



A STUDY ON THE USE OF ARTIFICIAL INTELLIGENCE IN TALENT ACQUISITION, HR & RECRUITMENT AND ITS IMPLICATIONS IN PUBLIC SECTOR

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ABSTRACT

When it comes to acquiring of human asset on public sectors, only thinks comes to our mind is hiring of talented individual in large number and that's the way it has to be because public sector is one of the primary pillars holding the structure of a nations economy. Hence the hiring of the top qualified individuals is done continuously and at rapid pace. The recruiting and talent acquisition department of these public industries has been incorporating cutting-edge AI and ML, autonomous testing, and self-learning algorithms in an effort to improve the current system utilized for managing human capital assets and acquiring the best candidate for each position. Today, every business seeks to employ the most qualified candidates, and the largest IT companies are agreeing to do so. Despite the fast technology advancements and improvement around AI's potential, there are great advancement ongoing with AI's application in the Talent Acquisition process, and many businesses have yet to identify critical AI deployment spots. We have highlighted major areas of AI application in the TA lifecycle, as well as proof as to the value and validity of the technology's use.

I. INTRODUCTION

There has been a significant advancement in corporate management thanks to the introduction of artificial intelligence, which will have a significant effect on the way people do their jobs, particularly in the areas which are particularly working with in talent acquisition and recruitment sector. Technologies that effectively using the AI have a multi facet kind of impact on the way that HRM is carried out. The term "artificial intelligence" refers to the use of technology to perform a job that typically needs a certain degree human intellect to do successfully. In other words, a tool that can be taught to do tasks that can only be performed by a person. The application of artificial intelligence in a way that is both practical and effective has led to an improvement in the accomplishment of the work tasks associated with human resource management. AI has indeed been proved by a number of businesses and organisations to have the potential to contribute to either an improvement in quality of care or a reduction in expenses. It is estimated that during the next twenty years, about fifty percent of all employment will become obsolete or unnecessary, and the healthcare industry is not an exception. Just as essential as developing the appropriate algorithms and data architecture is taking the time to have an understanding of the advantages and drawbacks of the various ways.

Keywords: *Artificial Intelligence, Recruitment, Talent Acquisition, Human Resource, Public Sector*

II. LITERATURE REVIEW

The administration of human resources (HR) and employee recruiting are topics that are investigated in a great deal of study. These research works focus their attention mostly on particular subjects pertaining towards the private sector, whilst research literature pertaining to the public sector is quite lacking. Procedures in the private sector make use of cutting-edge technologies such as evaluation visualisation, chat boxes, data collecting from social platforms (such as LinkedIn, Facebook, and Twitter), and data pools accessed via external channels (Faliagka, 2012). In the public sector, evaluating and recruitment assessment methods should be built on indisputable and common to all applicants' criteria; hence, the social networking sites should be eliminated in order to maintain dependability, meritocracy, equality, openness, and confidentiality of recruitment and assignment processes. (Kulkarni & Che, 2019)

In the field of workforce analytics, machine learning is used to the task of classifying candidates in order to make predictions about whether or not they are qualified for certain job openings. Kulkarni and Che (2019) claimed that the use of AI was very important in talent recruiting, and they came to the conclusion that HR managers should make full use of appropriate machine learning approaches to assist them. A model was developed that provides a framework for talent acquisition. This concept is based on just a performance measure that assesses and monitors the growth of talent through time. The model was built. In that methodology, the profiles of the applicants who turned down a job opportunity was taken into consideration, as were the reasons why they turned down a job position offer, which can be connected to the compensation, the location of the workplace, the specific job position, or the offer of something like a better job opportunity by rivals, among other things. This was possible to determine and predict whether the new hire is inclined to accept or refuse the job offer by using machine learning approach for classification such like decision trees, (SVM), and Naive Bayes. This was accomplished by knowing candidate's qualifications, salaries, and their performance measurement score. Additionally, it was possible to determine if a selected candidate the job will reject the job offer (Deshpande, 2007).

