Reduction of Hiring Biases through AI Interventions: AStudy from West Bengal

Rianka Saha
Ph.D. Scholar, St. Xavier's University
Email: rianka10@gmail.com
and
Mourlin K,S.J.
Assistant Professor, St. Xavier's University

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Abstract

Hiring decisions all over the world have faced a major problem of hiring bias that inherently seeps through in the final selection processes as well as the initial stages of hiring. To curb the same, smart systems and robotic interventions are doing the hard work to eliminate the bias risk. A qualitative study was undertaken to understand whether hiring biases through AI interventions have been reduced to some extent. The study was undertaken in the state of West Bengal wherein there are various IT and ITes industries and the data were collected through a structured interview from the hiring managers. Through the qualitative study it was found that if a comparative analysis is done before and after introduction of AI in hiring decisions, a marked difference in hiring bias could be seen. This study has further scope if undertaken for a larger group and a scale could be created to measure the degree of biasness in the hiring process for bulk hiring process as well.

Keywords: Artificial Intelligence, Hiring, IT, ITes, Hiring bias, AI Interventions

A. Introduction

Artificial Intelligence (AI) is very similar to human intelligence as it is created by humans. As per Wolfgang Ertel (2017), the term artificial intelligence stirs up emotions. As per John McCarthy, 1955, “the goal of AI is to develop machines that behave as though they were intelligent”. It should be kept in mind that human intelligence is not the only form of intelligence and therefore the scope is very wide. As per Elaine Rich (1991), “Artificial Intelligence is the study of how to make computers do things at which, at the moment, people are better”. As per another research, it was seen that there are five different ways to define AI, by structure, by behavior, by capability, by function and by principle. The structure AI is mainly contributing to the human brain study(2008). The limitation to this aspect is that the brain is created under evolutionary restrictions and the same are not relevant to computers. The behavior AI on the other hand contributes to the understanding of the human psychology. The issue with this is that the human way

may not be the best possible way to solve a practical problem that we may encounter. The capability AI is more concerned with solving practical problems however, it mainly suffers due to an utter lack of generality of solutions. The function AI on the other hand is concerned with producing new type of software that will help carry out a certain type of computation. The principal AI is concerned with information processing in different situations. It is seen that although each of the above five definitions are valid; it is not a good idea to mix all of them in a single project. If an AI project has no clear idea, the people working on them may swing from one definition to next. This may further cause complication in evaluation and design (2008).

As per research (2019), it was seen that AI generates solutions that can resolve and optimize the results for the recruiters and thus contribute effectively to the quality of the hiring process. The researchers also felt that they can neutralize the human biases by using AI. Another research on this aspect showed that although the usage of AI for recruitment had shown remarkable effect on hiring decisions, still a lot of hiring managers either were unaware or were reluctant to use the process(2021).This shows that although means are available, there is not much awareness as well as some reluctance to use the same. In order to understand the same, the present research has been undertaken to analyze the aspect of hiring biases that creep in the recruitment process specifically in the Information Technology (IT)/Information Technology enabled services(ITes) sector of West Bengal.As per information available on Ministry of Electronics and IT (MeitY), Govt. of India website, it is mentioned that the government has created IT Hubs across the country called as STPI (Software Technology Parks of India). There are nearly 63 STPI centers across the country out of which five centers are in West Bengal. This shows that there is much wider scope for growth in this area for the industry in Bengal (2023) and no such research has been undertaken yet in this area. Hence, the author has focused on the IT/ITes companies of West Bengal.

B. Literature Review

Traditional hiring

The traditional hiring does not really have a fixed model and it generally starts with identification of the vacant post, which will be followed by drawing a job description and then advertised on various platforms internal as well as external. After sourcing the resumes, the same are screened and assessed by subject matter experts as well as HR Personals(2019).The method is time tested and it was felt that the time and cost involved are perhaps the only issues in this system.

However, it was seen that bias is also another of the issues that erodes the sanctity of the whole system.

AI in traditional hiring

NLP or natural language processing is a process wherein the knowledge and information can be gathered using a planning text which comes handy when resumes are being scanned for collecting information and check the suitability of a candidate against a particular profile (2019). However, there are many challenges in adopting AI such as ethical, privacy related and technological. Due to the concerns on privacy and ethics, the adoption of AI becomes an issue. For instance, the data of failed as well as successful candidates is stored without their consent for deducing common markers of failed and successful candidates. This translates into breach into ethical boundaries as well as privacy. The technological issues are dissolved eventually due to rapid industrialization. The author discusses Amazon's experimental AI recruiting tool that as per some reports showed bias against women. In 2014, Amazon asked its engineers to create an AI-based tool that will help in the head-hunting process of the organization (Vishwakarma& Singh, 2023). The engineers then built a tool that automatically rated prospective job seekers on a scale of 1-5 based on the last ten years of training data for the interviews conducted by the company. The managers who used this tool for the period of 2014-15 found that the too was primarily gender biased. After this new automation tools were used for the hiring process. Since this was started as an experiment, the company had legal protection by the Statute of Limitations, 1957, Section 8(6) but it was also reaffirmed that the company needed to have the consent of the applicants to process the sensitive data (2019). Thus, it was concluded that for the AI to be effective in hiring process, the system needs to be thoroughly checked against bias. Another research article in this regard emphasized the aspect of discrimination in the decision-making algorithms. The authors in this particular study created an automated fictitious recruitment test bed, FairCVtest. They fed this tool with bias and the results showed that AI had the capacity to extract information that was sensitive in nature and introduce data biases in unfair ways(2020).

