Project Dissertation

Impact of Artificial Intelligence on the Future of work and HRM

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DECLARATION

I, **Shikha Sharma**, student of MBA Batch 2016-18 of Delhi School of Management, Delhi Technological University, Bawana Road, Delhi-42 declare that the dissertation report on **Impact of Artificial Intelligence on the Future of work and HRM** submitted in partial fulfilment of Degree of Masters of Business Administration is the original work conducted by me.

The information and data given in the report is authentic to the best of my knowledge.

This Report is not being submitted to any other University for award of any other Degree, Diploma and Fellowship.

Shikha Sharma

Place: Delhi

Date:

CERTIFICATE

This is to certify that the dissertation report titled "**Impact of Artificial Intelligence on the Future of work and HRM"**, is a certified bonafide work carried out by Ms. Shikha Sharma of MBA 2016-2018 batch and submitted to Delhi School of Management, Delhi Technological University in partial fulfilment of the requirement for the award of the Degree of Masters of Business Administration.

Signature of Guide

Signature of Head (DSM)

Place:

Date:

ACKNOWLEGEMENT

Firstly, I would like to thank Dr. Shikha N Khera who was my guide and mentor during this project, for providing me the opportunity to do my dissertation under her guidance and expertise.

I also convey my regards to my friends and parents, who provided me with their encouragement and support whenever I needed it.

Lastly, I would like to thank god for giving me the skills and patience because of which this project was made possible.

Shikha Sharma

ABSTRACT

Artificial intelligence (AI) is a term for simulated intelligence in machines. These machines are programmed to "think" like a human and mimic the way a person acts. The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal, although the term can be applied to any machine that exhibits traits associated with a human mind, such as learning and solving problems.

Artificial intelligence is based around the idea that human intelligence can be defined in such exact terms that a machine can mimic it. The goals of artificial intelligence include learning, reasoning and perception, and machines are wired using a cross-disciplinary approach based in mathematics, computer science, linguistics, psychology and more. Some examples of machines with artificial intelligence include computers that play chess, which have been around for years, and self-driving cars, which are a relatively new development.

Artificial intelligence (AI) is barging its way into business. Various studies reveal that firms of all types are harnessing AI to forecast demand, hire workers and deal with customers and AI is at the cusp of altering the way work is done across sectors and businesses. There are apprehensions around how this progress would kill or displace jobs and how reskilling will be inevitable in this new age of work. The intersection of Artificial Intelligence and Human Resources is also a phenomenal development where HR leaders are beginning to pilot AI to deliver greater value to the organization by using chat-bots for recruiting, employee service, employee development and coaching.

This dissertation aims to study the impact of Artificial Intelligence on the transformation of labour market and the changing paradigm of skills due to the merger of this technology with

business. Further, it analyses how AI will also cause changes in the way workers of the future will be managed by evolved HRM practices.

The objective is to understand how AI will change current jobs, impact on the organization of work and skills that will be required to do the enhanced jobs in the age of AI and to also come up with the best possible framework for skill development for the future jobs. Further, to explore how AI will change the face of HRM on various levels.

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1. INTRODUCTION

1.1 Artificial Intelligence (AI)

This idea of Artificial Intelligence was coined by John McCarthy, who did an extensive research on AI during 1955. He believed that learning and intelligence are such domains that can be defined precisely and thus can be fed into a machine to stimulate. On the contrary, the terms ‘artificial intelligence’ and ‘intellectual behaviour’ have not been deliberated upon clearly.

AI constitutes the methodology and activities performed by algorithms that normally need knowledge when performed by people. The term ‘artificial intelligence’ may stand for “studying intelligent problem-solving behaviour and producing intelligent computer systems”.

“Artificial Intelligence (AI) refers to IT systems that sense, comprehend, act and learn”. AI comprises of various advancements through which smart systems sense the world (for example- computer vision, audio processing and sensor processing), dissect and also understand the data (such as, natural language processing), perform decision making or recommend course of actions (for instance, inference engines or expert systems) and gain knowledge from experience. Intelligent systems are programming projects and applications with AI innovation implanted.

Broadly, AI can be put in two categories:

- **Weak AI:** The intelligent system is simply an application for investigating intellectual procedures and after that imbibing that knowledge.
- **Strong AI:** The processes in the framework are savvy processes capable of learning by themselves. Computers can be made capable of self-learning by utilizing right programming help so they can improve their own behaviour based on their previous encounters, missteps and learnings from them. For example- automatic networking with other machines

Economic fields of Artificial Intelligence

On the basis of economic uses, AI can be partitioned into four classifications:

- **Deep learning:** It is a high level of machine learning where system tries to emulate data abstracts and algorithms encoded in it. Unlike human specialists, these frameworks can remain associated constantly. Regardless of whether one machine submits an error, other associated frameworks will profit by this and will evade repeating a similar mistake.

- **Robotic Process Automation (RPA):** Since the beginning of mechanization, machines employed in industries have been substituting employees as a result of the movement in innovation. Machines can play out a similar assignment with more precision and less cost.

- **Dematerialisation:** With inventions like automatic programmed information recording and data processing, traditional 'back office' deeds are becoming extinct. Autonomous softwares can now accumulate crucial information and disseminate it to the employees. Also, dematerialisation is causing the transformation of the traditional physical products into softwares/applications, for example, substitution of CDs or DVDs by streaming applications. The adaption of paper based event tickets, travel tickets or hard cash in digital property is also an increasingly popular phenomenon.

- **Autonomous driving:** Smart vehicles are being designed that are self-reliant without human assistance using sensors and smart self-learning algorithms. Drivers are consequently, at the danger of becoming outdated. The same applies to delivery based jobs and postal bearers etc. as the delivery may be carried out by delivery drones in the future (already begun at organizations like Amazon).

