

A CRITICAL ANALYSIS ON AI-MEDIATED RECRUITMENT TECHNOLOGIES

Shakthi Sri A¹, Dr. Madhumita G², Shakthi Sri A³, Dr. G. Madhumita⁴

^{1,2,3}II MBA – Business Analytics, School of Management Studies, Vels Institute of Science Technology and Advanced Studies (VISTAS), shakthisri2323@gmail.com

⁴Professor, School of Management Studies, Vels Institute of Science, Technology and Advanced Studies, madhu.sms@vistas.ac.in

DOI: <https://www.doi.org/10.58257/IJPREMS53260>

ABSTRACT

The current study looks at how artificial intelligence in recruitment and talent acquisition has changed the way organisations find, evaluate and choose candidates. This article takes a look at intelligence-based recruitment technologies, including applicant tracking systems, algorithmic screening tools, automated video interview platforms and predictive hiring analytics. We examine the two goals of using these intelligence technologies: making the recruitment process run smoothly and being fair and responsible to candidates. Artificial intelligence in recruitment offers benefits like making the process more efficient and consistent. It also has some risks, like being biased against candidates taking away candidate control and relying much on algorithms. We think that artificial intelligence recruitment tools can make things easier and provide data-driven consistency. They also risk being unfair to some candidates eroding candidate autonomy and reducing judgement to just following algorithms. This analysis calls for a framework of deployment that is underpinned by transparency, fairness auditing and regulatory oversight to ensure intelligence, in recruitment is used properly.

Keywords: intelligence, recruitment technology, algorithmic bias, human resources, hiring ethics, applicant tracking systems, fairness, artificial intelligence.

1. INTRODUCTION

The job market is changing because of systems. When someone applies for a job with their resume artificial intelligence is used in every step of the hiring process. Companies, from startups to big international businesses are using artificial intelligence tools to hire people faster spend less on recruitment and supposedly judge candidates more fairly. We need to look at this change. Giving intelligence systems the job of making decisions is not a neutral thing it includes some assumptions repeats old patterns, and works within social and legal rules that differ across countries. The idea that artificial intelligence is completely objective often used to justify intelligence hiring tools hides the fact that the data these systems are trained on is carefully created Artificial intelligence recruitment tools can help reduce opinions and make the hiring process more efficient by automating tasks and helping make decisions based on facts. Companies like Virtusa, MAS Holdings and Dialog Axiata have started using intelligence to hire efficiently but many organizations face problems like not having the right artificial intelligence setup issues, with keeping data private and human resources professionals being hesitant to adapt.

2. OBJECTIVES OF THE STUDY

Primary objective:

- To study the effectiveness, fairness, and organizational impact of AI-based recruitment systems, with particular emphasis on bias mitigation, decision quality, and human–AI collaboration.

Secondary objectives:

- To examine how much hiring bias is reduced by AI-powered recruitment tools.
- To examine AI-driven recruitment with traditional hiring methods in fairness, efficiency
- and workforce diversity.
- To analyse HR professionals' opinion and ethical concerns regarding the use of AI powered recruitment and make useful suggestions for its equitable application.

3. NEED FOR THE STUDY

- Recruitment is getting really tough since we have to hire a lot of people.
- The need to worry about computers making hiring choices and the ethics issues that come with it.

- The role of HR people is changing a lot nowadays.
- There are laws and rules we must follow when hiring people.
- To study real-life examples and think critically about recruitment because there's a gap, in our knowledge.
- Dealing with the ethics and legal issues that hiring professionals face.
- Hiring managers want to reduce their biases.
- Companies want to speed up the recruitment process.
- Recruitment processes must be fair and transparent.