Hiring bias

As per researchers Mark Bendick Jr. and Ana P. Nunes (2012), discrimination that was based on ethnicity, race, national origin, gender, gender orientation, age and other some other characteristics tend to negatively affect the hiring decisions. This discrimination is understood as bias and it affects the hiring decisions in organizations negatively. In another study by researchers, attempt was made to measure ethnic and racial discrimination in hiring in a controlled environment using non-minority and minority research assistants in matched pairs, posing as applicants for a job. In the study it was seen that out of the 149 job applicants in the Washington D.C., African American applicants were given a less favorable treatment as compared to non-minorities who were equally qualified. The study highlighted the fact that it was very critical to understand the cognitive deeprootedness of bias (1994).

Based on the above discussions, hiring bias may be established as the differentiation between out-group and in-group and in the process favoring those who belong to the same group as one's own group (1979). Researchers in Cornell University have worked on the concept of algorithmic assessments for preemployment assessments. They argue that use of algorithmic techniques may result in preventing and identifying unfair behavior. They also argue that the hiring decisions that are made in the organizations are very important and they lead to the development of the key aspects of their lives. For employers too such decisions are critical because they have a need to hire high quality resources within a stipulated period of time and that leads them to use such tools that would optimize or enhance their hiring processes (2020).

Artificial Intelligence: The Game Changer

Decision-making algorithms are rapidly growing in society and there are also major concerns about the aspects of transparency and biasness leading to new sources of discrimination. For instance,certain biometric systems that are used for personal recognition have been shown to discriminate based on social groups or act upon sensitive information. Thus, existence of hiring biases is a given and although AI intervention has helped to reduce the same, further improvements need to be made in the automated universe for fair systems (2020).

Usage of Artificial Intelligence in every sphere of business is an exponentially growing phenomenon which all industries are keen on exploiting and exploring to gain efficiency and also have cost reduction. Some school of thoughts emphasize that AI is capable of replacing humans especially in areas which were earlier limited to human mind. However, a differing school of thought lays emphasis on the fact that the AI instead of replacing the human mind is in fact helping in intelligence augmentation or IA. The human society is functioning in a VUCA(Volatility, Uncertainty, Complexity and Ambiguity) environment and hence the continuous assessment of increased artificial awareness is critical for development. This also means that human beings are continuously seeking to adapt to newer situations and more efficient workflows. However, the human decision making does not always tend to be rational and perfect. Humans thus need to manipulate the environment around them for learning as well as adapting to newer situations. The reason that AI exists is because the human intelligence could envision the same in the 1950s (2020). Alan Turing, a British Mathematician envisioned the idea of intelligent machines (1950). Technological innovations paved the way for further advancement in analytics and big data. AI is considered one of the main inventions of the fourth industrial revolution and it is not only limited to robots, but also technology enabled devices and the ability of programming computers in order to understand the underlying nature of intelligent action and thought. AI was thus defined as "a broad discipline with the goal of creating intelligent machines, as opposed to the natural intelligence that is demonstrated by humans and animals" (2022). Scientists are continuously trying

to extract huge amounts of useful data from large amounts of growing data. Many thinkers such as Alvin Toffler and Peter Drucker have defined the world in its present condition as knowledge economy or information age (2020).

AI is also widely recognized as the ability of a computer to recognize patters and then take further actions based on statistical models on the available data. AI has in fact shown great deal of superior performance in many areas such as Apple's Siri, Amazon's Alexa and Google assistant using pattern and voice recognition algorithms, in health care industries, fault detection, forecasting etc. Here it is also worth mentioning that one of the latest trends in AI is IoT or Internet of Things. As per an estimate by Cisco, there will be around 50 billion devices that will be connected to each other by the year 2020. IoT is in fact enabling the collection of exabytes of voice, text, image and other forms of training data that will feed into machine learning and deep learning models and turn increases the efficiency and accuracy of these models (2011).

Intelligence Augmentation is another concept that needs elaboration here as it talks about a solution that is halfway between entirely automated and entirely human capabilities (2010). Both AI and IA guide us into an area that is based on computational intelligence.

AI Classification

Although there are many classifications of AI, there are two distinctive categories for classification-

First Classification: It is further divided into four sub-classifications:

a) Reactive machines:IBM's Deep Blue is considered one of the best examples of reactive machines that beat chess Grandmaster Garry Kasparov, 1997. The machines have the ability to respond to only a limited set of inputs.

b) Limited-memory machines: These machines have the ability to learn fromthe historical data in addition to having the capabilities of reactive machines. Chatbots and virtual assistants fall in this category.

c) Theory of mind: This type of AI is still work in progress and is unlike the other two type of AI. The interaction happens through thought processes.

d) Self-aware AI- This is also concept that is hypothetical and is ultimate aspiration for all AI. These machines could be comparable to human brain and they are believed to have developed self-awareness.