The bulk of research interest in artificial intelligence (AI) has been directed toward its applications in the commercial sector. Research has been done on the effects that artificial intelligence would have on high tech, the automobile sector, financial services, commerce, communication, academia, and tourism, among other fields. On the other hand, there is currently a dearth of empirical study concerning AI inside the public sector. This comes as a surprise given that artificial intelligence (AI) activities inside the public sector have already begun to take place in a variety of public sector fields, including disease monitoring, enforcement agencies, and tax services. (Chui, 2017; Dirican, 2015)

The little amount of empirical study that has been conducted on Intelligence inside the public sector has more or less concentrated on the topic of AI's potential to affect labour dynamics. The use of artificial intelligence in government work has been shown to have impacts in the following four areas: AI can be used in the following ways: designed to relieve, wherein AI did take on mundane tasks and frees up public sector workers to focus on more important tasks; splitting up, in which AI helps to push up a job in to the smaller pieces and tends to take over as many of these as possible, leaving humans to do the remainder of the work; replacing, in which AI carries out the job effectively that was conducted by an individual; and augmenting, in which the AI tech allows workers more productive by complementing one's skills (Eggers, 2017).

It is especially surprising that there are so few empirical research on the effects using AI in public sector when we take into account the distinct characteristics of the difficulties faced by the public sector in comparison to those faced by the private sector. AI is distinct from other forms of automation in that it does not base its judgments on the pre-programmed logic of if-then statements. In this kind of system, the exact same set of input instructions will always create the same set of outputs. Instead, artificial intelligence goes even farther by demonstrating some degree of learnability. Therefore, artificial intelligence is, in theory, an excellent technology to be implemented in the context of the public sector, which is characterised by environments that are in a state of perpetual change and where which was before could not be account for all conceivable scenarios (Russell & Norvig, 2016)

Research is only starting to uncover the many obstacles that will need to be overcome in order for the public sector to successfully use AI. The first significant effect that artificial intelligence is expected to have is on the labour force. According to Susskind and Susskind (2016), positions such as those held by physicians, nurses, managers, and attorneys are more susceptible to being automated, which increases the risk of unemployment. Second, there has been an increased emphasis placed on social norms and ethical problems. It is widely acknowledged and one of the biggest important challenges facing widespread adoption (Begg, 2009) and Implementation is figuring out how to protect individuals' privacy while amassing sufficient amounts of data. Third, there are regulatory difficulties that need to be addressed as well. There is a need for efficient monitoring as well as appropriate legislation and regulations in the many public sectors, such as for example the education and healthcare systems (Gulson & Webb, 2017).

Public healthcare is an area that shows great potential for the use of AI. Despite the modest pace at which it has been adopted, its usage is constantly growing. This is partially because to the potential cost savings that may be made by artificial intelligence is replacing one-on-one interview sitting Infront of each other. It has been hypothesised that the use of AI would probably result in significant changes to the healthcare industry in many respects. This particular application makes use of both a physical as well as a virtual branch. Recent years have seen an increase in the amount of focus placed on research pertaining specifically to the application of AI-based systems to aid medical professionals with in diagnosis of patients. (Hamet & Tremblay, 2017)

III. RESEARCH METHODOLOGY:

Research methodology implies the methods of collecting data which can be secondary and primary data. The types of research design are Exploratory, Descriptive etc. The research design used for the study is Exploratory & Descriptive. The researchers have used secondary data available online. The researchers have used internet to study further about the theoretical background of the title of the study as well as for various other concepts related to the study. The questionnaire sampling approach was used to 102 office-going, postgraduate-educated professionals working in either the public or private sector. There are two sorts of research approaches that may be used to derive conclusions and findings: qualitative and quantitative. In this paper, a qualitative research technique was used to determine the factors that influence AI-based recruiting procedures in the public sector. A qualitative examination technique is useful for comprehending respondents' points of view, identifying important phrases that describe respondents' logics and thoughts or interactions, and determining respondents' motives behind a decision. A qualitative examination refers to an investigation that generates hypothetical and graphical data.

A quantitative examination is one in which the collected data is conveyed and analysed mathematically. In this study, subjective methods are used to provide a better understanding of the issue's structure, and 102 participants were given the questionnaire used in this investigation. In the primary area, respondents were given broad questions on HR practises incorporating AI so that inferences could be drawn from the present perspective of the sample community.

