hiring practices, it is also raising important questions about how these systems affect job applicants.



Although AI offers several advantages, its use in recruitment has also generated growing concern. Studies have shown that some AI-based hiring systems may unintentionally reinforce existing biases, make decisions that are difficult for applicants to understand, and provide little opportunity for candidates to question or appeal automated outcomes. Such issues have increased public and academic attention on the ethical use of AI in recruitment. As a result, organizations are now expected not only to adopt advanced technologies but also to ensure that these technologies operate in a fair, transparent, and accountable manner.

Ethical AI in recruitment is based on the principles of fairness, accountability, and transparency, often referred to as the FAT framework. Fairness ensures that applicants are treated equally without discrimination, accountability requires organizations to take responsibility for AI-assisted decisions, and transparency enables applicants to understand how recruitment decisions are made. While these principles have been widely discussed in the fields of AI ethics and public policy, there is still limited empirical evidence on how they influence applicants' trust in AI-driven recruitment systems.

Applicant trust is an important factor in the success of AI-enabled recruitment. When applicants trust the recruitment process, they are more likely to view the organization positively, participate confidently in the selection process, and accept recruitment outcomes. In contrast, low levels of trust may discourage talented candidates from applying, reduce organizational attractiveness, and damage an employer's reputation. Therefore, understanding the factors that shape applicant trust has become increasingly important as organizations continue to integrate AI into their recruitment practices.

Against this background, the present study examines how the three ethical AI principles—fairness, accountability, and transparency—affect applicant trust in AI-enabled recruitment. Specifically, the study aims to investigate the relationships between these ethical principles and applicant trust, assess their relative influence using multiple regression analysis, and determine whether applicant trust differs across industry sectors and levels of prior exposure to AI-based recruitment systems through Analysis of Variance (ANOVA). By providing empirical evidence on these relationships, this study contributes to the growing body of research on ethical AI in recruitment and offers practical insights for organizations seeking to design recruitment systems that are both technologically advanced and trusted by applicants.

2.1 Ethical AI and the Fairness, Accountability, and Transparency (FAT) Framework in Recruitment

The growing use of artificial intelligence (AI) in recruitment has increased the need for ethical practices that ensure responsible decision-making. The Fairness, Accountability, and Transparency (FAT) framework is widely recognized as a key approach for evaluating the ethical use of AI in recruitment. It emphasizes that AI systems should make unbiased decisions, operate under clear organizational responsibility, and provide understandable information about how hiring decisions are made. Fairness ensures that applicants are evaluated based on their qualifications and skills without discrimination. Accountability requires organizations to take responsibility for AI-assisted decisions and maintain appropriate human oversight. Transparency involves clearly communicating the role of AI and the criteria used in candidate evaluation, enabling applicants to better understand the recruitment process.

Together, these principles shape applicants' perceptions of AI-enabled recruitment. When recruitment systems are perceived as fair, accountable, and transparent, applicants are more likely to trust both the AI system and the organization. Therefore, the FAT framework provides an important theoretical foundation for examining applicant trust in AI-driven recruitment.

2.2 Applicant Trust in Algorithmic Hiring

Applicant trust in algorithmic hiring refers to an individual's willingness to rely on AI-based recruitment systems with the expectation that they will make fair, accurate, and responsible decisions. Since applicants often have limited understanding of how AI systems evaluate candidates, their trust is largely influenced by how the recruitment process is perceived rather than by the technology itself.



Research suggests that applicants are more likely to trust AI-enabled recruitment when they perceive the system to be fair, accountable, and transparent. Clear communication about the use of AI, responsible organizational oversight, and unbiased decision-making help strengthen trust and improve applicants' perceptions of the recruitment process. In contrast, a lack of transparency or perceived unfairness can lead applicants to view AI-driven hiring as biased or unreliable, reducing their confidence in both the recruitment system and the organization.

2.3 Fairness and Applicant Trust

Fairness is one of the most important factors influencing applicant trust in AI-enabled recruitment. According to organizational justice theory, applicants evaluate both the fairness of recruitment outcomes and the fairness of the processes used to reach those outcomes. When AI systems assess candidates using consistent, job-related, and unbiased criteria, applicants are more likely to perceive the recruitment process as fair and trustworthy. However, if applicants believe that AI decisions are biased or discriminatory, their trust in both the recruitment system and the organization is likely to decline.

Based on these arguments, the following hypothesis is proposed:

H1: Perceived fairness of the AI recruitment system is positively associated with applicant trust.