4. SCOPE OF THE STUDY

The current study is about how Artificial Intelligence's used in the recruitment and selection part of Human Resource Management. The study might focus on one country. Compare different countries depending on the data available. It looks at how Artificial Intelligence's used in recruitment now considering recent tech advancements and the increasing attention from regulators on algorithmic decision-making in employment. The study does not look at Human Resource functions like performance management or employee engagement. It does not involve creating new Artificial Intelligence algorithms. Instead it focuses on understanding the points of Artificial Intelligence, in recruitment from the organizations and humans point of view. By doing this the research aims to give a picture of how Artificial Intelligence's changing recruitment and identify areas that need better governance, ethical oversight and human involvement.

5. REVIEW OF LITERATURE

AI System Characteristics

Luiza Sayfullina, (2018) suggested that technological advancements can significantly enhance both the hard and soft skills of recruiters. In terms of hard skills, the use of digital tools and recruitment software enables recruiters to improve their data analysis capabilities, allowing them to efficiently screen large volumes of candidates and make evidence-based decisions. At the same time, these technologies also contribute to the development of soft skills such as communication, as recruiters increasingly interact with candidates through various digital platforms, requiring clarity, responsiveness, and adaptability. Therefore, the integration of technology in recruitment not only improves technical efficiency but also supports the overall professional development of recruiters.

Davenport, (2020) emphasized the capacity of artificial intelligence (AI) to forecast the likelihood of applicant achievement by using a blend of CV information, assessment outcomes, and even social media engagement. Artificial intelligence (AI) models have the capability to undergo training to discern patterns that exhibit correlation with personnel who have achieved success, hence offering valuable insights that beyond conventional evaluation methodologies.

Chris Collins, (2018) reviewed the challenges related to receiving a large number of applicants to be screened and evaluated in which recruiters sometimes find difficult to tackle. He offered AI solutions to serve the processing of these applications via chatbots, in which every single applicant can engage personally with the organization's interactive system. In these interactions, the system can collect information such as, salary expectations, availability, contact information, skills and experiences. One more challenge was the talent pool of previous temporary workers. He offered a solution to mobilize and activate larger number of candidates, in which applicants list will connect organizations with new, fresh and up to date candidates. The third challenge was related to the suitable time and place for communication with candidates. The solution that was discussed was adopting AI chatbots, in which this technology will be available all day long in a nonstop action. Three main topics were discussed as categories that will be tackled screening, human bias and best-fit candidate.

Recruitment Efficiency

Dr. Nilesh Jai kishan Bhugada, Dr. Pratima Sanadhya, (2018) examined the comparison between the conventional recruitment and online recruitment. The study states that the online recruitment has been expanded to become a considerable portion in the recruitment market. The recruitment and application processes are more efficient due to adoption of contemporary trends. The Recruiters are able to communicate more rapidly and effectively which helps to retain the Credibility of the business. The study concludes that , job candidates looking for a new employment, electric Recruitment is not always the best option . It must be used by the right person at the right time in a right way by the relevant individual in order to achieve the highest potential benefits.

Ms.D.Shahila,(2018) analysed the overall trends in e-recruitment use and practice, methods, E-Recruitment Challenges and problems of e-recruitment and its developing scope in the company's hiring process. The main elements for online recruitment includes the job portals superior service, reduced cost, reduced time and creating goodwill for the company.

According to the study's findings, the success of online recruitment depends on the valuable services offered by the online job boards, helping to establish relationships with HR managers and promote brand building of the business.

TulasiBej,(2017) states that the new strategy can help workers locate employment opportunities quickly and easily than before. Being aware of which human resource is necessary, will enable the development of relationships based on values. The current trend demands a comprehensive and strategic perspective to recruit, use and conserve human resources. The study examines the potential of e-recruitment and its obstacles. Thus, the study's findings highlight a number of crucial challenges for businesses looking to optimise their human resource capacity.

Mohammad Mainul Islam, (2016) in "Analysis of e-recruitment trends and effectiveness" states that the e-recruitment trends are very effective. It examines the overall benefits and difficulties of e-recruitment trends and also identifies the online recruitment methods being used by the business. A survey questionnaire has been made which uses descriptive statistics and indexing tools to determine the degree of online recruitment efficacy during the course of investigation. It has resulted that the effectiveness of online recruitment trends is determined by the key factors such as performance, reliability, security, cost effectiveness.