Second classification- It is a technology-oriented classification which is further divided into three more sub-classifications-

a) Artificial narrow intelligence (ANI): These machines are functioned to do exactly what they have been programmed to do. Therefore, they have a very narrow range of capabilities.

b) Artificial general intelligence (AGI):It is the ability of the AI agent to perceive, learn, function and understand completely like a human being. As compared to ANI, AGI is considered as the strong AI as it is capable of performing general intelligent actions.

c) Artificial super intelligence (ASI): It is considered as the peak of AI. If this level can be achieved in the future, it will eventually change the human life.

From the above classification it is clear that, today's AI at its best can only analyze the data as per some preset rules and patterns. The fact is that one day AI will be able to completely replace AI and will be self-aware is a very far off possibility. However, as we have learnt from the various classifications that some of the AIs have actually made our work easier by removing the manual intervention at every stage and instead replacing it with well-formed patterns and rules.

Hiring in the modern world

Many organizations in the world are still dependent on the traditional hiring methods which include resume screening, psychometric tests and job interviews as already elaborated. However, there is a lot of discussion about the inherent bias that creeps inside the traditional methods and therefore a lot of new generation tools for assessment are quickly gaining grounds. Emerging assessment methods include digital interviews, gamified assessments and candidate data mining. This is totally based on the concept of new talent signals. A very interesting study was done by (2016), wherein the authors tried to understand McKinsey's notion for war for talent. This has further envisaged the vision for the development, validation and application of the innovative tools in order to quantify the human potential. The authors believe that like all other forms of warfare, the war for talent has unleashed a hitherto unforeseen usage of digital tools for identifying fresh talent signals that are also non-traditional signals of potential that is work-related. Therefore, the talent identification activities are rapidly becoming high tech and are leaving the academics guessing about the impact and the ethical constrains for adapting these new tools.

Although traditional methods are fast getting replaced by the high-tech methods, the fact is that most of the new methods are in fact refined versions of the old school methods. For instance, situational judgments test was replaced by gamified assessments, the digital interviews have replaced traditional interviews and various social and professional networks have replaced resume and background verification requirements. The parallels between old and new, has in fact assisted our understanding of the talent identification process. The most critical step in talent identification is answering the two questions of what to assess and how. Here the "what" component will involve defining the key requirements of talent and its all the more critical because it will ultimately help to measure what is being measured. The "how" component will help to create the methods that will ultimately identify individual differences such as tools used by the recruitment

consultants etc. Understanding these two will help to answer the age-old question whom to hire for a particular job. Interestingly, the need to stay connected has resulted in leaving large number of digital footprintseverywhere wherein it is very easy to identify the individual preferences, reputation and values (2016). And even after this, the novel AI tools for talent identification are in their infancy and the number of users using them is relatively low. In spite of this the number of recruitments based professional sites is steadily growing and many startups are offering many such technologies that will disrupt the traditional hiring scenario and offer to profile candidates, screen and also interview them. These startups are basically using, social media analytics and web scraping, digital interviewing and voice profiling, gamification and internal big data and talent analytics. These methods are all based on AI and in the long run are critical for the disruption that they are aiming to achieve in the talent acquisition area (2016).

As per researcher, Kimberly A. Houser (2019), responsible AI can reduce hiring bias and cut the problems in decision-making. Her research was focused on the aspect of understanding the inherent bias in the traditional hiring methods and how mitigating them may actually result in a more heterogeneous organization. She also argued that almost 80% of the leaders were still using personal opinions and gut feelings while taking employment decisions. The researcher also points out that human decision makers are unaware of their biases as well as the inconsistency of the decisions that they make which is also called as noise. Nobel laureate Daniel Kahneman mentions that the human decision making is disrupted with unjustifiable variability and bias (2016).

Digital interviewing and voice profiling

Job interviews are more often than not the final hurdle for getting a job. If technology can be introduced in the same it may make the process much more efficient, cost saving as well as standardized. A lot many companies have used technology enabled interviewing processes via webcam to assess the prospective candidates using prerecorded interview questions. These further result in standardization and also further analysis of new signals such as those generated thorough voice signals (voice generated emotions) and text analytics. For instance, the voice mining helps to compare the candidate's voice with high performing individuals. Here the AI will deftly identify and remove undesirable voice patterns and send only those who fit the requirements to the next round. More such questions that are used are scenario-based questions, work-sample tests and imagebased tests.

The question here is can the digital interviewing and voice profiling be considered as biased in any way? As per a study (2012), the researchers asked 374 raters to review the digital avatars that represented the computer mediated interviews, it was found that those candidates that had a better-looking avatar had better interview ratings. The stereotype influence that exists in normal interviewing process is therefore interrupting the fairness of the hiring process. This

attractiveness bias exists then in case of avatars which can easily be seen in case of non-avatar based digital interviews as well. Therefore, to remove this, some companies have also initiated automatic video transcriptions wherein the profiling is also done based on some keywords that they are supposed to say in an interview (2019).