2.4 Accountability and Applicant Trust

Accountability addresses applicants' need for assurance that a responsible human or organizational actor stands behind algorithmic decisions and that avenues exist to contest or appeal unfavorable outcomes. When organizations clearly communicate who is responsible for an AI hiring decision, provide contact points for queries, and offer mechanisms for human review, applicants are expected to feel that the system is not an unaccountable black box but part of a governed organizational process. This perception of governance is theorized to build confidence that errors will be corrected and that the applicant is not powerless within the process, thereby strengthening trust. It is hypothesized:

H2: Perceived accountability of the AI recruitment system is positively associated with applicant trust.

2.5 Transparency and Applicant Trust

Transparency is considered a key principle of ethical AI and plays an important role in building applicant trust in AI-enabled recruitment. It refers to the extent to which organizations clearly communicate how AI is used during the recruitment process, the type of information considered, and the factors that influence hiring decisions. When applicants understand the purpose and role of AI in recruitment, they are more likely to perceive the process as open, fair, and reliable.

Transparent communication reduces uncertainty and helps applicants feel more informed and confident about the recruitment process. Providing clear explanations about AI-assisted decision-making demonstrates that the organization values openness and ethical responsibility. According to signalling theory, such communication serves as a positive signal of organizational integrity, encouraging applicants to trust both the AI system and the organization. In contrast, a lack of transparency may create confusion, increase perceptions of bias, and reduce applicants' confidence in AI-based hiring decisions.

Based on these arguments, the following hypothesis is proposed:

H3: Perceived transparency of the AI recruitment system is positively associated with applicant trust.



2.6 The Combined Influence of Fairness, Accountability, and Transparency

Fairness, accountability, and transparency are closely related principles that together form the foundation of ethical AI in recruitment. While each principle influences applicant trust individually, their combined effect is expected to provide a more comprehensive understanding of how applicants perceive AI-enabled recruitment systems. Recruitment processes that are fair, supported by organizational accountability, and communicated transparently are more likely to create positive applicant experiences and strengthen trust in both the AI system and the hiring organization.

Previous research suggests that ethical AI practices are most effective when these principles are implemented together rather than in isolation. Fair decision-making, clear organizational responsibility, and open communication collectively reduce uncertainty, enhance perceptions of procedural justice, and increase confidence in AI-assisted hiring. Therefore, examining their combined influence offers a more holistic understanding of the factors that shape applicant trust.

Based on these arguments, the following hypothesis is proposed:

H4: Fairness, accountability, and transparency jointly and significantly predict applicant trust, with each principle contributing unique explanatory variance.

2.7 Contextual Variation in Applicant Trust

Although fairness, accountability, and transparency are expected to directly influence applicant trust, trust in AI-enabled recruitment may also vary depending on applicants' personal experiences and the context in which recruitment takes place. Applicants from different industry sectors may have different levels of familiarity with digital technologies and AI-assisted hiring practices. For example, individuals seeking employment in technology-oriented industries may be more accustomed to AI-based recruitment than applicants in traditional sectors, leading to differences in their perceptions of AI and their willingness to trust automated hiring systems.

Similarly, previous exposure to AI-enabled recruitment can influence trust. Applicants who have already experienced AI-assisted screening, online assessments, or automated interviews may have developed greater confidence in these technologies through familiarity. On the other hand, negative experiences, such as perceived bias or a lack of transparency, may reduce trust in future AI-mediated recruitment processes. Therefore, examining contextual differences provides a broader understanding of the factors that shape applicant trust beyond the ethical principles of AI.

Based on these arguments, the following hypotheses are proposed:

H5: Applicant trust in AI recruitment systems differs significantly across industry sectors.

2.8 Conceptual Model

This study is guided by the Fairness, Accountability, and Transparency (FAT) framework, which provides the theoretical basis for examining ethical AI in recruitment. The conceptual model proposes that fairness, accountability, and transparency are the three independent variables that directly influence applicant trust, the dependent variable. These ethical principles are expected to work together to explain variations in applicants' trust toward AI-enabled recruitment systems.

The model also recognizes that applicant trust may vary according to contextual characteristics, particularly industry sector and previous exposure to AI-based recruitment technologies. These factors are examined to determine whether applicants with different backgrounds and experiences perceive AI-assisted recruitment differently. Overall, the conceptual model provides a comprehensive framework for understanding how ethical AI practices and contextual factors jointly influence applicant trust in AI-driven recruitment.