A questionnaire is a compiled list of questions. While using a survey, the responder reads the questions, interprets what is commonly expected, and then registers the replies. In this study, a survey design is used since the subject matter is entirely customer behaviour. The client's inner brain communicates sensations and ideas that must be converted into numbers.

The sample size is determined by the basic characteristics of the population, the kind of information desired from the research, and the budget in issue. For this investigation, 102 respondents have been selected. This number is chosen because these responders are the most qualified in the pool. They have excellent knowledge of the web and its properties. Each responder has a post-graduate degree.

There are two primary sampling techniques: probability sampling and non-probability sampling. With probability testing, also known as irregular testing, every unit of the population has an equal chance of being recalled for the example. Non-likelihood inspection occurs when the selection of the sample is based on human judgement rather than a comprehensive application of the probability hypothesis. For conducting this research project, judgement testing is applied, which is a sort of non-probability in testing, and all respondents have a solid understanding of recruiting and are, thus, the optimum population for this study.

Research Process of the study consists of I. Literature Review, II. Setting of Study Objectives, III. Data / information Collection and Classification, IV. Setting Objective for the study, V. Data Analysis & Findings VI. Discussion and Conclusion of the sub-themes,

IV. OBJECTIVE OF THE STUDY

The Objective of this research are:

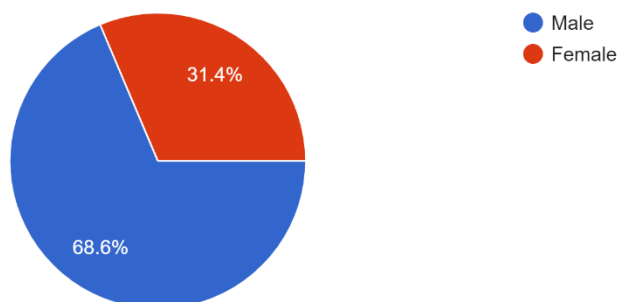
- To Highlight the development in the use AI in talent Acquisition and recruitment in public sector
- To understand the current literature about talent Acquisition and recruitment in public sector and to understand the extent of use and impact of AI on the same.
- To study the implication of AI within public sector on talent Acquisition and recruitment

DATA ANALYSIS AND FINDINGS:

From the survey analysis regarding A Study on The Use and utilisation of Artificial Intelligence in Talent Acquisition, HR & Recruitment and Its Implications in Public Sector, the researcher received 100+ responses from the survey form distributed among the working professionals who are either in working in private sector or else in public sector aged between 18 to 45+ years

2. Gender

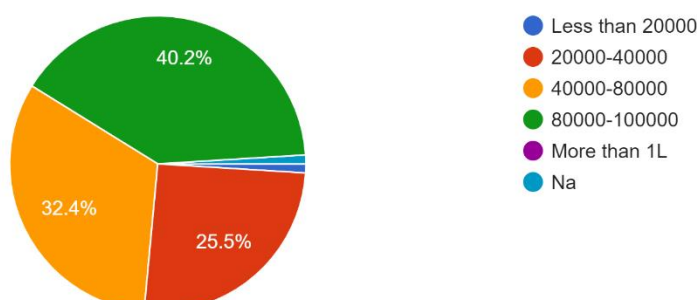
102 responses



The gender for the responses is mixed with different categories such as male and female and in our survey, we found that around 68.6% were the male respondent while other 31.4% were female. Data here interpreted is maximum respondent to survey were male while female respondent were less in number

3. Monthly Income

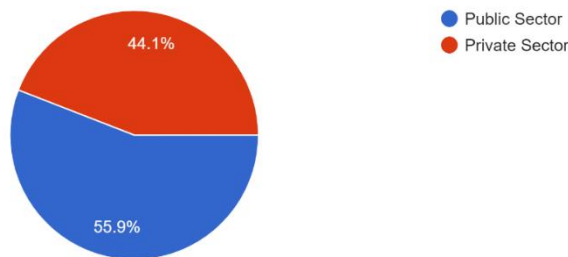
102 responses



Interpretation: Around 1 percent of respondents earn less than Rs20000 per month. While 25.5 percent of respondents earn between Rs20,000 to Rs40,000 per month, the remaining 32.4 percent earn between Rs40,000 to Rs80,000. Also we found that most of the respondent were qualified with a some master degree which helped them boost their salary and around 40.2 percent of respondent were earning between Rs80,000 to Rs 1 Lakh.

