

Emotional Readiness as an Algorithmic Advantage: An AI-Driven Analytical Framework for Digital Recruitment Systems

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Abstract - The rising trend of artificial intelligence in the recruitment process has brought a paradigm shift in the manner of recruiting, which in turn has sparked critical discussions about employability, equity, and career readiness. The research paper focuses on MBA students' insights about the influence of AI based recruitment software on employability confidence in the business industry. The research follows a quantitative cross-sectional study to collect data from 109 MBA students via a research questionnaire. The research combines age-old statistical analysis with machine learning to interpret findings about the impact of AI awareness, fairness, skill displacement, and AI anxiety and optimism on employability confidence. The analysis techniques employed in this research are correlation analysis, Decision Tree, Random Forest Analysis, K Means Analysis, as well as moderation analysis, which are carried out in Google Colab in Python. The result shows that anxiety and optimism towards AI is a more prominent predictor of confidence in employability than awareness and skill readiness, and awareness of AI is a more prominent predictor of confidence in employability than skill readiness. Business school and HR integration practices demonstrate a strong positive effect on awareness and confidence in employability as well as awareness and confidence in employability among students.

Keywords - Artificial Intelligence; AI-Driven Recruitment; Employability Confidence; MBA Students; Machine Learning; HR Integration Practice

I. INTRODUCTION

There is growing use of artificial intelligence (AI) in recruitment and selection, which has made a significant impact on the recruitment process in modern organizations [7]; [17]. AI enabled tools like applicant tracking systems, resume screening, and video interview analysis are increasingly being used, which is changing the way job seekers, especially management graduates, view their employability in AI-enabled labor markets. Previous studies have found that technological advancements impact job structures and skills, with a focus on technical skills, flexibility, and other human skills [2]. In the recruitment field, AI not only impacts the mechanism of evaluation but also the cognitive understanding and emotional aspects of job seekers. Technology Acceptance Model-based studies have

found awareness and perceived usefulness to be critical determinants

of the acceptance of AI-enabled recruitment systems [9]. However, recent studies have found that acceptance is also influenced by affective aspects like anxiety, uncertainty, and optimism, which have a significant impact on confidence and engagement with AI-enabled recruitment systems [13]. These aspects are also linked to concerns about fairness and bias in AI-enabled recruitment systems [3], as fairness perceptions influence trust and attractiveness of the organization [21]. Employability, conceptualized as a multidimensional construct that encompasses skills, flexibility, and psychosocial processes [12], is increasingly characterized by a paradigm shift towards the development of hybrid skills that combine AI

literacy with leadership, ethics, and communication skills [2].

However, some important research gaps still exist despite the increasing literature on AI recruitment. Firstly, most of the current literature is either on organizational adoption or applicant attitudes, providing little information on MBA students' perceptions of the joint impact of awareness, attitudes, and skill changes on employability [21]; [13]. Secondly, most of the current literature considers the cognitive, ethical, or emotional aspects in isolation, without accounting for the joint impact of these aspects on attitudes towards employability [2]; [12]. Thirdly, while the importance of institutional context is increasingly recognized, little empirical research has been conducted to explore how business school practices can enhance the relationship between AI awareness and employability confidence in recruitment settings. Finally, most of the current literature is based on conventional statistical analysis, providing little information on non-linear perception patterns that can be better revealed by interpretable machine learning models [17].

The main objectives of the research is to explore the relationship between perceptions of AI and confidence in employability for MBA students. Examine the relationship of AI awareness, perceived fairness, perceived skill shift, and AI anxiety & optimism with employability confidence. Evaluate the mediating process of perception of the role of AI in the recruitment process to employability confidence. Examine how business school and HR integration practices moderate the correlation between awareness of AI and confidence with respect to work-related employability skills.

Problem Statement - Despite the widespread use of AI in recruitment, MBA students continue to be ambivalent about the impact of AI recruitment systems on their employability. There are disparities in AI awareness, feelings towards AI, perceptions of changes in skills, and support from institutions that influence the level of employability confidence. However, the current state of research is not sufficient to enable the explanation of the impact of integration between the business school and the human resources department on the level of employability confidence.