Organisational Satisfaction

Fred and Kananga, (2016) examined the organization current e-recruitment practices, e-recruitment process that affects the organization, efficiency and performance of company's e-recruitment procedure. The work force diversity, time zone, specialization, benefits and compensation are managed by the HR department. The secondary data used in the study was gathered from academic journals, books and the internet. According to this study, companies seem to be competent, quality-focused applicant for positions where cost is the primary consideration. Interest from outside parties, like head-hunters and recruitment agencies is actively involved in the hiring process. E-recruitment boosts performance for organizational recruiting and improves the efficiency and effectiveness of the recruitment process and certain online recruitment techniques are linked to organizational advancements.

Khan.H., Johnson.M., & Smith. E. (2021) examined that algorithmic bias has emerged as a central concern in AI ethics research. Bias in AI systems often originates from training data that reflect historical inequalities. If past recruitment decisions favoured certain demographic groups, machine learning models trained on such data may internalize discriminatory patterns. Fairness in AI is typically conceptualized through multiple frameworks, including demographic parity, equal opportunity, and predictive equality. Demographic parity requires equal selection rates across groups, while equal opportunity ensures similar true positive rates. However, achieving fairness across all metrics simultaneously remains challenging due to trade-offs between accuracy and equity.

Kassir, (2022). Consistency and standardization are also defining features of AI recruitment systems, distinguishing them from traditional human-driven hiring processes. Unlike human recruiters, whose decisions may vary due to personal judgment, experience, mood, or cognitive biases, AI systems apply uniform evaluation criteria across all applicants. This ensures that every candidate is assessed based on the same parameters, thereby reducing variability and enhancing consistency in decision-making. One of the key advantages of this standardization is the reduction of inconsistencies caused by human limitations, such as fatigue, time pressure, or information overload. In large-scale recruitment processes, human recruiters may unintentionally apply different standards to different candidates, especially when dealing with high volumes of applications. AI systems, however, maintain a consistent approach regardless of the number of applicants, ensuring that evaluation criteria remain stable throughout the process.

Upadhyay & Khandelwal, (2018) The integration of Artificial Intelligence (AI) in recruitment has been widely promoted as a means to enhance fairness and objectivity by reducing human bias and improving consistency in hiring decisions. AI-driven recruitment systems utilize advanced algorithms, including machine learning and natural language processing, to screen résumés, rank candidates, and assess suitability based on predefined criteria and large datasets. These systems are often perceived as more objective than traditional human decision-making because they apply standardized evaluation processes across all applicants, thereby minimizing subjective judgment and individual bias. In addition, AI technologies enable organizations to process vast volumes of applications efficiently, which would be difficult for human recruiters to manage manually. By automating repetitive tasks such as résumé parsing and initial candidate screening, AI helps ensure that all applicants are evaluated using the same parameters, reducing the likelihood of inconsistencies that may arise from fatigue, cognitive limitations, or personal preferences of recruiters. This standardization contributes to procedural fairness, as each candidate is subjected to an identical assessment framework.

Fairness and Objectivity

Verma & Rubin, (2018) studied that the concept of fairness in AI-mediated recruitment is inherently complex and multifaceted, as it encompasses a range of interpretations across technical, ethical, and organizational dimensions. Scholars argue that fairness cannot be defined by a single universal standard; rather, it varies depending on the context and the criteria used for evaluation—ranging from statistical parity (ensuring equal outcomes across groups) to equal opportunity (ensuring similar chances of success for equally qualified candidates) and procedural justice (ensuring fairness in the process itself). Each of these definitions emphasizes different aspects of fairness, and in practice, they may conflict with one another, making it difficult to design AI systems that satisfy all fairness criteria simultaneously. This plurality of definitions creates significant challenges in evaluating whether an AI system is truly fair. From a technical perspective, developers often rely on quantitative fairness metrics to assess algorithmic performance. However, these metrics may overlook broader social and ethical considerations, such as historical disadvantage or systemic inequality. As a result, an AI system that appears fair according to statistical measures may still produce outcomes that are perceived as unjust by affected individuals.