4. In which sector of company are you working in right now

102 responses

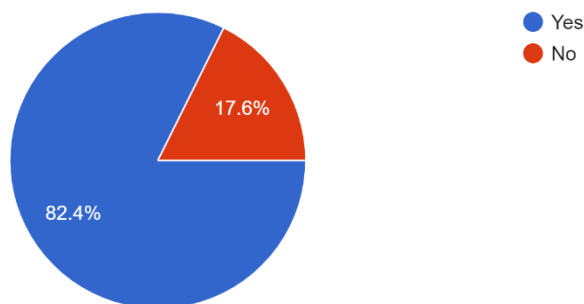


Interpretation: Next in our survey we found out that most if the individuals were working in the public sector and hence the respondent of this survey were the right audience to draw inferences and establish findings about the research done so far.

Around 56 percent of the respondents were working in the public sector while this survey was floated and 44 percent working in private sector

5. Did your Interview process with your current or past employer involved AI in any part of it

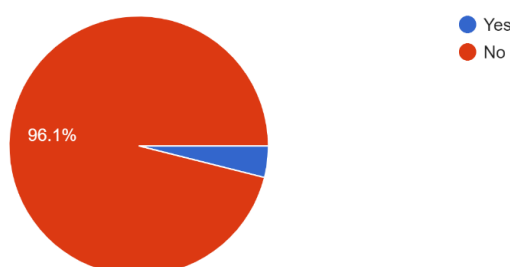
102 responses



Majority of the respondents to the survey agreed that at some point there was AI involved in the interview process and therefore 82.4 percent of the respondent had encountered AI in their interview process while 17.6 percent didn't have any kind of AI in their interview process

6. Did you faced any problem In your AI involved interview Process.

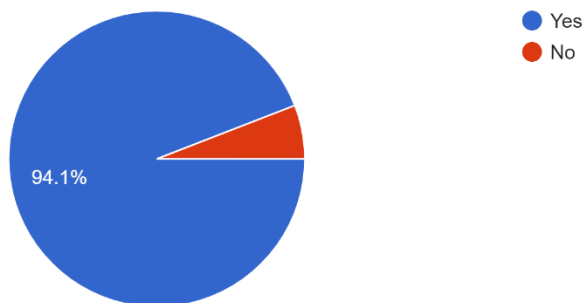
102 responses



Over 96 percent of the responded answered that the individuals didn't encounter any problems in their interview process involving AI that means that the algorithms are properly trained and tested on the give n parameters to make it seamless while a minority of 4 percent may have faced some issues to due external factor

8. Do you think involvement of AI in recruitment process makes it seamless.

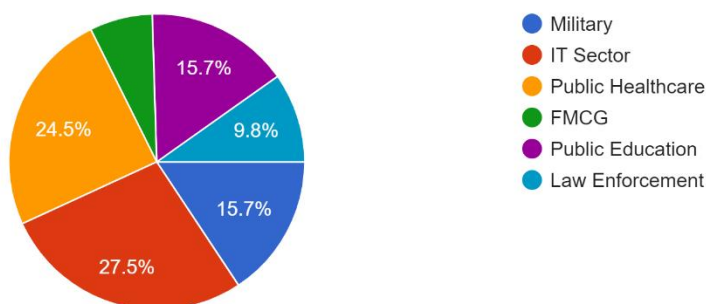
102 responses



Around 94 percent of the response have an opinion that AI is important in talent acquisition and recruitment process in public sector and that makes the process seamless. Human has made the computers but the reverse is not true and hence they exist to make the process seamless and fast and they don't cut down jobs.