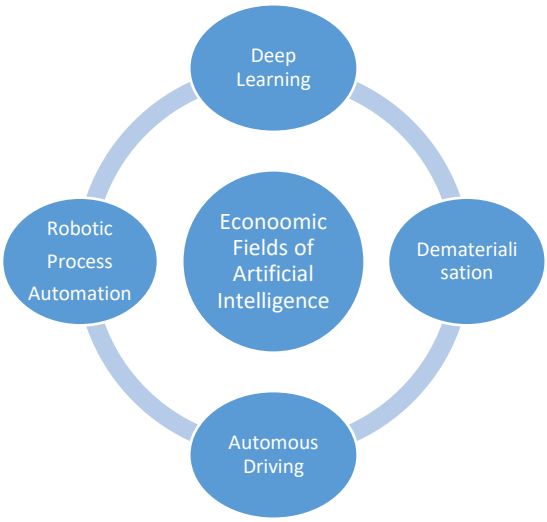

Figure 1: Economic fields of Artificial Intelligence (Compiled by the author)

1.2 Advantages of automation and intelligent machines

- Predominantly in the industries of developed countries (countries with high labour cost), automation and use of production robots causes significant savings with regard to the cost of labour and products. A production robot might thus cost cheaper than a worker in China. Another characteristic is that robots do not fall sick, have children or go on strikes and are not entitled to annual leaves.
- An intelligent machine need not rely on outside components and can work unfailingly and constantly, 24/7, and it can work in danger zones. As an implication, its accuracy is greater than that of a human, and it cannot be side-tracked either by fatigue or by other external circumstances
- While making crucial decisions, intelligent systems can be governed by unprejudiced standards, so decisions can be made practically, on the basis of facts and data. Productivity expansions have so far always led to an upgrading of living circumstances for everybody. The same applies for intelligent machines.
- The major advantage for employees is that the burden of labour-intensive may reduce for them; tedious, dull work can be done via self-ruling frameworks. The same is appropriate for typical back-end activities in the service sector: frameworks can be designed to gather information naturally, transfer data from one system to another, and find resolutions for problems. Once an interface between two systems is set up, manual intervention to enter data is not necessary.

- Apart from supporting functions, intelligent machines can be designed with life-saving capabilities as well. For example, robots used in medical diagnostics or inspection robots. These must be designed with high accuracy to avoid any accidents and to have best results.

1.3 Artificial Intelligence and HRM

As many of the administrative functions of HR are based on human understanding and not facts or data, there is a huge scope to improve decision making in HR. It is sure that AI in HR can possibly enhance a significant number of administrative decisions and make HR a more strategic function. Some examples of the same are:

- **Recruiting:** It is one of the first functions in HR to apply AI technologies as multiple solutions have already been built for recruiting. For example, AI-based chat systems that can communicate with candidates and more efficiently screen people. This allows recruiters to focus on more strategic functions such as employer branding, candidate management etc.
- **Learning:** One needs to constantly learn and upgrade skills in order to stay relevant in work today. Smart applications have come up that can intelligently recommend videos or learning programs based on your job role, experience and interests. Learning programs are also becoming more and more customised to suit the needs of the learner
- **Leadership:** Algorithms can be designed that to evaluate characteristics of high-performing leaders based on their performance history and related data. On the basis of the same, leaders are offered personalized coaching and performance improvement plans.
- **Interviews:** A lot of companies today prefer their first round of candidate interaction as video interviews. These videos are then analysed by AI to gauge the effectiveness of employees along various parameters.
- **Sourcing:** Sourcing is the process of finding suitable candidates for a job role. Now algorithms can search vast internet database to match a candidate's qualifications with job role requirements and offer suggestions saving cost and time.
- **Career Management:** Tracking employees' progression journey on various metrics and then feeding those metrics to AI applications to develop customised career management plans for employees.

1.4 Objective of the Study

1.4.1 Primary Objectives

To analyse:

1. New job structures that will be developed in the age of AI- Jobs to be eliminated, Jobs in demand and enhanced job-roles.
2. Impact on the organisation of work and working environment
3. Skills required to flourish in the AI driven work culture.
4. Impact of AI on managing the human resources in an organization.

2. LITERATURE REVIEW

2.1. Defining Artificial Intelligence

The term "Artificial Intelligence" was utilized without precedent at the Dartmouth Conference wherein John McCarthy of the Massachusetts Institute of Technology characterized AI as science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable (Merrill Lynch, 2016). According to him, no convincing definition of intelligence exists that is independent of human intelligence because "we cannot yet characterize in general what kinds of computational procedures we want to call intelligent." Another definition, provided by Marvin Minsky in 1968 defines AI as the process of enabling machines to do those functions that usually require human intelligence.

A review of literature offers following definitions for AI:

- "The branch of computer science that is concerned with the automation of intelligent behaviour" (Luger and Stublefield, 1993).
- AI allows creating intelligent machines that can understand its surroundings and respond to it. Under this definition, AI is believed to be a collective science of multiple technologies such as computer vision, speech processing, natural processing, reasoning, knowledge representation, learning, and robotics (Stuart Russell and Peter Norvig, 2002).
- In Artificial Intelligence: Foundations of Computational Agents (David Poole and Alan Mackworth, 2010) AI was explained as "the field that studies the synthesis and analysis of computational agents that act intelligently".