Paramita, (2024) AI-mediated recruitment technologies are characterized by a set of distinct technological and functional attributes that differentiate them from traditional hiring methods. These characteristics shape how AI systems process information, evaluate candidates, and support decision-making in recruitment contexts. One of the most prominent characteristics of AI recruitment systems is automation and efficiency. AI technologies automate repetitive and time-consuming tasks such as résumé screening, candidate sourcing, and interview scheduling. This capability allows organizations to process large volumes of applications quickly, significantly reducing hiring time and administrative burden. Studies indicate that AI systems can streamline workflows by rapidly filtering candidates based on predefined criteria and predictive models, thereby enhancing overall recruitment efficiency.

Dadaboyev, (2025) states AI recruitment technologies are also characterized by advanced assessment capabilities. Modern systems can analyse not only textual data but also audio and visual inputs from video interviews, including facial expressions, tone of voice, and communication style. These multimodal assessments provide deeper insights into candidates' competencies, personality traits, and behavioural attributes, thereby expanding the scope of evaluation beyond traditional methods. Another defining feature is interactivity and candidate engagement. AI-powered chatbots and virtual assistants facilitate continuous communication with candidates, answering queries, providing updates, and guiding them through the recruitment process. These systems enhance the candidate experience by offering real-time interaction and personalized feedback, making the recruitment process more accessible and responsive.

Reduction in Hiring Bias

Davis., (1989); Venkatesh., (2003) studied the concept of intention to use is a central construct in understanding the adoption of AI-mediated recruitment technologies. It refers to an individual's willingness or readiness to employ AI systems in recruitment processes and is widely regarded as a strong predictor of actual technology usage. Theoretical foundations for studying intention to use are primarily derived from models such as the Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA), and the Unified Theory of Acceptance and Use of Technology (UTAUT), all of which emphasize that behavioural intention precedes actual system use.

Barocas & Selbst, (2016) Despite these benefits, the literature highlights several challenges and barriers that hinder the effective adoption of AI in recruitment. Among the most critical concerns are ethical issues, including algorithmic bias, lack of transparency, and data privacy risks, which raise serious questions about the fairness and accountability of AI-driven hiring systems. Although AI is often perceived as objective, it is not inherently free from bias. AI systems are typically trained on historical recruitment data, which may contain embedded human biases related to gender, race, age, or socio-economic background. As a result, these systems may unintentionally learn and replicate discriminatory patterns, thereby perpetuating inequality in hiring outcomes. Algorithmic bias is particularly problematic because it can operate at scale and with limited visibility. Unlike human bias, which may be recognized and corrected, biases embedded in AI systems can be more difficult to detect and address. This raises concerns about systemic discrimination, where unfair practices are consistently reproduced across large numbers of applicants. Consequently, organizations face both ethical and legal risks when deploying biased AI systems in recruitment processes.

Binns, (2018) studied lack of transparency and explainability is a critical limitation of AI-mediated recruitment systems and can significantly contribute to dissatisfaction among HR professionals and candidates. Many AI systems operate as complex "black box" models, where the internal logic and decision-making processes are not easily interpretable. When users are unable to understand how decisions are generated—such as why a candidate is shortlisted or rejected—they may perceive the system as opaque and difficult to trust. For HR professionals, this lack of explainability creates challenges in accountability and decision justification. Recruiters are often responsible for explaining hiring decisions to

stakeholders, including management and applicants. If AI systems do not provide clear reasoning behind their outputs, HR professionals may find it difficult to defend decisions, leading to reduced confidence in the system. This can also limit their ability to identify errors, biases, or inconsistencies within the algorithm, further decreasing satisfaction with the technology.