9. In which field under public sector the AI involvement needed the most

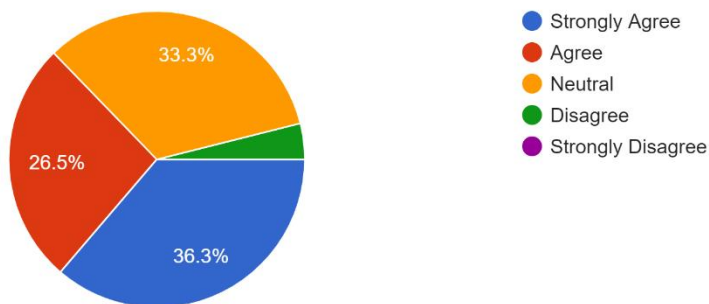
102 responses



According to the above pie chart we can conclude that AI involvement is more in IT sector i.e., 27.5 percent whereas its 24.5 percent in public healthcare which show the importance of AI in healthcare sector. Although the involvement of AI is same in both public education and law enforcement i.e., 15.7 percent and a low involvement in FMCG.

10. Are you get influenced by AI making recruitment decision and Expediting it?

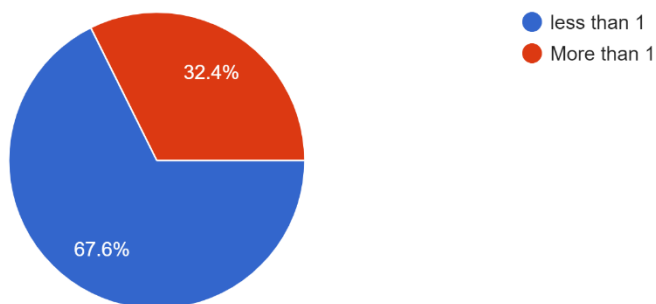
102 responses



The majority of 36.3 percent strongly agrees and 26.5 percent of the survey responses that AI help to find the right person to pick whereas 33.3 percent remain neutral to this and a minimal disagreed with it.

11. How many times approximately have you been in a Recruitment process that involved AI?

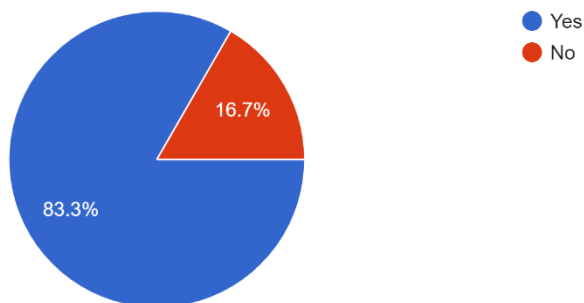
102 responses



Around 67.6 percent of the respondent have gone through the AI recruitment process for more than once which supports that AI is extensively been used in public sector and private sector for 32.4 percent didn't have gone through this procedure.

12. Do you think it is necessary for AI to take the lead in recruitment, TA and HR ?

102 responses



According to the above chart we can conclude that around 83.3 percent responded feels that AI recruitment, TA and HR are plays a crucial role and should take the lead in recruitment and talent acquisition where as 16.7 percent denied for the same.

V. Suggestion:

- the facilitation of intergovernmental councils, networks, and communities with the purpose of promoting systemic approaches

- the computerization of mundane governmental procedures to boost overall productivity
- the application of AI to the process of policymaking in public institutions.
- the strategic management, use, and open up of public data in order to produce individualised and predictive services and to feed artificial intelligence in the commercial sector
- the strengthening of the capabilities of the civil service via education, recruiting, the provision of resources, and financial support
- the testing of artificial intelligence inside the government, as well as the naming of particular AI projects that are either presently being worked on or will be produced in the coming years
- cooperation across industries, including but not limited to via public-private partnerships and made possible through innovation centres and laboratories