2.2 Understanding AI Technologies

Under the wide scope of AI, numerous dependent technologies have also created over the years. Below are a few definitions for the different focus technologies developed over the years and their current market share. (Merrill Lynch, 2016)

- **Machine Learning (ML) –** uses computer algorithms based on mathematical models using probability to make assumptions and can make predictions about similar data sets.
- **Cognitive Computing –** builds upon ML using large data sets with the goal to simulate human thought process and predictive decisions. Training the systems tends to utilize human curation.
- **Deep Learning –** builds on ML using neural nets to make predictive analysis. The use of neural nets is what is differentiating Deep Learning from Cognitive Computing right now. Deep Learning is also helping improve image and speech recognition.
- **Predictive application programming interfaces (APIs) –** A predictive API basically uses AI to provide a predictive output (from a standardized set of outputs), when you have data sets.
- **Natural Language Processing (NLP) –** programming computers to understand written and spoken language just like humans, along with reasoning and context, and finally produce speech and writing. Many machine learning companies use NLP for training on unstructured data
- **Image Recognition –** recognizing picture and objects as humans, as well patterns in visually represented data, which may not be apparent.
- **Speech Recognition –** converting spoken language to data sets that can be processed by NLP.

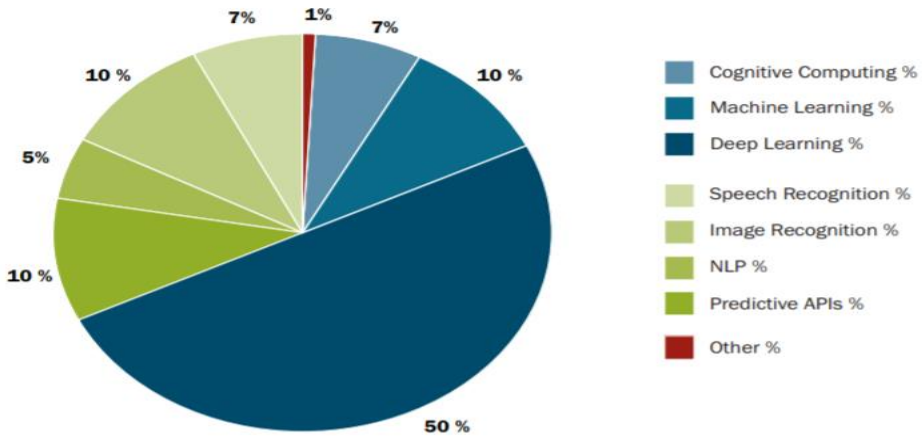

Figure 2: Technology-wise Revenue – 2015 (Source: Tractica)

2.3 Industrial Scope of AI

AI is a powerful force whose impact will be felt on customers, organizations, and governments in the world. As per experts, about a third of current professions would be performable by machines in the coming decade (Christoffer O. Hernces, 2015)

Different sectors where the impact could be felt are:

A. Transportation and Manufacturing

One of the earliest applications of AI in industries has been driverless or autonomous cars. In future, this technology would become extendible to public transportation, delivery drivers, and more. The obvious advantages are: probability of decreased accidents, safe driving on roads, and reduced costs. (Connie Chan, 2015) Manufacturing has been the earliest adopter of various technologies including AI for production and warehouse management.

B. Education

AI can be a revolutionary technology for EdTech where students can be offered customized and need based learning solutions by analysing their information. (Nishit Desai, 2018)

C. Defence and Security

Countries like Russia are developing humanoid military robots who will replace battlefield soldiers thus, helping save many precious lives and offering assistance to human soldiers. (news.vice.com)

D. Healthcare

As per CB Insights, 2017- healthcare industry has observed highest rate of adoption for AI. Technology giants like Google and IBM are also focusing on the industry. For example- IBM's Watson is currently working on oncology research, and drug development.

2.4 Navigating the future of work

Based on a research (John Hagel, Jeff Schwartz, and Josh Bersin, 2017) three factors are said to be responsible for impacting future of work and the future workforce:

Technology. As being discussed in this paper, future technologies such as AI and others (Augmented Reality, Block chain, Virtual Reality etc.) are largely shaping the way work is done by employees.

Demographics. With factors like diversity, increasing life expectancy, globalization of workforce etc., Demographic changes are impacting the composition of the global work force

The power of pull. Due to emerging digital technologies and changes in policies, individuals have got the power to find and access people and resources when and as needed.