Social media analytics and Web scraping

The human race is distinctly social in nature and that has resulted in the need to connect and is therefore the driving force that fuels the exponential growth of face book for instance. This has catapulted Facebook to a place of useful research tool. It has been seen through research that many aspects of the Facebook activity such as sharing of quotes, photos, messages convey a lot of accurate information about individual uniqueness. It is estimated that almost 70 percent of the adults are passive job seekers. Companies like Entelo claim that they can use scraping to find out potential job seekers out of 200 million candidate profiles and 50 internet sources and also identify those who are likely to change their jobs within the next 3 months (2016). Another talent signal is the language that the prospective candidates are using in their online activities. Psychologists such as Freud and Rorschach have argued that the language the people use reveal a lot about their personalities. Thus, linguistic analysis is a very good methodology to identify the talent from the web activity. Thus, linguistic profiling and word count (LIWC) application has also shown that in the long run, the LIWC categories tend to correspond to big five personality traits (2011). It is however, still remains to be seen that online biodata, facebook likes and voice profiling can actually improve any work related outcomes in a workplace. How much predictive power they hold remains to be seen.The idea with which the AI is working here is usage of data driven tools in order to avoid toxic workers and even identifying those workers that are prone to quit sooner

(2019).

Big data and workplace analytics

Data generated in house on employee behavior is now being considered another predictor of future behavior. Big data may be used to aggregate the sales staff variables of personality, LinkedIn use and sales activity, etc. to the future revenues and customer ordering data(2016). A big source of information in this particular area is case of open-source rating and peer evaluation. For instance, Glassdoor, a site that helps individuals to rate their employers and the work culture has already garnered reviews for more than 50,000 companies. This data can be retrieved by anyone, anytime. Organizations can actually use this data to analyze the leadership performance and perception of their company outside their premises (2016).

Research Questions

Based on the above discussion and after much deliberation on the above aspects, the author arrived at the conclusion that there is a significant research gap on

whether there is a significant reduction of hiring biases through AI interventions in the IT and ITes companies of West Bengal.

C. Methodology

Since the hiring managers are the first to notice the changes, before and after using AI tools for the hiring process, a group of 10 hiring managers from different IT and ITes companies was interviewed using a structured interview. The hiring managers were all mid-senior level with 7-9 years of experience in hiring. The age group of the hiring managers was between, 33 to 41 years of age and out of the ten that were interviewed, 6 were females and 4 were males. A qualitative research technique was used in which data was collected from these hiring managers of different IT and ITes companies based out of West Bengal. The data collected from the actors in this particular situation reflected on the daily actions, expression of ideas, usage of hiring software such ATS, observations as well as improvement in the quality of hiring after adoption of AI in the hiring process. The hiring managers elaborated that they mostly used inhouse AI software solutions designed and customized specifically for their organization.

The sample size was ten hiring managers from IT/ITes companies of West Bengal and the data was collected through a structured questionnaire. For this study convenience sampling has been opted as the resources were limited and time constraints were there.

D. Ethical Considerations

The ethical considerations that were taken great care of are shared as under:

- The anonymity of the respondents was protected
- The responses to the questions were kept as voluntary
- The consent of the respondents for responding to the questions was given due importance
- The quality of the data was not tampered with.

E. Research Limitations

- The research could have yielded better results if there was less time constraint
- The resources for data gathering with one researcher was limited

F. Data Analysis

The questionnaire was divided into two sets of questions, the threats and benefits. The benefit part questions included those questions that highlighted the advantage

of using AI in reducing the hiring bias and the threat part included those questions that highlighted those questions that affected the hiring process negatively because of bias.Since the questionnaire was structured, top three areas highlighted by the hiring managers have been plotted in graphs to understand the phenomenon.

1) Has introduction of AI in hiring process eased your hiring process?

The answers to this question ranged from mostly yes to yes. The hiring managers felt that it was much easier now that the AI could screen the potential candidates and only shortlist those who were eligible making the process smoother and easier.

Figure 1. Has AI eased the hiring process for the hiring managers based on a structured questionnaire format

2) The advertised job vacancy had specific criteria for selection

In understanding the benefits of the AI based hiring, the efforts were made to understand the specific criteria for selection of the candidates during the screening as well as during interviewing process. The hiring managers felt that sometimes the job advertisements were very specific and they could become discriminatory against certain gender, ethnicities.

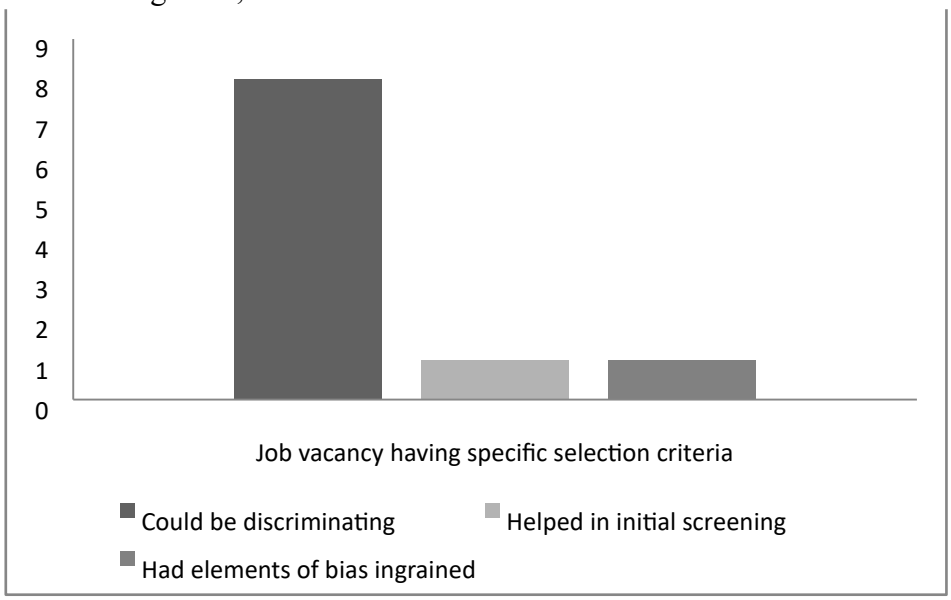

Figure 2. Based on discussion with hiring managers on job advertisements being discriminatory

3) Has AI based hiring helped in better retention of employees?

