



# ROLE OF ARTIFICIAL INTELLIGENCE IN HRM: OVERVIEW OF ITS BENEFITS IN BUSINESS DECISION- MAKING

<sup>1</sup>Ms. Shafna A., <sup>2</sup>Dr. C. Beulah Vijayarani.

<sup>1</sup> Ph.D Research Scholar, <sup>2</sup>Deputy Controller of Examinations, Head and Associate Professor.  
Department of Commerce  
Providence College for Women (Autonomous) , Coonoor – 643102, The Nilgiris, India

## Abstract :

Ensuring the optimum growth and development of the organizations, HRM faces new challenges. The recent growth of Artificial Intelligence (AI) technology in human resource departments paves the way to the development of HRM. The fusion of AI with HRM practices alters the traditional methods of recruiting and engaging their workforce. Artificial intelligence opens up tremendous opportunities in the workplace through robotics innovation. The study focuses on the contributions of AI in HRM and its benefits of decision making. The understandings of ethical positions of individuals and organizations concerning HRM decision-making processes with AI integration in HRM are the main focus of this study. AI initiates the importance of machines which replaces the physical labour force and provides strategic roles to the HR professionals. A discussion of the benefit of artificial intelligence (AI) for organizations seeking to enhance the effectiveness of decision-making will be presented in this paper.

**Keywords - Human Resource Management, Artificial Intelligence, decision-making**

## I. INTRODUCTION

Organizations today are offering products, services, and methods to enhance the firm. Employee management, time & attendance management, employee self service portals, leave management, etc., are all a part of the trends in HRM culture today. To give precedence to high-value and productive workings, HR leaders leverage AI-powered solutions to automate their daily tasks that were carried out manually. Practices such as screening, sourcing talents, on boarding, keeping check of attendance, etc., can be carried out by the systems in this tech- driven world.

Artificial Intelligence (AI) helps to usher in a new era of Human Resource Management, where data analytics, machine learning and automation can work together to save people-time and support higher-quality outcomes. As AI technology moves beyond automation to augmentation, companies may be looking at how AI tools can make the work of Human Resources (HR) better for employees and job seekers. This trend in HRM will change the face of a workplace and skyrocket the growth of every organization leveraging these methods.

Human Resource Management (HRM) finds its root in the development of the organization. The competitive edge of organizations can be increased through the acquisition, expansion, and fusion of human, capital and physical resources. This is truly possible only when organizations work on HR practices. “Artificial intelligence leverages computers and machines to mimic the problem-solving and decision-making capabilities of the human mind.” It can be expressed as the ability of a system to correctly understand input, learn from it, and apply it in achieving specific objectives and tasks. Human Intelligence is enhanced by AI, as it enables them to develop their skills and knowledge in a productive manner. The business decision-making process is a step-by-step process allowing professionals to solve problems by weighing evidence, examining alternatives, and choosing a path from there. It is a time consuming process for any organization to take an appropriate and correct decision. AI decision making allows businesses or companies to make faster, accurate, and consistent decisions by capitalizing on datasets with AI. Artificial intelligence can analyze large datasets without error. This helps business teams to focus better on work relevant to their field.

This review paper aims to discuss the role of AI in Human Resource Management and its overview in business decision making.

## RESEARCH OBJECTIVES

- To assess the various areas of HRM and bring out the uses of AI in it.
- To bring out the advantages if AI in the specified areas.
- To assess the benefits associated with implementation of Artificial Intelligence in Business decision making.
- To formulate relevant recommendations and draw conclusions based on research evaluation.

## 1. RESEARCH METHODOLOGY

This study uses a descriptive research method. Secondary data is used and have been collected from published materials, websites, research papers and subject related blogs.

## 2. LITERATURE REVIEW

From recent research, it has shown that AI has a beneficial impact in HRM. The advantages of implementing AI in the dimensions of HRM was discussed in studies by (Madhavi M., and Vijay D.R), (Kumar V.), (Strohmeier S. and Piazzo F.), (Vivek and Yawalka) and (Eniola Sanyyaolu and Rebecca Atsaboghena). The dimensions of HRM in their studies included human relation management, recruitment and selection, training, compensation management, development and human resource strategic planning. George and Thomas argued that humans cannot be replaced by AI, whereas Madhavi M. and Vijay D.R highlighted on how AI assists with workload reduction in the workplace.