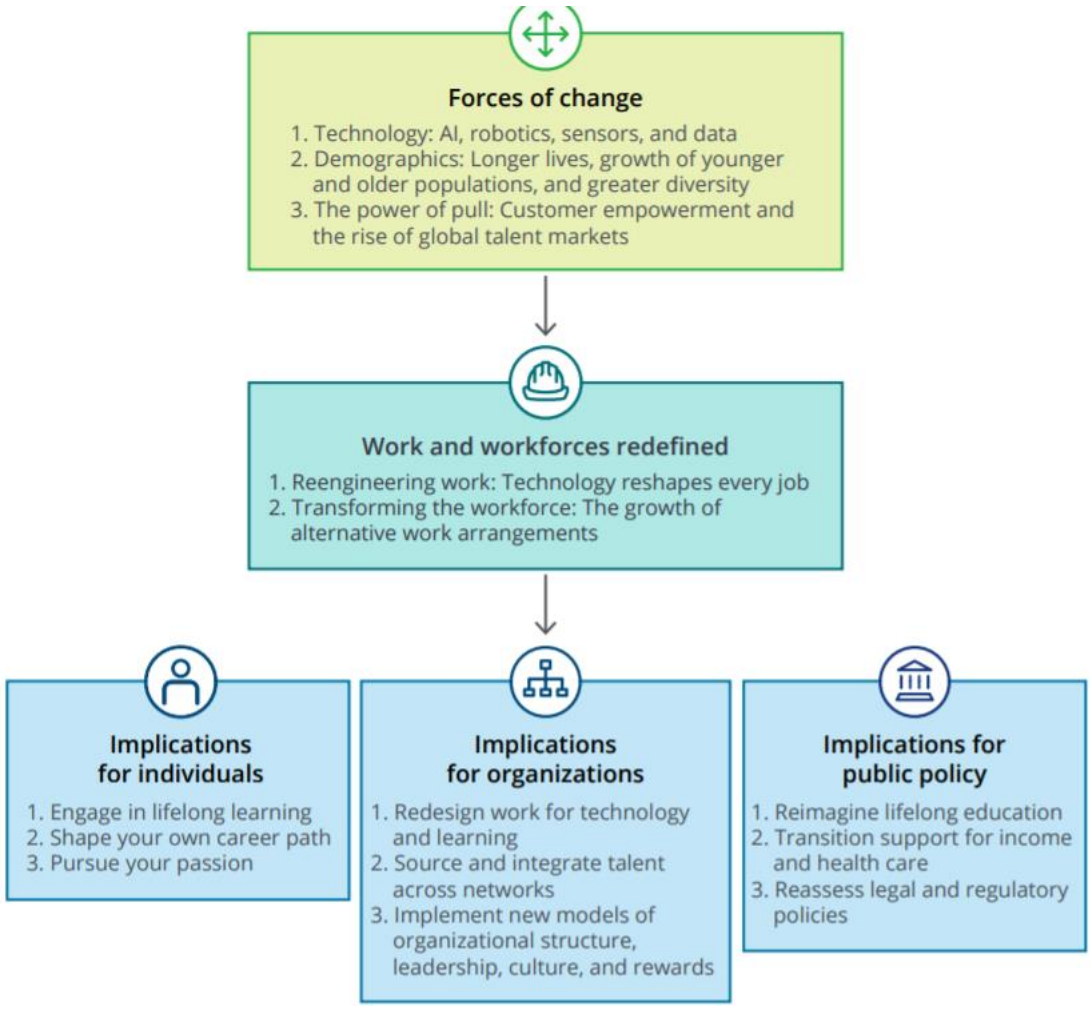

Figure 3: Framework for understanding the future of work (Source: Deloitte University Press)

2.5 Changing Landscape of Employment

After the identification of above mentioned three factors shaping the future of work, it is important to understand what will be the scenario where jobs are automated and machines become smarter. Despite popular belief, mass unemployment will not be a resultant however a massive makeover of jobs seems likely. (KPMG, 2016)

Key trends will be as follows:

- **Technology reshapes every job:** A wide scope of white-collar and knowledge-worker jobs such as HR staff, legal staff, and even salespeople and marketers are defenceless against disturbance by robots and AI. (John Hagel, Jeff Schwartz, and Josh Bersin, 2017). A more prominent chance to upgrade efficiency may lie in re-examining and rethinking work around tackling business issues, providing new services, and achieving new levels of productivity and worker satisfaction and passion. (Evans-Greenwood, Lewis, and Guszcza, 2017)
- **Rise of more social jobs:** Research recommends that in excess of 30 percent of lucrative new employments will be social and "basically human" in nature (Deloitte, 2016). In this view, employers should become much more focused on exploring opportunities to create work that exploits particularly human capacities, for example, interest, creative ability, imagination, and social and passionate knowledge.
- **Alternative work arrangements:** Innovation is changing more than the way jobs are done—it's changing the way organizations discover work. Numerous worldwide organizations as of now effectively utilize crowdsourcing platforms to source new thoughts, take care of issues, and plan complex frameworks. (John Hagel, Jeff Schwartz, and Josh Bersin, 2017)
- **Lifelong Learning and skill development:** As rapid technological and marketplace changes contract the valuable life expectancy of skills, specialists should move from gaining particular aptitudes and certifications to seeking after persevering and basic abilities for long lasting learning. (John Hagel, Jeff Schwartz, and Josh Bersin, 2017)

2.6 Role of AI in HR:

On the basis of a research (HRPA Member Survey, 2017), following are the top 4 challenges AI can assist HR with:

- Lessening amount of time HR Professionals spend on administrative activities
- Recruiting and retention
- Employee retention
- Reducing bias in HR decision making

Administrative Tasks: As companies begin to recognize that a business's success is highly dependent on its people, HR leaders are increasingly expected to contribute to strategic planning on an organizational level. In a survey of its members, the HRPA found that today's companies use AI for administration of benefits (18%) and administrative support (18%), while 24% of respondents believed that AI can assist with reducing the amount of time HR professionals spend on administrative tasks.

Recruiting: A natural avenue for leveraging analytics in human resources is for recruitment and selection of staff. In a survey of its members, the HRPA found that companies mostly use AI for recruitment (43%). AI provides solutions in this area primarily by reducing flawed logic and assessing soft skills.

Reducing Bias: Even when employers strive to be inclusive, they may subconsciously lean toward candidates who are most like them. This phenomenon is called "unconscious bias," and is just that, unconscious. In a survey of HRPA members, 12% of respondents indicated that 'embedded bias in algorithms'' was the primary aspect of AI they were most concerned about. Though AI applications aid in reducing bias, they can inherit the bias of their creators according to a recent Princeton University study (Hadhazy, Adam, 2017)

Employee Retention: Smarter algorithms can help in early identification of flight risk employees, build career maps for employees based on their interests and past history and thus provide better retention opportunities.