AI based hiring makes the work of the hiring manager easier and therefore it gives them an advantage of saving time and reducing the turnover as per some of the hiring managers. They felt that AI based hiring definitely leads to better hiring that results in better retention as well.

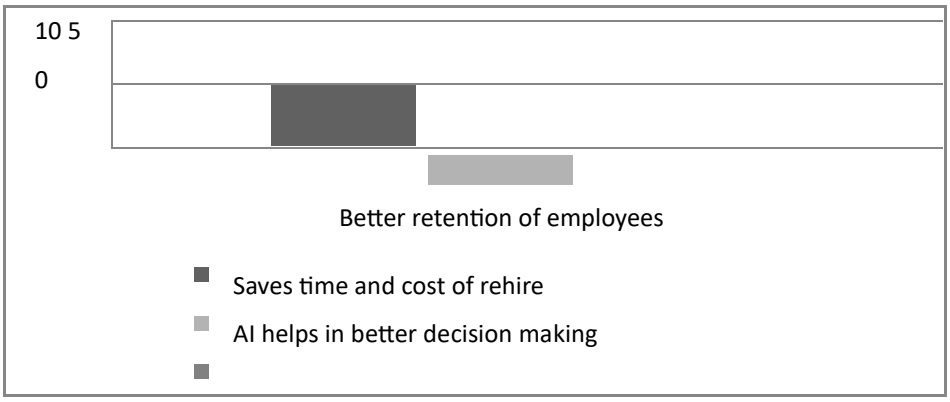

Figure 3. In IT and ITescompanies better retention of employees is very critical

4) As a hiring manager, what has been your greatest learning?

The hiring managers felt that as no two candidates are same it was difficult to judge accurately which candidate will stay and which one will leave. Attrition thus was the greatest problem and therefore they felt the same needed AI intervention.

Figure 4. Greatest learning while hiring

5) Does IT and ITes industry have the advantage of being the frontrunner in introducing AI in the hiring process because it being a high attrition industry?

The hiring managers felt that IT and ITes companies are definitely high attrition industry and therefore they need interventions to check the same. Therefore AI interventions in hiring process is not only critically required it is also much needed for checking the attrition rate.

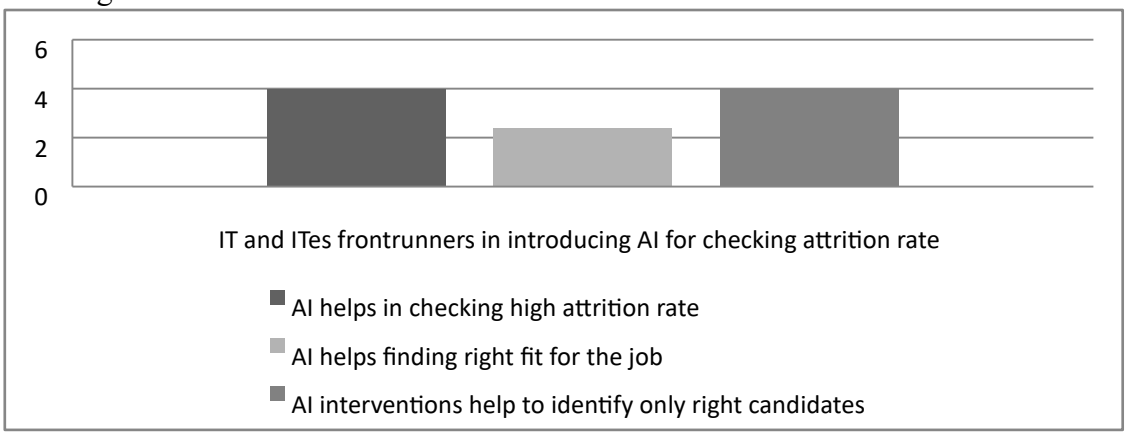

Figure 5. IT and ITes industries need AI interventions because attrition rates in these industries are very high.

Questions that highlighted the threats that were ingrained in the hiring process caused by bias

1. Have you at some point felt that the hiring process is biased against certain gender/ethnic minorities/people belonging to specific region

The hiring managers felt that there was no biasness from their end on the basis of gender or ethnic background or regional specifications. However, some of them also agreed that certain profiles are specific to certain genders such as marketing executives and the companies look for male candidates for such profiles.