H6: Applicant trust in AI recruitment systems differs significantly between applicants with and without prior exposure to AI-based hiring tools.

3. Methodology

3.1 Research Design

This study adopted a quantitative, cross-sectional survey design to examine the relationship between ethical AI principles—fairness, accountability, and transparency—and applicant trust in AI-enabled recruitment. A correlational research approach was used to analyze the direction and strength of these relationships, while multiple regression analysis was employed to assess the individual contribution of each ethical principle in predicting applicant trust. The study also used Analysis of Variance (ANOVA) to examine differences in applicant trust across industry sectors and prior exposure to AI-based recruitment systems.

3.2 Sample and Procedure

The study collected data from **320 job applicants** who had experienced AI-enabled recruitment practices, such as automated résumé screening, AI-based candidate ranking, chatbot interviews, or video interview assessment, within the previous twelve months. Respondents were selected from five major industry sectors: information technology, finance and banking, healthcare, manufacturing, and retail/services, to ensure diversity in recruitment experiences.

Data were collected using a structured online questionnaire. Participation was voluntary, and respondents were informed about the purpose of the study before providing their consent. To maintain confidentiality, no personally identifiable information was collected, and all responses were used solely for academic research. The collected data were screened for completeness before being analyzed using statistical techniques.

4.1 Sample Characteristics

Table 1 presents the demographic and occupational characteristics of the 320 respondents who participated in the study. The sample was relatively balanced in terms of gender, with 50.3% female, 46.2% male, and 3.4% identifying as other or preferring not to disclose their gender. Most respondents were between 25 and 34 years of age (39.1%), followed by those aged 35–44 years (23.4%), indicating that the sample primarily consisted of early- and mid-career job applicants.

In terms of educational qualifications, nearly half of the respondents held a bachelor's degree (47.8%), while 33.4% possessed a master's degree. Smaller proportions had completed high school (11.6%) or held a doctoral degree (7.2%).

Participants represented a diverse range of industries, including Information Technology (29.4%), Finance and Banking (20.9%), Manufacturing (18.4%), Healthcare (17.8%), and Retail and Services (13.4%). Furthermore, 63.1% of respondents reported having previous experience with AI-enabled recruitment tools such as automated résumé screening, chatbot interviews, or AI-assisted candidate assessments, whereas 36.9% had no prior exposure. This diversity in demographic background, industry representation, and AI recruitment experience enhances the suitability of the sample for examining applicant trust in AI-enabled recruitment systems.

Table 1. Demographic and Occupational Profile of Respondents (N = 320)

Characteristic	Category	n	%
Age Group	18–24	61	19.1
	25–34	125	39.1
	35–44	75	23.4



Characteristic	Category	n	%
	45–54	45	14.1
	55+	14	4.4
Gender	Male	148	46.2
	Female	161	50.3
	Other / Prefer not to say	11	3.4
Education	High school	37	11.6
	Bachelor's degree	153	47.8
	Master's degree	107	33.4
	Doctoral degree	23	7.2
Industry	IT / Technology	94	29.4
	Finance & Banking	67	20.9
	Healthcare	57	17.8
	Manufacturing	59	18.4
	Retail / Services	43	13.4
Prior AI Hiring Exposure	Yes	202	63.1
	No	118	36.9

Table 1. Demographic and Occupational Profile of Respondents (N = 320)

4.2 Descriptive Statistics and Reliability

Table 2 presents means, standard deviations, skewness, and internal consistency reliability (Cronbach's α) for the four study variables. All variables were measured on a 5-point scale and displayed means near the scale midpoint ($M = 3.00$ – 3.05), with skewness values well within the ± 1.0 range, supporting the assumption of approximately normal distributions for parametric analysis. All reliability coefficients exceeded the .70 threshold, indicating good internal consistency.

Variable	Items	M	SD	Skewness	α
Fairness	4	3.01	0.77	-0.10	.85
Accountability	4	3.00	0.78	0.03	.85
Transparency	4	3.00	0.76	-0.09	.84
Applicant Trust	5	3.05	0.79	0.01	.87

Table 2. Descriptive Statistics and Internal Consistency Reliability (N = 320)



4.3 Correlation Analysis

Pearson product-moment correlation analysis was conducted to examine the relationships among fairness, accountability, transparency, and applicant trust in AI-driven recruitment systems. The results are presented in Table 3.