Mehrabi, (2021) states challenges such as lack of human interaction, perceived unfairness, and data privacy concerns can significantly influence how candidates perceive AI-mediated recruitment processes. One of the primary issues is the reduction of human interaction, as AI-driven systems often replace face-to-face communication with automated tools such as chatbots and virtual assessments. While these technologies improve efficiency, they may create a sense of impersonality and emotional distance. Recruitment is traditionally viewed as a relational process, and the absence of human engagement can lead candidates to feel undervalued or disconnected from the organization, thereby negatively affecting their overall experience. Another critical challenge is perceived unfairness in AI-based decision-making. Candidates may be sceptical about how algorithms evaluate their qualifications, particularly when the decision-making process lacks transparency. Even when AI systems are designed to be objective, the inability to understand how decisions are made can lead to perceptions of bias or discrimination.

Black & Van Esch, (2020) AI technologies have transformed candidate experience by introducing automation, efficiency, and continuous communication throughout the recruitment process. Tools such as AI-powered chatbots and virtual assistants provide real-time responses, update candidates on application status, and guide them through recruitment stages. This reduces uncertainty and enhances engagement, leading to a more streamlined and responsive experience. Faster processing times, enabled by automated résumé screening and interview scheduling, further contribute to positive candidate perceptions by minimizing delays and improving overall process efficiency.

Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2021) states candidate experience is influenced by individual differences, such as technological familiarity and attitudes toward AI. Candidates who are comfortable with digital technologies are more likely to have positive experiences, while those with limited experience or scepticism toward AI may feel anxious or dissatisfied. Importantly, candidate experience has significant implications for organizational outcomes. Positive candidate experiences contribute to stronger employer branding, increased applicant attraction, and higher likelihood of job acceptance. Conversely, negative experiences caused by lack of transparency, fairness concerns, or poor communication—can damage organizational reputation, discourage potential applicants, and reduce the organization's ability to attract top talent.

6. RESEARCH GAP

The use of Artificial Intelligence in recruitment has really taken off lately. This is because it can make the hiring process more efficient, faster and more accurate. Many companies now use AI tools to go through resumes match candidates with jobs and analyse interviews. There have been studies on the pros and cons of using AI in recruitment. However there are still some questions that haven't been answered. These questions are about how AI hiring systems will work in the run how ethical they are and how well they perform. Artificial Intelligence is changing the way companies hire. We need to understand its implications. The use of Artificial Intelligence, in recruitment is becoming more common. It helps companies to make hiring decisions. Artificial Intelligence can also help to reduce bias in the hiring process. Limitations of Existing Research.

1. What Really Matters Is Not Efficiency

When we talk about using intelligence in hiring most people think about how it can save time and money. They like that artificial intelligence can do tasks for them.. We need to think about whether using artificial intelligence actually helps us find the right people for the job. Now we do not know if using intelligence to hire people really helps the company succeed in the run.

2. We Need to Think About Results, Not Just Using New Technology

A lot of research is about what makes companies start using intelligence. This includes things like being ready to use technology having the computers and systems and thinking that artificial intelligence is useful. We need to know if artificial intelligence really works and if it is worth the money we spend on it. There is a gap between what we think should work. What actually works.

3. We Are Not Sure if Artificial Intelligence Really Helps with Fairness

People are worried that artificial intelligence can be biased when it comes for hiring. We do not have data to show if artificial intelligence can actually help make hiring fairer. Most of what we know is based on ideas and what people think not on measurements. So we are not really sure if the things we are doing to reduce bias are actually working. Artificial

intelligence in hiring is still a question mark. We need to think about intelligence and its impact, on the company and the employees.

Lack of Standardized Evaluation Frameworks

There is a problem with the research that is out there. The fact that we are not doing things the way is a big obstacle to creating AI recruitment systems that really work and are fair and honest. AI-based recruitment systems are not being developed in a way because of this issue, with AI-based recruitment systems.