II. LITERATURE REVIEW

The widespread use of artificial intelligence (AI) across functions in business, especially in the context of recruitment and selection, has completely revolutionized the manner in which job candidates are evaluated and the concept of employability is viewed. Previous studies conducted on automation and AI imply that, although technological progress changes work patterns, there is an escalating need to develop flexibility skills and technological know-how to survive in the workplace [2]; [7]. An important role in this is played by institutions of higher education, including business schools.

2.1 AI Awareness and Sources of AI Knowledge

Artificial intelligence awareness or technical literacy has been shown to be continually linked with favourable views on the adoption of AI and perceived employability [11]. Research within the higher education setting reflects the student understanding of the increasingly critical role of AI but lacks confidence to cope with it at work [11]. Empirical research tends to confirm that systematic exposure to learning about AI through class exercises, workshops, internships, and other activities fosters greater comprehension and decreases the unease with AI-enabled technologies [21]; [19]. Research based on the Technology Acceptance Model confirms perceived usefulness and ease of use as mediators between knowledge and system usage for individuals exposed to interactive training on AI-based staff selection tools [9]; [18].

2.2 Perceived Fairness of AI Recruitment

Fairness is another construct in the responses of job applicants to AI-assisted recruitment practices. The use of AI in making decisions has been associated with transparency, bias, and responsibility, especially when AI involves opaque forms of data processing [3]; [17]. From research, job applicants feel more objective in AI compared to human recruitment personnel but feel their rights may be lost if the criteria for evaluation are opaque [13]; 'Rejected by an AI?' There is research in Western countries, including India, that shows fairness in AI recruitment practices has been shown to affect the perception of trust and use of AI-assisted recruitment tools (Bots at the Gate; [18]. Fairness, however, might not be the defining construct regarding the trust in AI-assisted employability confidence

2.3 Perceived Skill Shift and Employability

The literature stresses that this integration affects the acquisition and perception of skill change, particularly in areas that emphasize the combination of knowledge and soft skills like leadership, flexibility, and moral judgment [2]; [12]. Those students that perceive this change and identify that they experience this shift and are able to develop the required qualifications to match this technological movement seem to enhance employability confidence [19]. The literature investigating preparedness to work in an AI-enabled context identifies that feelings of non-preparation can accelerate feelings of anxiety and reduce confidence, although technically skilled [14].

2.4 AI Anxiety and AI Optimism

Affective experiences with AI, examined via AI-related anxiety and optimism, have been identified as robust predictors for employability perceptions. Evidence has been presented to indicate that job applicants manifest anxiety related to diminished human interaction, unclear assessment criteria, or anticipation of automation, especially during later stages of employment selection [13]; Navigating a Black Box. However, associated positivity related to an AI ability to offer better job matching and diminish human biases is related to increased levels of acceptance and career

self-confidence (“When AI Is Perceived to Be Fairer Than a Human”).

2.5 Mediating Role of Perception of AI’s Role in Recruitment A number of studies have found that how people perceive the functional role of AI, either in terms of its augmenting capabilities or threats, acts as a mediating factor for awareness, fairness, and employability [21]; [18]. Those people who regard AI’s role in terms of efficiency and objectivity will be more inclined to trust AI-based recruitment tools and will have no issues in terms of employment.

2.6 Moderating Role of Business School and HR Integration Practices

The institutional context plays a decisive role in shaping students' perception of AI in recruitment. According to available literature, the explicit integration of AI into curricula, placement activities, and HR practices enhances the preparedness and self-assurance of students to a great extent. If the business schools align AI education with actual HR applications and ethical frameworks, then the positive effects of AI awareness on employability would be further enhanced. Conversely, the weak institutional support will amplify anxiety and skepticism even amongst aware students.