VI. DISCUSSION AND CONCLUSION:

In the present day, artificial intelligence is redefining the manner in which firms manage their workforce and build strategies for their human resources in order to boost the level of staff work and enhance productivity. On the other hand, it is very necessary that employers ensure that their employees' interests, not only in their abilities, but also in welcoming new people and matching openings, are aligned. The corporate world of today, dominated by millennials and witnessing a transformation in terms of work-life equilibrium, job satisfaction, and ethics, places a significant emphasis on the use of cutting-edge technology supported by scientific research. The newest generation of workers is self-sufficient and constantly adapting. The most efficient method of communication with them is via the use of technology, such as through a smartphone or programmes for self-service. These significant shifts in the manpower of institutions compel them to implement digital transformation in AI in order to compete, service their clients, and recruit the appropriate workers. In addition, the use of technology in the workplace should enable workers by providing them with access to their job at any time and in any location, in accordance with the new digital era. Due to the fast developments in HR technology, major trends are obviously developing. One of these trends is privatisation, which presents a significant freedom to advance from in the pedagogy of HR programmes were first implemented earlier. With AI technology, we are able to create unique environments for every employee. This gives them a personalised experience that not only encourages individuals to use enterprise channels but also offers them with data same to what they would receive in their handle a variety. As a result, the system recognises them and assists them in enhancing their time spent at work. Learning that continues throughout one's life is going to be very necessary for ensuring the continued prosperity of human resources in the future, particularly in light of the rapid advancements being made in both the field of automation and the use of technology. When it comes to assigning new roles to workers or recruiting individuals in new post, it is not only about supporting the human resources of employees; rather, it is more about ensuring that all employees continuously think about how advances in business and technology influence their professions, as well as the capabilities they need to learn to continue to be successful in the future. Companies have a responsibility to provide a public infrastructure that assists workers in their attempts to acquire new competencies and enhances their capacity to keep up with developments in their industry.

Because of the incorporation of AI into the recruiting process, Practitioners and recruiters have been given the opportunity to make the flow of their recruitment process more convenient and robust by getting rid of all laborious procedures. Now, HR practitioners have more time to concentrate on the critical and tedious aspects of HRM. The incorporation of AI in to HR system of the company has led to the creation of an automatically updated big data repository of candidates. They are able to administer the database that contains the information of millions of people's resources. Tools such as plyometrics may assist human resource professionals in the process of identifying potential individuals for internal recruitments. The conduct of candidates may be evaluated in advance with the use of auto-tech evaluation and video-interview platforms, which can aid with improved decision making. The interview process is made seamless by sending email and mobile notification to the candidate before the interview so that they are well prepared and can check the desktop environment that they will be using for interview to check if there exists any issue. Using and deploying AI plugins such as bots can expedite the process of matching the recruiters with right candidates. One of the most

important things about recruitment is JD and the top companies have the kind of JD that outperform others and hence they are able to hire the best candidates.

It is abundantly evident that artificial intelligence is swiftly reshaping a great deal of people's day-to-day lives, and this reshaping is proceeding at a rate that is exponentially increasing. When it comes to artificial intelligence in the public sector it should be noticed that they can be put to work to achieve crucial objectives in recruitment linked to public healthcare, primary education, national objectives. Hence the training and testing of the AI algorithm should be done in a way that they can outperform the existing system whatsoever. When confronted with ever-increasing complexities and expectations from its inhabitants, communities, and enterprises, governments absolutely need innovation and change of this kind in order to remain relevant. It is possible to include AI into every stage of the process of formulating policies and designing services. As artificial intelligence (AI) and machine learning continue to advance, more administration and procedure jobs will be likely to be automated, which will increase the efficiency of the public sector and frees public servants to concentrate on work that has more of an impact. In addition, governments will have an improved ability to comprehend and make choices inside their own organisations, as well as to anticipate the requirements of the people they serve. When properly executed, automated procedures have the potential to provide the government with assistance in making judgments that are more just and accurate than was previously the case.

The AI popular uprising has been heralded as undoubtedly create to repurpose, augment, and intensify practically all of the tasks that are currently performed by humans. This is similar to how the industrial revolution and the digital revolution each provided ways for machines to utilise, compliment, and enhance the manual labour that was performed by humans. In spite of growing excitement, the vast majority of academics are in agreement what we're seeing now is the spread of technologies that use weak artificial intelligence, as contrasted to strong AI. Strong artificial intelligence (AI) is a term used to describe hypothetical computer systems that have either human or even superhuman levels of intelligence and can imitate the complex human capacity to think and carry out clever tasks such as making moral decisions, using symbolic reasoning, handling social situations, and coming up with new ideas. Systems that are capable of doing tasks that need single human skills, such as visual perception, comprehending contextual, pattern recognition, and coping with complexity, are referred to as having weak artificial intelligence (weak AI) Practical applications are only interested in the more basic type of artificial intelligence (AI), since AI Technology are still thought of as a subject for conjecture and science fiction Our research is on Ai in their early stages, with a particular emphasis on the little-explored topic of AI deployment with in public sector.

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