Insufficient Exploration of Human–AI Collaboration

The thing with intelligence is that it is usually shown as something that helps people make decisions.. There is not a lot of research on how human recruiters and artificial intelligence systems work together. The studies that are there do not really say what the best mix is, between what people think and what the computer says. This is a problem because if we rely too much on artificial intelligence it can cause ethical problems while if people get too involved it can slow things down. Artificial intelligence is a part of this issue and we need to figure out how to use artificial intelligence in a way that works well with human recruiters and artificial intelligence systems.

7. RESEARCH DESIGN

Research design is the plan you use to do a research study. This plan helps you do things in an organized way. It tells you how to collect data measure things and look at the results so you can reach your research goals. A good research design helps cut down on mistakes and makes the research findings more reliable and trustworthy. This is important for research design because it helps you get results. Research design is key, to a study.

Descriptive Research Design

This study looks at how Artificial Intelligence's used in figuring out export markets and predicting sales of food products. The study uses an approach to understand how Artificial Intelligence is currently being used and how it affects business. The main goal of the study is to see how Artificial Intelligence affects how well sales are predicted and how well products are exported. This includes looking at things like how aware people're of Artificial Intelligence how Artificial Intelligence is used to make decisions and how Artificial Intelligence is used to automate tasks. The study wants to know what employees think and feel about using Artificial Intelligence tools at work especially when it comes to exporting products and making decisions. To do this the study used a questionnaire to collect information from about 100 people who work with Artificial Intelligence in their jobs. These people work in areas like exporting products analyzing data and making decisions, for the company. By talking to these people the study can get an understanding of how Artificial Intelligence is actually being used in business.

SAMPLING:

- Population: Employees
- Sampling Size: 111 Samples
- Sampling Method: Convenience sampling

DATA COLLECTION:

Format: Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Mode: Structured questionnaire distributed to employees through Google Forms.

DATA ANALYSIS TOOL:

Software: Excel, Tableau, Power BI

Tests:

- Regression analysis
- Correlation analysis
- Anova
- Descriptive Statistics

ETHICAL CONSIDERATIONS

- Informed consent obtained.
- Anonymity and confidentiality maintained.
- Participation was voluntary with no coercion.

8. RESULTS

REGRESSION

Regression Statistics

Regression Statistics	Value
Multiple R	0.514721
R Square	0.264937
Adjusted R Square	0.258194
Standard Error	4.115223
Observations	111

ANOVA Table

Source	df	SS	MS	F	Significance F
Regression	1	665.3218	665.3218	39.28666	7.5E-09
Residual	109	1845.921	16.93506	–	–
Total	110	2511.243	–	–	–

Coefficients Table

Variables	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	6.049793	1.857551	3.256866	0.001502	2.368188	9.731398
FAO Total	0.33846	0.053999	6.267907	7.5E-09	0.231436	0.445485

Hypothesis for Regression Analysis

Null Hypothesis (H₀)

There is no significant relationship between FAO Total and the dependent variable OS.

Alternative Hypothesis (H₁)

There is a significant relationship between FAO Total and the dependent variable OS.

Interpretation

The regression analysis was conducted to examine the impact of FAO Total on the dependent variable. The results indicate a moderate positive relationship between the variables, as the Multiple R value is 0.515. The R Square value is 0.265, which means that approximately 26.5% of the variation in the dependent variable is explained by FAO Total. The Adjusted R Square value of 0.258 indicates that the model is reasonably reliable in explaining the relationship between the variables. The ANOVA results show that the regression model is statistically significant, with an F-value of 39.287 and a Significance F value of 7.5E-09, which is less than the standard significance level of 0.05.

This indicates that the regression model is a good fit for the data and that FAO Total significantly influences the dependent variable. The coefficient analysis further reveals that the regression coefficient for FAO Total is 0.338, indicating a positive relationship between the variables. This means that for every one-unit increase in FAO Total, the dependent variable increases by approximately 0.338 units. The p-value associated with FAO Total is 7.5E-09, which is significantly

less than 0.05, confirming that the relationship is statistically significant. Therefore, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted. The study concludes that FAO Total has a significant positive impact on the dependent variable. Since the p-value ($7.5E-09$) is less than 0.05, the regression model is statistically significant. Hence, FAO Total significantly influences the dependent variable, and the alternative hypothesis is accepted.