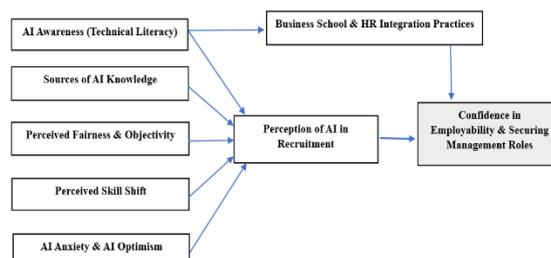


Fig. 1. Research Framework

III. METHODOLOGY

This research uses a quantitative, cross-sectional research design with primary data collected from an online survey of 157 MBA students, with 109 valid responses included in the analysis. The respondents were chosen from management programs due to their imminent entry into managerial positions and rising familiarity with AI-driven recruitment systems. The data was collected using a structured questionnaire with 42 perception-related items measured on five-point

Likert scales, using a non-probability convenience sampling method, which is a common method used in perception-related management studies. The research investigates independent variables such as AI awareness, sources of AI information, perceived fairness of AI recruitment, perceived skill shift, and AI anxiety/optimism; a mediating variable, perception of AI's role in recruitment; a dependent variable, employability confidence; and a moderating variable, business school and HR integration practices. Data analysis was done using Python in Google Colab with

Pandas, NumPy, SciPy, Statsmodels, and Scikit-learn. The preliminary data analysis included descriptive statistics [10], Cronbach's alpha [16], and Pearson

correlation [8], followed by Decision Tree [6], Random Forest [5], K-Means clustering [15], and hierarchical multiple regression with interaction terms [4]: [1].

IV. FINDINGS

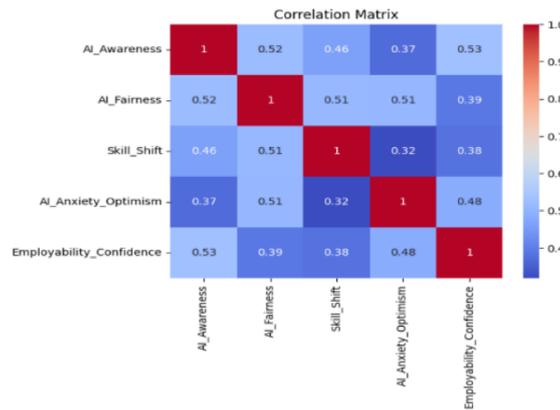


Fig. 2. Correlation

Fig. 2. Shows that the correlation analysis highlights a positive link between AI-related constructs and employability confidence for MBA students. AI awareness has a moderately strong link to employability confidence ($r = 0.53$), suggesting that students with higher knowledge levels regarding AI-driven job assistance tools have higher confidence in place-seeking jobs. AI anxiety and optimistic levels have shown a moderate link to employability

confidence ($r = 0.48$), suggesting that students with AI-positive outlooks have higher career confidence levels. Moreover, skill displacement has a link to employability confidence ($r = 0.38$), suggesting a need for a mix of AI knowledge and people skills to ensure efficient leadership skills. Based on these findings, it can be established that awareness and skill readiness in AI influence employability confidence in MBA students.

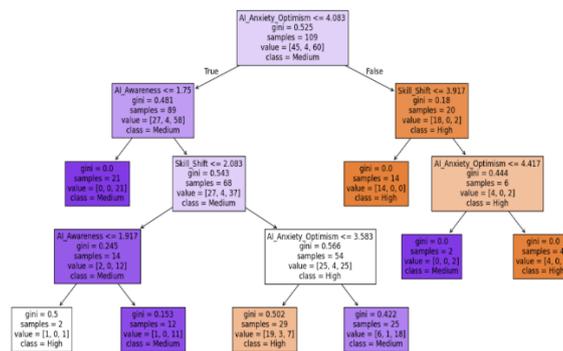


Fig. 3. Decision Tree Analysis

Fig. 3. shows Decision Tree analysis identifies AI anxiety/optimism as the most influential predictor of employability confidence among MBA students, represented through the placement as the root node. Students with higher levels of AI optimism are much

more likely to demonstrate high employability confidence, which is most pronounced when combined with high perception over skill readiness. On the other hand, high levels of AI anxiety tend to lower employability confidence even for those demonstrating moderate AI awareness. Thus, it is indicated that

emotional acceptance of AI precedes and conditions the influence of cognitive factors. It is found that AI awareness comes out to be the second determinant, strengthening confidence through decreased uncertainty related to recruitment systems driven by AI. The perceived skill shift further strengthens employability confidence when students feel prepared to adapt to the shifting skill landscape. The tree structure indeed shows that it is the interaction of

affective, cognitive, and skill-based factors rather than any single variable alone that creates employability confidence. The relatively weak role of perceived fairness indicates that self-efficacy and adaptability are stronger drivers of immediate confidence than ethical concerns. Taken together, the results confirm the proposed conceptual framework and support the alternative hypotheses on the link between AI optimism and higher levels of employability confidence.