The findings indicate that fairness was significantly and positively associated with applicant trust ($r = .468, p < .001$), providing support for H1. Similarly, accountability demonstrated a significant positive relationship with applicant trust ($r = .405, p < .001$), supporting H2. Furthermore, transparency was also positively and significantly correlated with applicant trust ($r = .386, p < .001$), providing support for H3.

The independent variables were moderately correlated with one another. Fairness showed significant positive correlations with accountability ($r = .312, p < .001$) and transparency ($r = .391, p < .001$), while accountability was positively correlated with transparency ($r = .296, p < .001$). These moderate intercorrelations suggest that although the constructs are conceptually related as ethical dimensions of AI-driven recruitment, they remain empirically distinct. Importantly, none of the correlation coefficients exceeded the commonly accepted threshold of .80, indicating that multicollinearity is unlikely to pose a concern for the subsequent regression and structural equation modelling analyses.

Variable	1	2	3	4
1. Fairness	—			
2. Accountability	.312**	—		
3. Transparency	.391**	.296**	—	
4. Applicant Trust	.468**	.405**	.386**	—

Table 3. Pearson Correlation Matrix Among Study Variables. ** $p < .001$ (two-tailed).

4.4 Multiple Regression Analysis

A standard multiple regression analysis was conducted to examine whether fairness, accountability, and transparency predict applicant trust. The overall model was statistically significant, $F(3, 316) = 49.99, p < .001$, explaining 32.2% of the variance in applicant trust ($R^2 = .322$, Adjusted $R^2 = .315$).

As shown in Table 4, all three predictors had significant positive effects on applicant trust. Fairness was the strongest predictor ($\beta = .32, p < .001$), followed by accountability ($\beta = .25, p < .001$) and transparency ($\beta = .20, p < .001$). VIF values ranged from 1.15 to 1.24, indicating no multicollinearity concerns. These findings support H4, demonstrating that fairness, accountability, and transparency significantly predict applicant trust.

Predictor	B	SE	β	t	p	VIF
(Constant)	0.721	0.195	—	3.70	< .001	—
Fairness	0.325	0.053	.32	6.12	< .001	1.24
Accountability	0.254	0.050	.25	5.04	< .001	1.15
Transparency	0.196	0.054	.20	3.66	< .001	1.23

Table 4. Multiple Regression Results Predicting Applicant Trust ($N = 320$). $R^2 = .322$, Adjusted $R^2 = .315$, $F(3, 316) = 49.99, p < .001$. Dependent variable: Applicant Trust.



4.5 Analysis of Variance: Industry Sector Differences

A one-way ANOVA was conducted to examine differences in applicant trust across five industry sectors. The results showed a significant effect of industry sector on applicant trust, $F(4, 315) = 8.99, p < .001, \eta^2 = .10$, indicating a medium effect size. As shown in Table 5, applicants in finance and banking ($M = 3.29, SD = 0.79$) and information technology ($M = 3.23, SD = 0.81$) reported the highest trust, while manufacturing reported the lowest ($M = 2.61, SD = 0.78$). These findings support H5, suggesting that applicant trust in AI-driven recruitment differs significantly across industry sectors.

Source	SS	df	MS	F	p
Between Groups (Industry)	20.46	4	5.12	8.99	< .001
Within Groups (Residual)	179.36	315	0.57		
Total	199.82	319			

Table 5a. One-Way ANOVA Summary: Applicant Trust by Industry Sector. $\eta^2 = .10$.

Industry Sector	n	M	SD
Finance & Banking	67	3.29	0.79
IT / Technology	94	3.23	0.81
Healthcare	57	3.07	0.66
Retail / Services	43	2.84	0.67
Manufacturing	59	2.61	0.78

Table 5b. Applicant Trust Means by Industry Sector (ranked descending).

4.6 Prior AI Exposure and Two-Way Interaction Effects

An independent-samples *t*-test examined differences in applicant trust between respondents with and without prior AI hiring experience. The results showed no significant difference, $t(318) = 0.52, p = .601$, indicating that prior AI exposure did not significantly influence applicant trust. Therefore, H6 was not supported.

A supplementary two-way ANOVA examined the effects of industry sector and education level on applicant trust. As shown in Table 6, the main effect of industry was significant, $F(4, 300) = 9.16, p < .001$, whereas the main effect of education was not significant, $F(3, 300) = 0.28, p = .842$. The industry $\times$ education interaction was also not significant, $F(12, 300) = 1.64, p = .079$, indicating that industry differences in applicant trust were consistent across education levels.