3. RESEARCH METHODOLOGY

3.1. Research Design

This study aims at conducting an analysis of the impact of Artificial Intelligence on the future of work and HRM function. Currently, Artificial Intelligence has become an increasingly popular technology for business. AI is being employed across industries to forecast demand, recruit employees as well as for customer services. As a result, people are fretting that AI would cause mass unemployment without leaving much work for humans to do, thus, it is imperative to understand how AI will transform jobs and their nature- which jobs will cease to exist, which will change drastically and which jobs would evolve in nature. A study involving a decent number of participants in order to gather data on future is therefore difficult to conduct at the moment. For the purpose of this study, data about various projections needed to be gathered. Therefore, a qualitative research involving secondary data has been conducted to understand the following:

1. New job structures that will be developed in the age of AI- Jobs to be eliminated, Jobs in demand and enhanced job-roles.
2. Impact on the organisation of work and working environment
3. Skills required to flourish in the AI driven work culture.
4. Impact of AI on managing the human resources in an organization.

An exploratory study was first done to understand the context of changes in workplace in regards with Artificial Intelligence enabled future which led to the development of above mentioned objectives. A descriptive study was followed up to analyse the objectives in detail and come up with recommendations and conclusions on the same.

3.2. Data Collection

For the purpose of understanding the above mentioned objectives, an exploratory study was followed with a descriptive research on authentic studies, research papers and articles by various consulting firms, organisations and HR leaders.

3.3. Data Analysis Techniques

Qualitative analysis has been performed on secondary data collected from various researches to develop non-empirical frameworks to understand the above mentioned objectives.

Conclusions are based on the understanding developed from these frameworks and recommendations of various studied materials.

4. ANALYSIS, DISCUSSION AND CONCLUSION

4.1 New Job-structures in the age of AI

Recently, a survey by Pew Research Center revealed that (Frey and Osborne, 2013), 65 percent of US employees anticipate that within 50 years a robot or an intelligent machine might replace them at work. Some experts do not agree on this. Others believe that, due to digitization and automation, many employees whose employments are at high risk won't be substituted totally, regardless of whether the specialized enhancements would allow a substitution.

Thus, it is imperative to understand different Job structures that will emerge with the rise of Artificial Intelligence.

Jobs to be eliminated:

Based on the various research studies and analysis, it is conspicuous that there are going to be certain jobs that possess high risk of elimination due to their administrative nature and replaceable technologies available in the market already. However, experts suggest that this ***should not be misunderstood as a loss of employment*** as the elimination of these jobs will free up people to move towards knowledge based, more social jobs and eventually create space for more meaningful jobs.

Following are the possible areas of job elimination:

- **Administrative management work:** Managers today spend a lot of their time in administrative tasks that can be easily automated. Automation of various administrative coordination and control tasks, such as scheduling, resource allocation and reporting can leave more time for managers to focus on strategic work.
- **High routine occupations:** Jobs that might get completely extinct in some decades from now are, for example, clerks or data entry jobs. Given the high level of routine in their nature, these jobs can be easily automated by intelligent machines. These employees would rather engage in more analytical work to augment work capabilities.

- **Simple Physical/Manual work:** The sort of basic work that normally requires physical quality will be progressively, however never completely, performed by machines. The central factor will be the level of routine. It is perceived that even in low-work cost nations, for example, China, conventional production line employees are consistently being replaced by robots.

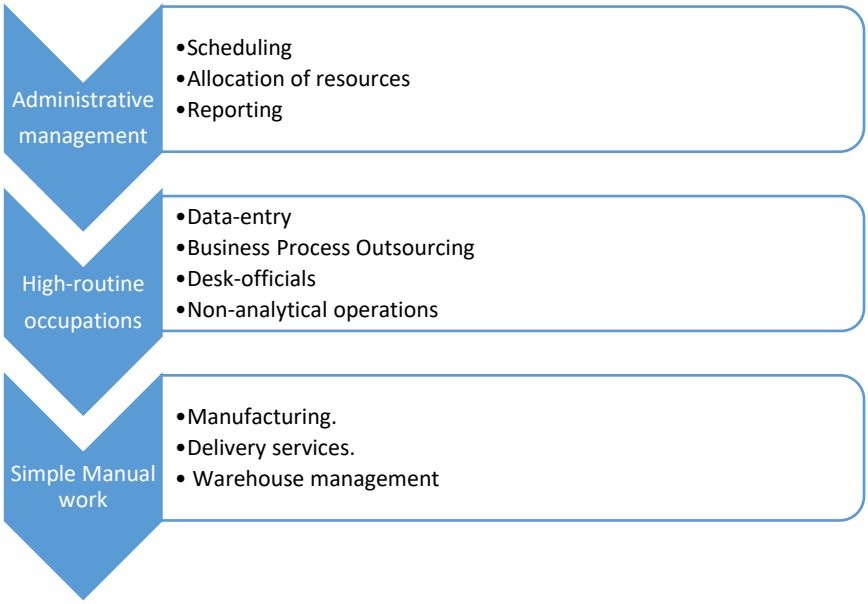

Figure 4: Jobs to be eliminated (compiled by the author)

Enhanced Job roles

There is no qualm that advancements like Natural Language Processing and machine learning are increasingly capable of performing a narrow range of routine tasks involving reading comprehension, speech recognition, speaking and inductive reasoning , for instance but for most parts they will aid professionals to do their jobs better, free them up from mundane work and allow them to focus on work with purpose and greater impact.

Some evolved job roles could be as follows:

Managers of the future: In future, executives will not be required to focus a lot on routine work, rather solving problems and collaborate, focusing on strategy and innovation and fostering people and communities.

Enhanced Digital skills at all levels: Since technology is at doors to free up your time and allow you to focus on better tasks at all levels would mean the digital skills must be required by executives and employees at all levels to make the best use of it and work seamlessly.

Jobs in Demand.