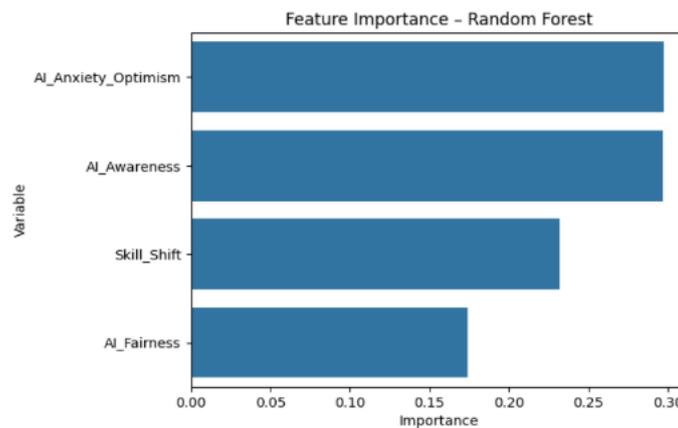


Fig. 4. Random Forest

The result from Fig. 4. and TABLE I. shows that the feature importance analysis for The Random Forest model shows that AI anxiety and optimism has a higher influence than any other variable in determining confidence in employability among MBA students. This is followed closely by AI awareness. This may indicate that for students, their emotional reaction to artificial intelligence and their level of knowledge

regarding AI-enabled hiring systems may have more prominence in determining their confidence in employability than having higher expectations regarding fairness alone. Perceived skill shift is another significant determinant in this model. The result supports the outcome from The Decision Tree model. It also supports the conceptual framework presented in this study.

TABLE I. RELATIVE IMPORTANCE OF PREDICTORS IN EMPLOYABILITY CONFIDENCE

	Variable	Importance
3	AI Anxiety Optimism	0.297369
0	AI Awareness	0.296750
2	Skill Shift	0.232117
1	AI Fairness	0.173763

TABLE II. CLASSIFICATION OF MBA STUDENTS INTO AI READINESS CLUSTERS

Cluster	AI Awareness	Skill Shift	AI Anxiety Optimism	Employability Confidence
0	1.692	2.320	3.162	2.974
1	2.391	3.062	3.585	3.728
2	3.462	3.666	4.481	4.500

TABLE II. shows that the K-Means clustering classified MBA students into three distinct groups of AI awareness, perceived skill shift, AI anxiety/optimism, and employability confidence. Cluster 0 consists of AI-anxious and low-prepared students who are less aware and have lower employability confidence. Cluster 1 is characterized by moderately aware MBA students in transition toward

AI readiness with a balanced perception of skill shift and moderate confidence. Cluster 2 represents the students who are AI-ready and high in their confidence, showing strong awareness and optimism about AI and very high employability confidence. The clustering therefore highlights the heterogeneous perception among MBA students and underlines the requirement for differentiated academic and institutional intervention.

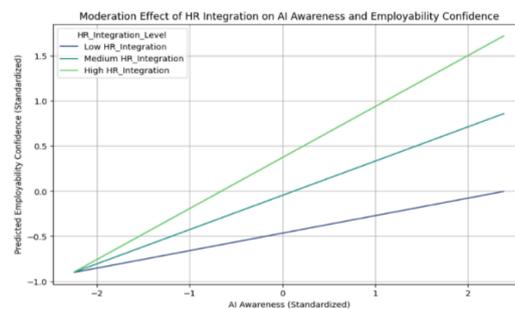


Fig. 5. Moderation Analysis via Refression

Fig 5. shows that Business School and HR Integration Practices support a positive moderation of the relationship between AI awareness and the confidence of MBA students regarding their employability. Although the positive relationship exists between AI awareness and the confidence of MBA students regarding their employability at all levels of HR integration, the intensity of the relationship improves with increasing levels of HR integration. There would be no significant increase in the confidence of MBA students regarding their employability due to AI awareness at lower levels of HR integration, but with moderate to high levels of HR integration, the relationship will improve with time, proving the positive moderating effect of HR integration practices on the relationship.