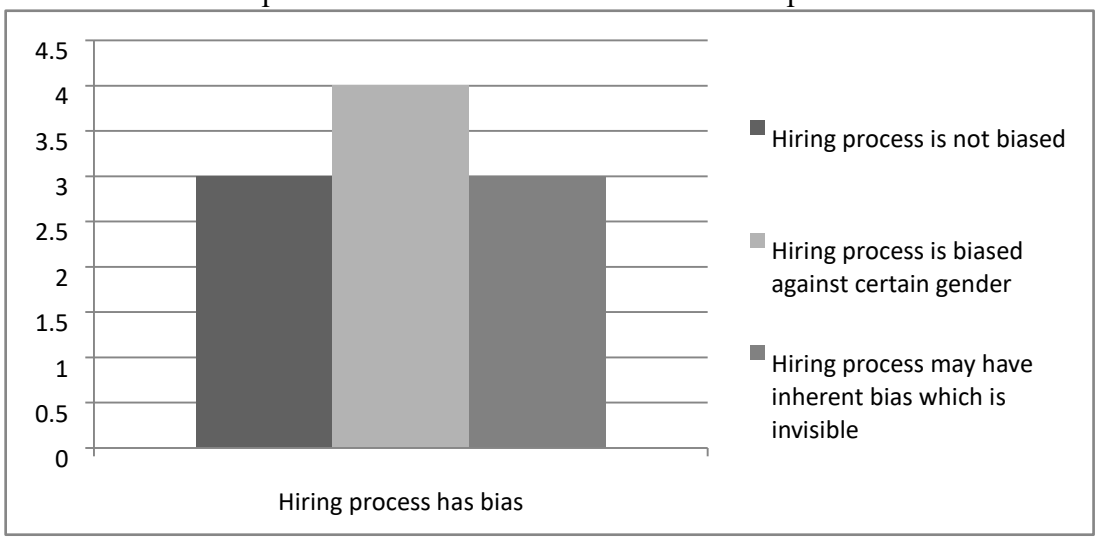

Figure 6. Hiring process has some kind of inherent bias against certain gender/ethnic minorities

2. Have you felt that people from certain parts of India/World are better than others in completing certain tasks at workplace

This question was meant to highlight the inherent unconscious bias that some hiring managers have towards the candidates. The responses to these questions were mixed and people responded that although there was no such bias they openly practised towards certain group of people yet they agreed that there was some difference in the productivity of certain group of people and some groups performed better than others.

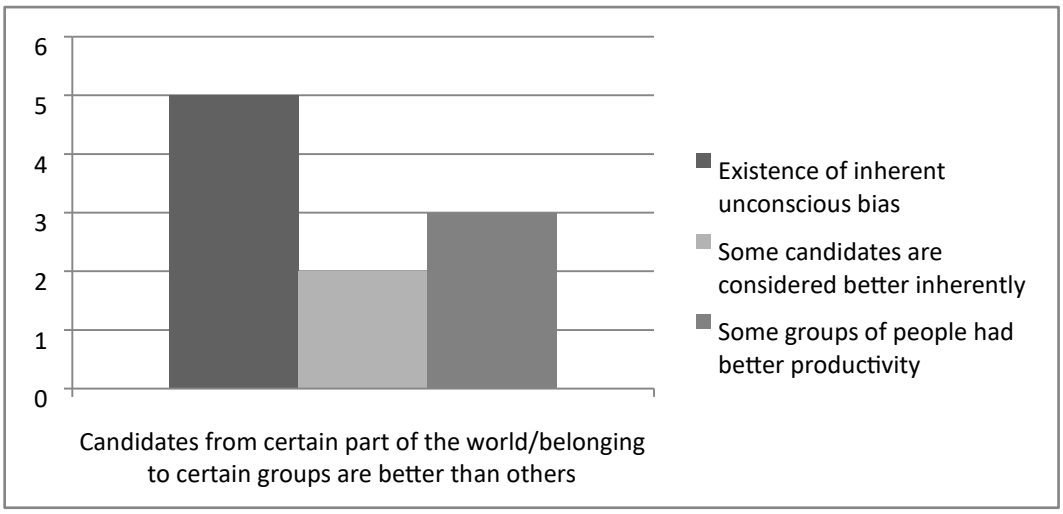

Figure 7.Certain candidates are better than others because they belong to a different group

3. Do you think in the long run the entire hiring process is going to be shifted on the AI based hiring process? Will that be a good step?

The hiring managers felt that it will be many years before this happens and human intervention at critical steps may still be required to make sure that the process is being done right. They agree that depending completely on AI will not be a wise step as it may hinder the processes and in the future it may result in hiring managers being less keen about the whole process.