IT and Science

IT and science employments, in particular, and additionally media science and humanistic callings, will principally profit by the upsurge in ventures and the associated development in the space of Industry 4.0.

Education and Training

The Education and Training sector contains not only schools, universities and vocational trainings, but in particular, chances of further and advanced training for adults as the demand to repetitively raise your skills will flourish.

Humanities, Social Science, Media and Arts

Creative occupations have been in high demand in all fields during recent times, and employees in these professions are not likely to be replaced by machines in the future either.

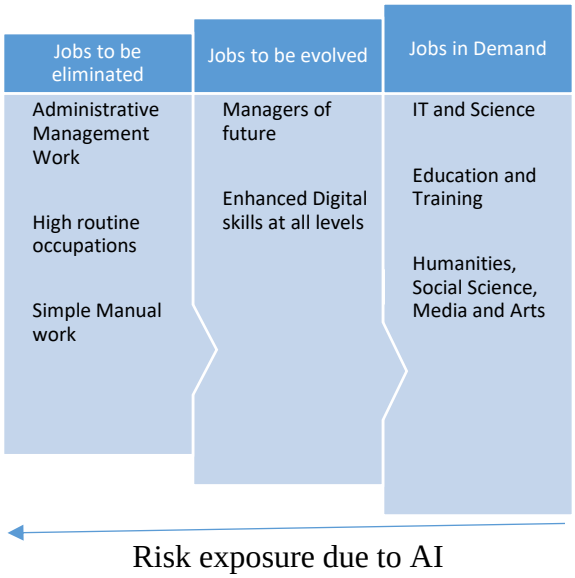

Figure 5: Changes in Jobs due to AI (compiled by the author)

4.2 Impact on the organisation of work and working environment

Emerging structures in the organization

Not only job characteristics but the way jobs are organized in companies will see certain transformations such as:

1. In-house structure

In the future, aside from the traditional setup of an organization where there are functional divisions such as sales, HR, production, supply chain, research and development (R&D) and finance, it will be the IT office that will end up being an incorporating power. Under certain environments, this might require internal reorganisation, to integrate data analysts with each team but a separate team of IT specialists. Thus, it may infer more integration than fragmentation and hierarchies.

2. Gig-economy

A rise in the number of freelancers and contractual employees is distinctive for the new generation of employees. With growing need for assignment based work and less requirement for full time generalists, the gig economy seems to be an inevitable force in future. 'Work on-demand via apps' have emerged as networking platforms to connect employees with employers on need basis.

3. Virtual teams

A virtual team is defined as a "group of people who work autonomously with shared purpose across organization boundaries, using technology to connect and collaborate with each other".

Changes in work-environment

Human-Robot Partnership

1. Collaboration: Robots are effectively performing assistive capacities and cooperating with people. Be that as it may, a lone machine time appears to be far-fetched. This will be especially indispensable in specific segments, for example, Healthcare. Many people might not agree to risk lives by being treated by a robot, thus, in practice it won't be likely to have hospitals without nursing humans in the future. However, robots can be assistive back-end force.

2. Streamlining the work of employees: Assistive intelligent machines can mitigate human specialists from overwhelmingly strenuous and tedious assignments, giving them more opportunity for key errands.

3. Better incorporation of older and disabled people: Helping robots and savvy machines can likewise be valuable to incorporate old or debilitated individuals in work. Robots composed with exceptional attributes can encourage not just a superior incorporation into the particular occupation, but also the prevention of several employees holding a crucial position from early retirement.

Evolution of intelligent machines and their functions

The changes in the organization structure will vary along with adoption and evolution of AI in work place where the three major roles assumed by it in hierarchical order will be:

- Assistant: Supporting capabilities
- Advisor: AI-Human partnership
- Actor: Decision making capabilities.

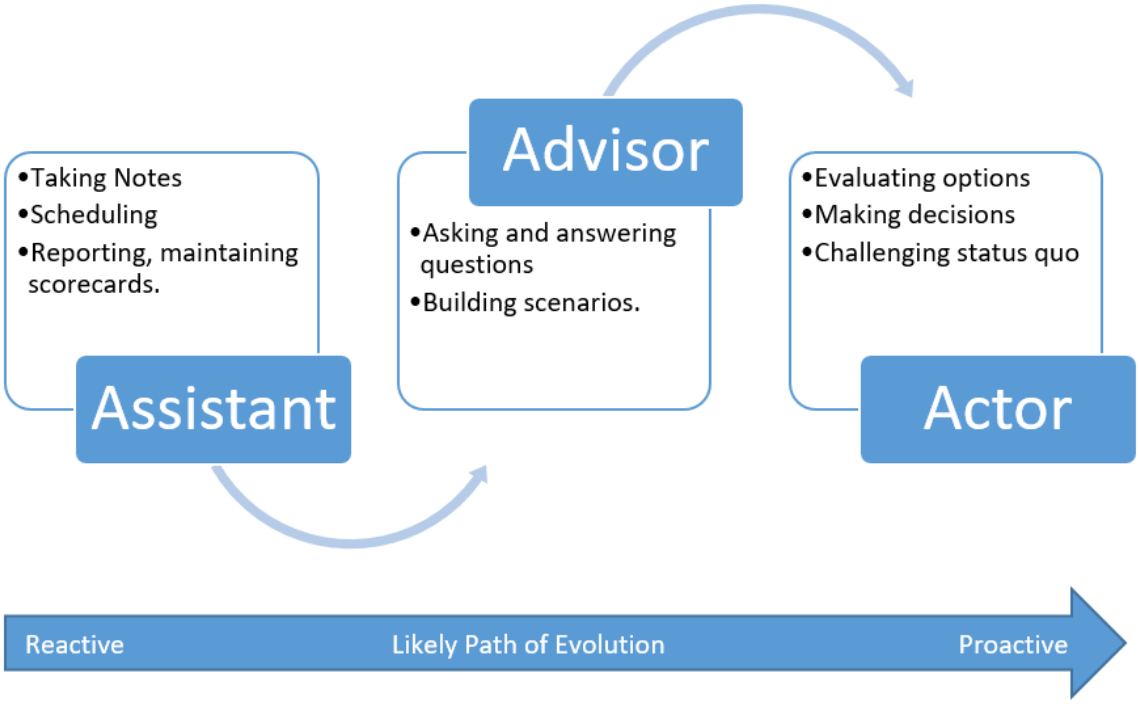

Figure 6: Evolution and adoption of AI in work (Compiled by author)