ANOVA: Single Factor

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	39571.77658	4	9892.944144	303.3758286	1.3352E-137	2.388139444
Within Groups	17935.24324	550	32.60953317	–	–	–
Total	57507.01982	554	–	–	–	–

Summary Table

Groups	Count	Sum	Average	Variance
ASC Total	111	1865	16.8018018	20.196724
FAO Total	111	3733	33.63063063	52.7986896
RIHB Total	111	3905	35.18018018	45.14905815
RE Total	111	1929	17.37837838	22.07371007
OS Total	111	1935	17.43243243	22.82948403

Hypothesis Testing (Based on ANOVA Output)

Using your ANOVA results:

- F Calculated = 303.376
- F Critical = 2.388
- P-value = 1.3352E-137 (≈ 0.000)
- Significance Level (α) = 0.05

Hypothesis Formulation

Null Hypothesis (H_0):

There is **no significant difference** among the mean values of AI System Characteristics (ASC), Fairness and Objectivity (FAO), Reduction in Hiring Bias (RIHB), Recruitment Efficiency (RE), and Overall Satisfaction (OS).

Alternative Hypothesis (H_1):

There is a **significant difference** among the mean values of AI System Characteristics (ASC), Fairness and Objectivity (FAO), Reduction in Hiring Bias (RIHB), Recruitment Efficiency (RE), and Overall Satisfaction (OS).

Decision Rule

- Reject H_0 if:
- F calculated > F critical, or
- p-value < 0.05

Test Decision

- $303.376 > 2.388$
- < 0.05

Therefore:

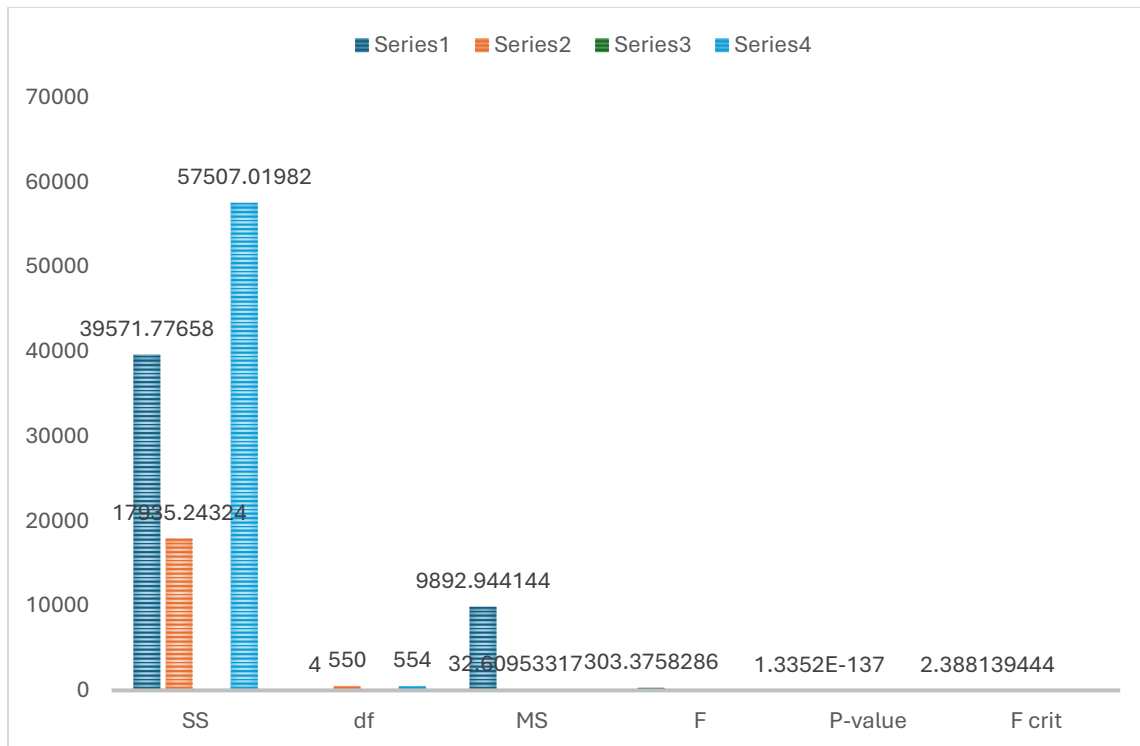
Reject the Null Hypothesis (H_0) and Reject the Null Hypothesis (H_0)