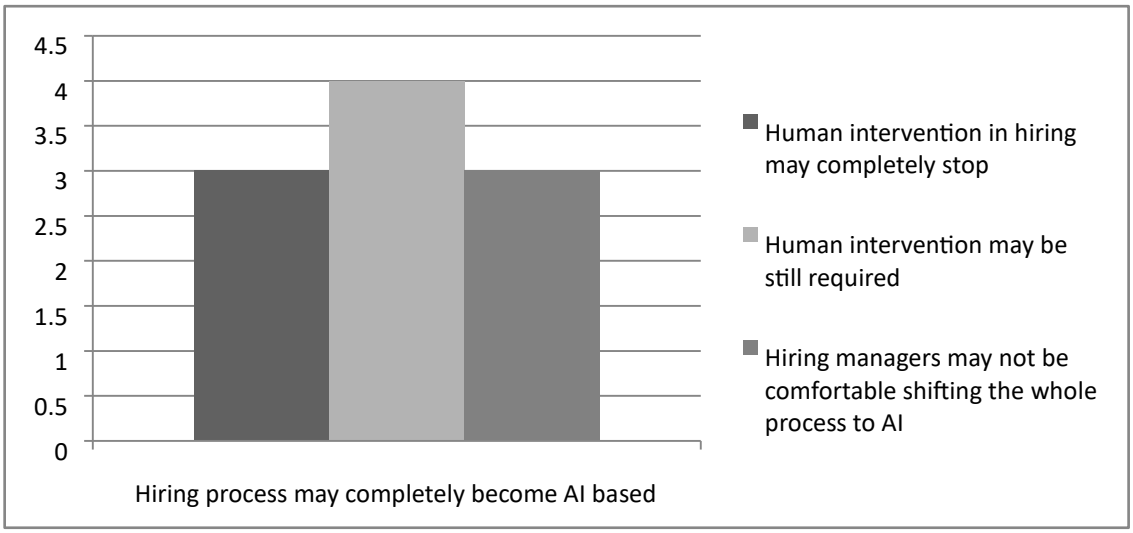

Figure 8.On the question of hiring process may become completely AI base, hiring managers are divided

4. AI has reduced the risk of getting biased. True?

The hiring managers felt that AI has definitely reduced the risk of getting biased as now through various screening measures that use AI, they can chose the right candidate for the right job without fear of getting biased at any stage. The question here is also that now they can shift the blame to AI in case of a wrong hire as AI is intervening at all critical steps during hiring.

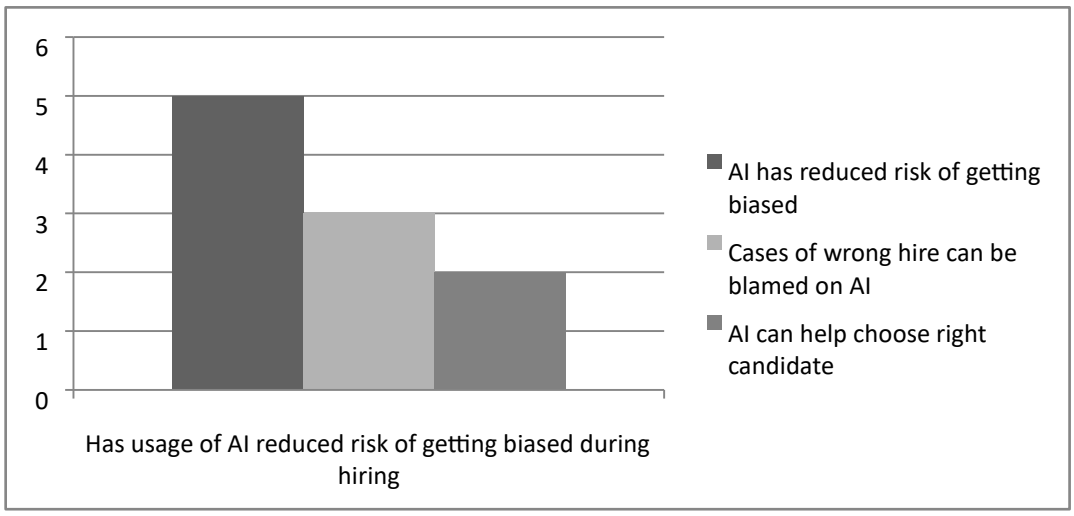

Figure 9. Usage of AI has reduced risk of getting biased during hiring

5. Has AI helped HR practitioners to shift blame on it in case of a bad hire?

As was discussed in the above question, it was seen that due to unreliable hiring processes as well as manual errors a lot of hiring happened with mistakes and that resulted in high rate of turnover. Now this is a challenge for hiring managers as no one wants to hire for the same profile again and again. Some hiring managers felt therefore that AI actually absolved them from the fear of making a wrong hire.

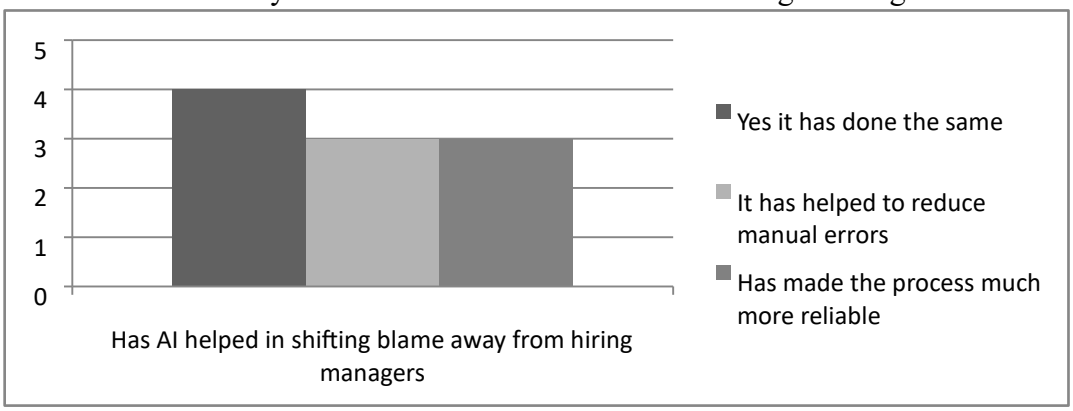

Figure 10. AI has helped hiring managers to shift the blame for wrong hire

The analysis of the above data from the questionnaire has helped us to understand what the hiring managers feel about the whole process of recruitment as well as recruitment biases. The hiring managers have also agreed that usage of the AI tools have actually made the process much more reliable and reduced the manual errors. One or more of the tools such as job aggregators, application tracking system (ATS), screening and skill assessment tools, video interview tools, chatbot and candidate engagement tools, background check tools and onboarding tools have been used by the recruitment managers as was elicited through the discussion with them.