4.3 Skills required to flourish in the AI driven work culture

Human Advantage

With AI taking on more rule based tasks, Human workers will be tasked with unleashing skills like experimentation and collaboration. Thus, the creative and social intelligence trait of human workers will become important assets for the organizations. Both forms of intelligence give humans an inherent upper hand over AI.

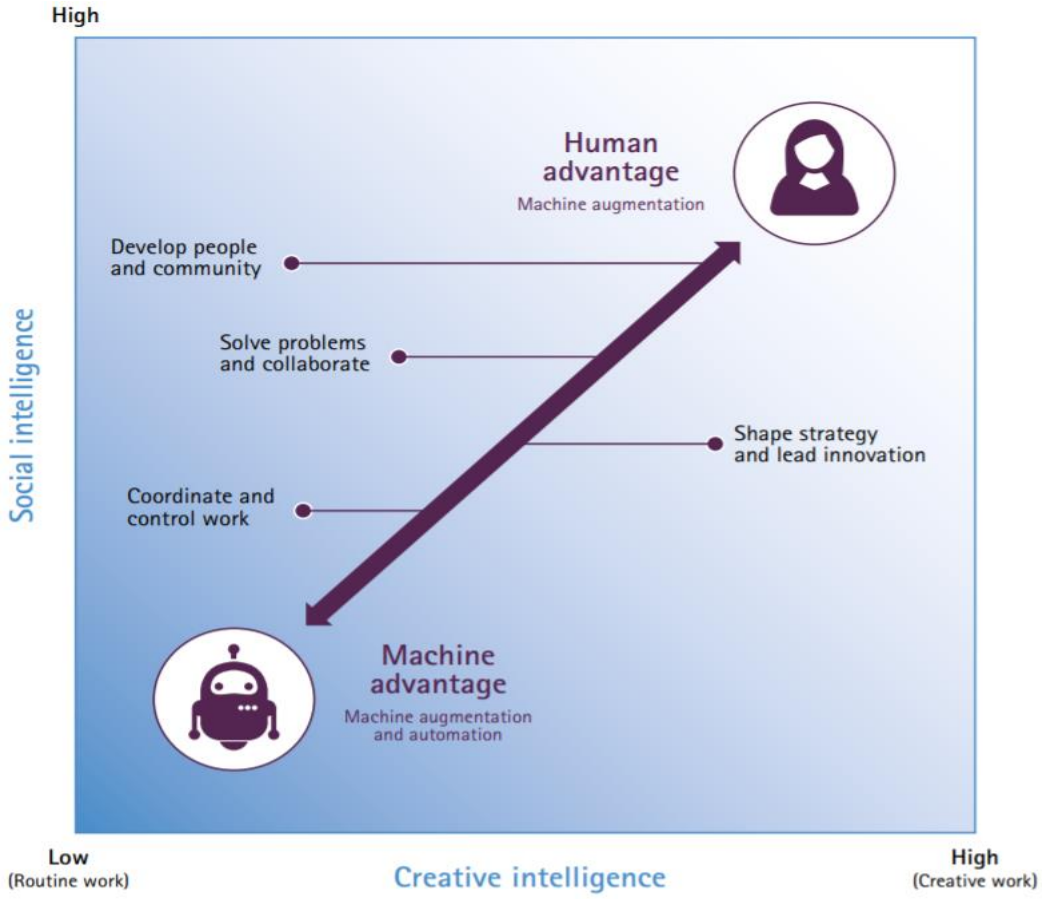

Figure 7: Human Advantage vs Machine Advantage (Accenture, 2017)

Skills required by employees in AI age:

- Digital skills/ Tech-savviness to work with intelligent systems.
- Data analysis and interpretation
- Creative thinking/Experimentation
- Social networking
- Collaboration
- People development and coaching

- Expertise development in chosen career

Conceptual Framework- Skill development in Artificial Intelligence age.

This conceptual framework has been developed to help employees understand the path of skill development to stay relevant during growing prominence of AI.

- **Education**: The basic model of education will have to evolve to help in the development of social and creative intelligence. The emphasis on innovation, creativity, and risk-taking must increase to help students prepare for the jobs that will be more and more social and innovation driven in future. Organizations should also focus on these qualities while training employees

  Another source of learning will be online platforms such as Coursera, Code academy, Big Data University and Microsoft's edX. These online platforms provide users with massively open online courses (MOOCs) to learn various skills.

- **Prepare for Technology:** The demand for tech jobs is only likely to grow. Thus, the sophistication level of skills in Technology related areas must grow. Computer education must become a cornerstone of each and every field of study to at least prepare employees with basic skills of working with smart machines.

- **Combine learning into work:** Learning is no more a once in a lifetime event for individuals. Learning mind-set should be developed by employees to continually upgrade their skills while working as well. This will help them learn new skills in the times when the shelf life of skills will be really low. Learning-related skills must become a necessary criterion for career progression, and skill levels must be actively measured in terms of the impact generated.