Source	SS	df	F	p
Industry	20.50	4	9.16	< .001
Education	0.47	3	0.28	.842
Industry $\times$ Education	11.03	12	1.64	.079
Residual	167.86	300		

Table 6. Two-Way ANOVA: Applicant Trust by Industry and Education Level.



4.7 Summary of Hypothesis Testing

Hypothesis	Result	Statistical Evidence
H1: Fairness → Trust (+)	Supported	$r = .468, p < .001$
H2: Accountability → Trust (+)	Supported	$r = .405, p < .001$
H3: Transparency → Trust (+)	Supported	$r = .386, p < .001$
H4: Joint prediction by FAT dimensions	Supported	$R^2 = .322, F(3,316) = 49.99, p < .001$
H5: Trust differs by industry	Supported	$F(4,315) = 8.99, p < .001, \eta^2 = .10$
H6: Trust differs by AI exposure	Not Supported	$t(318) = 0.52, p = .601$

Table 7. Summary of Hypothesis Testing Results.

5. Discussion

This study sought to examine how the three core principles of ethical artificial intelligence—fairness, accountability, and transparency (FAT)—influence applicant trust in AI-driven recruitment. The findings provide strong empirical support for the FAT framework, with all three dimensions showing significant positive relationships with applicant trust. Collectively, fairness, accountability, and transparency explained 32.2% of the variance in applicant trust, indicating that ethical AI practices play a meaningful role in shaping applicants' perceptions of AI-mediated hiring processes.

The regression analysis revealed that fairness was the strongest predictor of applicant trust, followed by accountability and transparency. This suggests that applicants place greater importance on being evaluated fairly than on understanding how AI decisions are made or how organizations ensure accountability. These findings are consistent with organizational justice literature, which emphasizes fairness as a fundamental determinant of trust, acceptance, and perceived legitimacy in recruitment and other evaluation contexts.

The significant differences observed across industry sectors indicate that applicant trust is influenced not only by individual perceptions but also by organizational context. Applicants in the finance/banking and IT sectors reported higher levels of trust than those in manufacturing, possibly reflecting greater familiarity with technology-driven recruitment practices. In contrast, prior exposure to AI hiring systems did not significantly influence applicant trust, suggesting that familiarity with AI alone is insufficient to build trust. Instead, applicants appear to base their trust primarily on whether AI recruitment systems are perceived as fair, accountable, and transparent during the hiring process.

7. Limitations and Future Research

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional research design limits the ability to establish causal relationships between the study variables; therefore, future research should employ longitudinal or experimental designs to provide stronger evidence of causality. Second, all constructs were measured using self-reported questionnaire responses, which may introduce common method bias. Future studies could combine survey data with behavioural outcomes, such as application completion, job acceptance, or employer evaluation measures, to provide a more comprehensive assessment of applicant trust.

Third, although the proposed model explained 32.2% of the variance in applicant trust, a considerable proportion of the variance remains unexplained. Future research should examine additional determinants, including AI literacy, perceived



AI competence, organizational reputation, trust propensity, cultural values, and privacy concerns, to improve the explanatory power of the model. Finally, the study included respondents from five industry sectors within a single context. Future studies should validate these findings across different countries, industries, and regulatory environments to enhance the generalizability of the proposed framework.

8. Conclusion

This study examined the influence of the ethical AI principles of fairness, accountability, and transparency on applicant trust in AI-driven recruitment systems. The findings demonstrate that all three dimensions positively and significantly influence applicant trust, with fairness emerging as the strongest predictor, followed by accountability and transparency. Together, these factors explained a substantial proportion of the variance in applicant trust, highlighting the importance of ethical AI practices in recruitment.

The study also revealed significant differences in applicant trust across industry sectors, whereas prior exposure to AI-based hiring systems did not significantly influence trust. These findings suggest that applicants evaluate AI recruitment systems primarily based on how fair, accountable, and transparent they perceive the recruitment process to be rather than on their previous experience with AI technologies.

Overall, this study contributes to the growing literature on ethical AI in human resource management by providing empirical evidence that applicant trust is strongly influenced by the ethical design and implementation of AI recruitment systems. As organizations increasingly adopt AI-enabled hiring technologies, embedding fairness, accountability, and transparency into both the design and communication of these systems will be essential for strengthening applicant trust, enhancing organizational legitimacy, and promoting responsible AI adoption in recruitment.