G. Discussion

Keeping the above aspects in mind about the impact of AI on the hiring processes worldwide, it was interesting to study the same impact on the IT and ITes hiring in West Bengal. Thus, the questionnaire was prepared keeping in mind the benefits that the hiring managers felt they had because of the AI based hiring and the threats that non-AI based hiring may lead to. There were five questions in threats and five in benefits and from that the author was able to analyze the topic under discussion that is, hiring biases are reduced using AI interventions.

Questions that were asked to understand the benefits of AI based hiring tried to understand the impact of the same. For instance, the questions like, has introduction of AI in hiring process eased your hiring process was meant to understand if AI based hiring has simplified the process of hiring or not. The attrition rates in IT and ITes companies are generally very high and as per a 2020 Talent Technology Outlook Study which was conducted by SCIKEY which was published in the economic times 2019 December, the attrition rates in IT and ITes

industries has increased by 22 percent (2020). Considering this situation, it is essential that there are interventions in the hiring processes to make sure that right hiring happened. The question such as this, Does IT and ITes industry have the advantage of being the frontrunner in introducing AI in the hiring process because it being a high attrition industry?This question tries to identify the impact of introduction of AI to understand the changes in the same.

Meanwhile there were few questions that tried to explore the threats associated with the hiring process such as Have you at some point felt that the hiring process is biased against certain gender/ethnic minorities/people belonging to specific region? As per Jeffrey Dastin (2022), Amazon an e-commerce giant used artificial tools to give scores to candidates looking for jobs from one star to five-star ratings. The system taught itself that male candidates were more preferable than female candidates. This obviously challenged the expected norms by such open bias. This case shows that since AI is also designed by humans it is also not above bias. This can be dealt with by making the system more efficient and removing the inherent bias that in turn affects the machine learning as well. To the question, Has AI helped HR practitioners to shift blame on it in case of a bad hire, the researcher was trying to understand if using an AI helped the hiring managers to shift blame on AI in case of a bad hire or high turnover. The hiring managers agreed that indeed it helped and they were in a position to take decisions without any fear of repercussions. Another interesting point is if the algorithmic bias in the talent acquisition software is already present then there will be absence of equity in the hiring decisions as the specialists creating the artificial intelligence systems may have that bias ingrained (2020). On the question of Do you think in the long run the entire hiring process is going to be shifted on the AI based hiring process? Will that be a good step? the hiring managers felt that it is a far-off possibility as human intervention at one or other point will be much required in the process of hiring (2022). The authors also found that although AI makes the job of recruitment and selection easier, it is also filled with distrust and cynicism as the hiring managers felt that they could lose their jobs to automation.

H. Conclusion and Recommendation

At present almost 99 percent of the fortune 500 companies are using AI for candidate hiring (2019). The systems are oftentimes based on AI and they allow the HR professionals to deal with extraordinary amounts of data, strict timelines as well as limited number of resources in order to find out the best kind of talent (2019). AI has therefore been defined as "the frontier of computational advancements that references human intelligence in addressing ever more complex decision-making problems" (2021). And basis of this definition we may define AI as those machines that are performing a range of intelligent behavior pattern and cognitive tasks that are commonly associated with human intelligence (2016).

From the above discussion it is clear that although many companies still rely on traditional methods for hiring, a lot many companies are either shifting to AI based hiring initiatives or taking help of companies that are facilitating the hiring process efficiently using AI. But the question here is if the AI devices are helping to remove any kind of hiring bias. As discussed before the discovery of newer talent signals is a never-ending process and new computing powers and analytic tools will keep on emerging and allow predicting behavior in an array of contexts and they will ultimately lead to prediction of performance as well. As per some researchers, there is a substantial amount of gap between what the science prescribes and what the HR practitioners actually do. The accuracy of the talent identification tools is another important factor that HR practitioners may not be much aware about. That recruitment process in any organization can be biased have been agreed upon by various studies. In our research also we have discovered the same as the hiring managers have agreed that bias does creep in the hiring processes and AI tools are helping them to reduce those biases. Yet, there seems to be a hesitation in usage of the AI tools by all because of maybe lack of knowledge about the same or apprehensions about the accuracy.

As discussed before, the "what" to assess and "how" to assess is very critical while using AI in hiring process. The "how" becomes more critical as after using numerous tools to gather the data, the correct interpretation is what will be required (2016). Although a lot of research has already happened in various areas of AI in different parts of the world in context of hiring, the usage of AI in Indian context remains very sketchy.

The hiring in IT and ITes industry of West Bengal that was under study in this article was motivated from the reason that there are very few studies that try to find out the underlying reasons of high attrition rates, wrong hires as well as bias in the hiring process. There are no significant studies undertaken in this area and therefore this was a significant research gap. The author has tried to explore the area as well as share some inferences drawn from the structured interviews conducted on the hiring mangers however, the study has significant scope and can be undertaken in the future with a larger sample size and a scale can also be designed for understanding the phenomenon.

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