V. DISCUSSION

This paper examines MBA students' perceptions of artificial intelligence (AI) driven recruitment and its impact on employability confidence using a combination of statistical techniques and machine-learning methods. The results derived from correlation analysis, Decision Tree modeling, Random Forest validation, clustering, and moderation regression provide insights into the complex interplay between cognitive, emotional, and skill-related factors influencing employability confidence in AI-enabled

recruitment environments. Correlation analysis indicates that AI awareness is positively associated with employability confidence, implying that greater familiarity with AI recruitment systems enhances students' confidence in employment outcomes. This supports the view that technological awareness clarifies recruitment processes and reduces uncertainty, thereby strengthening employability confidence [2], [21]. Awareness makes AI-driven recruitment systems less opaque, enabling students to better interpret recruitment outcomes. Beyond cognitive understanding, findings consistently show that AI anxiety/optimism plays a decisive role in shaping employability confidence. Both Decision Tree and Random Forest analyses identify AI anxiety/optimism as the most influential predictor, surpassing awareness, skill perceptions, and fairness considerations. This extends existing theory by demonstrating that emotional preparedness toward AI may be more critical than skill competence alone in AI-based recruitment contexts, consistent with prior studies on applicant reactions to algorithmic hiring [13]. This refines existing theory by showing that emotional readiness for AI can be even more important than skill competence in AI-driven recruitment systems, as has been found in previous research on applicant reactions to algorithmic recruitment [13].

Perceived skill transformation is revealed as a secondary predictor, largely capturing the importance of balancing AI skills with soft skills like leadership, ethics, and flexibility. Students who are aware of and feel ready for this dual skill challenge report greater employability confidence, supporting the psychosocial model of employability that combines skills, adaptability, and human agency [12]. The importance of dual skill portfolios in AI-driven settings has been previously highlighted [2]. Perceived fairness of AI recruitment is positively related to employability confidence, although to a weaker degree. This indicates that trust in AI recruitment is more affected by awareness and emotional readiness than fairness perceptions, despite previous findings that fairness is related to candidate trust and attraction to organizations [3], [17]. K-Means clustering analysis also shows diversity among students, classifying them into AI-anxious, transitional, and AI-ready categories, which underscores the importance of differentiated educational support [21]. Finally, the results of moderation analysis show that business school and HR integration practices significantly enhance the relationship between AI awareness and employability confidence, which supports existing research on institutional readiness and support in AI adoption [20]. In conclusion, this study highlights that employability confidence in AI-based recruitment is contingent on emotional acceptance, cognitive understanding, adaptive skills, and institutional integration.

VI. CONCLUSION

This research investigated the effects of artificial intelligence on employability confidence among MBA students by combining both statistical and machine learning models. The results show that employability confidence is influenced not only by cognitive awareness of AI but also by emotional acceptance, adaptability, and institutional support. AI awareness has a positive effect on employability confidence, especially when students are aware of how AI is used in recruitment practices. Nevertheless, emotional perceptions of AI, as measured by AI anxiety and optimism, are revealed to be more significant determinants, implying that students' confidence or fear of AI has a strong effect on their perceptions of employability. Perceived shifts in skill demands also affect employability confidence, underscoring the

significance of hybrid skill development that combines awareness of AI with soft managerial skills. While perceived fairness in AI recruitment practices is important, its effect on employability confidence is relatively less significant. The emergence of perception-based groups of students identifies the existence of heterogeneity, implying that a standardized approach to education may not be effective. Moreover, best practices in business school and HR integration strengthen the positive impact of AI awareness on employability confidence. In conclusion, the importance of management education addressing technical skills, psychological readiness, adaptive learning, and integration to prepare students for the AI labor market is highlighted.

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