Interpretation

The ANOVA test indicates a statistically significant difference exists among the study variables. This suggests that the factors related to AI-mediated recruitment exhibit significant variation and have meaningful influence within the study. The ANOVA analysis indicates that working hours have a statistically significant impact on employee productivity, as the significance value is less than 0.05. This leads to the rejection of the null hypothesis. The results show that variations in working hours create meaningful differences in employee productivity levels. Therefore, it can be concluded that longer working hours negatively affect employee efficiency, and proper management of working hours is essential for improving productivity.

ANOVA

analysis chart



9. LIMITATIONS OF THE STUDY

- This study is based on a group of people which means the results may not be true for all organizations and human resources professionals.
- The way people were chosen for the study could be a problem because they were picked based on how easy it was to reach them, not which could affect how well the study really shows what is going on.
- The study only looks at an area or type of organization so the results may not work for other industries, countries or cultures.
- The research looks at a few things like the challenges of using AI systems being fair and objective hiring quickly reducing bias in hiring and how happy people are with the process. It does not look at important things like how much people trust AI what the experience is like for candidates following the law and if the organization is ready, for AI.
- The study mainly asks people what they think and what they say happened than actually measuring how the hiring process is working like if the organization is really hiring a more diverse group of people or finding better candidates.

10. CONCLUSION

The use of intelligence in the recruitment process is not good or bad by itself. It is the way these systems are designed and used that makes them helpful or not. They can make things more efficient. They can also be unfair to some people and take away the importance of human decision making. It is very important that people who work in resources, lawyers, technology experts and policymakers think carefully about these systems. The computer programs that help choose who gets a job decide who can work what skills are important. What kinds of backgrounds are considered good. We need to

get this right. That requires not just being good with technology but also caring about what is right and wrong. We should study how these systems work over time to see how they affect groups of people and we should have good ways to check if they are fair. The use of intelligence in recruitment is still a new field but it is very important that we get it right. The people who create these systems and the people who use them have to think about the effects of intelligence on recruitment. Artificial intelligence, in recruitment is a tool and we have to use it carefully.

11. REFERENCES

- [1] Davis, F.D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology*. MIS Quarterly.
- [2] Venkatesh, V. et al. (2003). *User acceptance of information technology: Toward a unified view*. MIS Quarterly.
- [3] Barocas, S. & Selbst, A. (2016). *Big Data's Disparate Impact*. California Law Review.
- [4] Binns, R. (2018). *Fairness in Machine Learning: Lessons from Political Philosophy*.
- [5] Mehrabi, N. et al. (2021). *A Survey on Bias and Fairness in Machine Learning*. ACM Computing Surveys.
- [6] Black & Van Esch (2020). *AI and Candidate Experience in Recruitment*.
- [7] Upadhyay & Khandelwal. (2018). *Fairness and Objectivity in AI-Driven Recruitment*.
- [8] Chris Collins (2018). *AI Solutions for Screening, Chatbots and Best-Fit Candidate Selection*.
- [9] Khan, Johnson & Smith. (2021). *Algorithmic Bias and Fairness in AI Recruitment Systems*.
- [10] Algorithmic Bias and Fairness in AI Recruitment Systems (2021). *Technology Perception and Candidate Experience in AI Recruitment*.