- **Become more adaptable:** Job responsibilities and descriptions may become much more fluid in the future. Jobs will offer more breadth to explore and showcase your skills, and that must be embraced. Generalists based job may not give job security for long run.

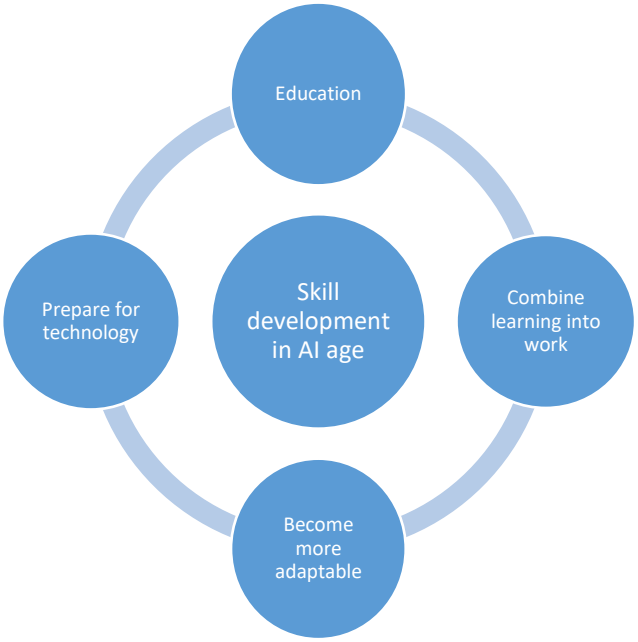

Figure 8: Conceptual Framework- Skill development in Artificial Intelligence age. (Compiled by author)

4.4 Impact of AI on managing the human resources in an organization

AI assistants can prove game-changing for HR by automating administrative tasks that keep teams from achieving the more strategic work. Tasks an AI assistant could conveniently transform:

- Reporting on key metrics and company analytics. A bot could be set up to automatically send reports on various important HR metrics.
- Planning, especially group meetings or interviews which require organizing numerous time-slots.
- Enhancing work processes by sparing representatives: such as gathering and sending somebody a preparation sheet before an essential meeting

These are some of the uses already implemented, and it's a good showing of the first wave of bots, with assistance in daily, monotonous tasks. But what has more long-term value is the ability of intelligent assistants to become an internal expert on your company. HR is a hub of information for the entire organization. While different bots (deals, designing, and advertising) might be group particular, a HR bot includes an incentive for each individual, in each part. Some examples can be:

- Assistants with understanding of organizational policies, benefits, and legal structure that can interface with employees directly
- Assistants that track employee growth and development and provide customized career management paths.
- Assistants that are able to understand knowledge gaps within an organization and provide hiring recommendations.

Case study: Vera- A bot recruiter

A Russian start-up has now created a robot that is taking over a recruiter's job and is being used to interview prospective employees**.** Named Vera, the robot has been created by Stafory, a start-up based out of St. Petersburg, Russia.

Vera can utilize artificial intelligence to limit candidates to the best applicants in light of occupation necessities. Vera can discover resumes from the top five job sites, call the potential employees and hold video and phone interviews. For those candidates who are interested in a firm's job offer, Vera will propose an online interview. Also, Vera can likewise erase duplicate cover letters and resumes, as well as fill in different jobs at once, like clerks and specialists.

As per the start-up, Vera can cut down the cost and time of recruiting by a third, as she's able to interview hundreds of applicants at the same time.

4.5 Conclusion

i. AI will involve short-term drawbacks. There are certain jobs worldwide that are facing the risk of being replaced and reskilling is the need of the hour across industries.
ii. Simultaneously, AI will bring new opportunities for organizations as well as individuals. Humans will be taking up more value adding and critical jobs. The application of intelligent machines will help reduce the time and costs of doing business. AI should, thus lead to increased prosperity.
iii. Employees in the workplace will need to build a collaborative partnership with intelligent machines. Thus technical skills across professions will have to improve.

iv. Education frameworks and policy makers will have to focus on improving basic skills in the fields of science, technology, engineering, and mathematics, and put more prominence on creativity, as well as on critical thinking

v. Companies and employees should recognize that AI implementation will not replace human capacity to make judgements. Human intervention is needed to create value. As with any emerging technology, it will take some time for issues to be addressed.

vi. AI can help with all HR functions if it is used as a tool to add to our knowledge rather than a gatekeeper to make hard decisions.

4.6 Implications of the Study

i. Employees can understand how transformation in the future of work will impact their jobs and organizations.

ii. The conceptual skill development framework can be adopted by employees as well as organizations to continually work on the skills of the workers of current generation to prepare for the future of AI-driven work.

iii. Human Resource professionals can understand the key changes in work and workplaces and how their jobs will evolve in managing professionals. Also, how AI will enable them to manage people better.

5. LIMITATIONS AND FUTURE SCOPE

One of the major limitations of this study is that it has been formed using secondary data from various authentic sources as a qualitative/quantitative study with primary data about a phenomenon that is a futuristic concept is difficult at this point of time. The argument that the perfect understanding of issues like challenges, priority areas and impact can be best possessed by experts and executives themselves holds true to a certain extent. A future study in this subject may be done by including direct responses from experts and professionals.

Also, this study aims to understand the present scenario of AI as an emerging concept and does not dive deep into future plans of the organizations. A more comprehensive work can be done along those lines.

This study can be extended to understand the adoption scenario among specific major industries and countries.

Lastly, the findings of this study should be followed up with an empirical analysis and statistical data analysis to prove the conceptual frameworks.

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