Although these papers argue on the conceptual changes in the domain of HRM with AI, the weakness is that they failed to address benefits of AI in business decision making which is the most important element of any business. An elaborate study was not carried out on such an important factor of decision making as implementation of AI in decision making will save time and can be the best technological advancement in human resource management.

## 3. USES OF ARTIFICIAL INTELLIGENCE IN THE FUNCTIONAL AREAS OF HUMAN RESOURCE MANAGEMENT

Human resources department is responsible for creating administrative procedures to support organizational employees. In fact, there are many key areas that human resources are developing, such as payroll, health insurance, employee discipline and staff recruitment. AI has the potential to transform these HR operations with relevant analyses of functional areas.

### 3.1 RECRUITMENT AND SELECTION

Hiring employees is usually the job of the hiring manager, but the human resources department usually sorts through job applications to find suitable candidates for the hiring manager. An applicant tracking system (ATS) uses keywords to help human resources pull applications that meet the job listing's criteria. As suitable applications are identified, they're forwarded to the hiring manager for further review. Once the hiring manager has made their decision on who they want to interview, they contact human resources to set up the interview. An HR representative writes job descriptions to match the qualifications for open positions. They also might need to edit a description for accuracy or to make sure that it meets legal guidelines. They can attend job fairs to meet potential candidates. They'll usually accept resumes or give out their business card and discuss what positions the company is currently hiring for.

AI can help speed up these processes by implementing machine learning techniques and ensure a fair recruiting process. AI technology can help check resumes and identify the suitable candidates for the required position. AI can also perform background checks such as checking through candidates' social media profiles to ensure that the candidate chosen is the most qualified.

### 3.2 EMPLOYEE BENEFITS

Employee benefits include health insurance, retirement accounts, health care flexible spending accounts, vacation time, sick leave, family leave and any other benefits an employer offers. A good package helps an employer attract and retain talent. That means human resources has to know the different types of employee benefit programs, best benefits at the right cost in addition to ensure the plans that are compliant with federal laws. Human resources hold open enrollment educational meetings for employees regarding their benefits, along with making sure they update their plans for the next year.

AI will change the way employers are planning for employee benefits by providing suggestions and recommendations at the right time for the right person. Use of Chatbots ensures faster claim settlements, proposes health insurance policies, detects fraud, and makes it easier for both employer and employees.

### 3.3 EMPLOYEE COMPENSATION

It's the duty of human resources to decide how much someone will be paid, performance bonuses, raises and if someone is salaried daily or hourly. To that extent, they supply the payroll department with the information it needs to pay employees the correct amount if vacation pay is due, when a sick day was taken and if a bonus has been issued. When it comes to compensation, HR researches to find the current competitive wage for a position, if the company can afford to offer that amount and what benefits can be offered in lieu of money if the company can't meet the competitive wage. This is done as part of compiling a

benefits package that's offered to a candidate all while maintaining the salary structure for employees through all levels of the organization.

An AI neural network becomes a very useful tool in establishing a level of fairness in employee compensation function. An intelligent support system can be created for fair compensation evaluation system and can help HR professionals in creation of ideal compensation package for their employees based on education, experience, skills etc.

### 3.4 EMPLOYEE AND LABOR RELATIONS

Human resources must adhere to procedures despite the fact if their employees are in a union or not. For union employers, humans resources needs to understand collective bargaining practices while non-union employers may have contracts for employees who are considered subcontractors. In either situation, it's within human resources' realm to draw up the contracts, negotiate details with knowledge of what the company can offer in terms of compensation and understand what the employees are seeking in terms of benefits. Human resources professionals must also be skilled in the negotiation process and play the neutral party, balancing the needs of all parties involved. Nevertheless, human resources have to stay abreast with changes in laws, employee needs and compensation despite the fact they're a union or non-union employer. Human resources moves ahead with disciplinary action when an infraction occurs on the company's premises or when employees are engaged in inadvisable activities while representing the company. Some employee policies may clearly outline that employees are representatives of the company inside and outside of the workplace and may be subject to further consequences. For example, if an employee posts insensitive content on social media, then human resources would intervene with the employee, providing the suitable course of action that best represents the company's core values.

The engagement level of employees can be predicted using several methods which is powered by Artificial Intelligence. Natural Language Processing (NLP) technology can convert information got from various media into structured data for analysis. AI analytical models can be applied in scanning through media comments, and the like to extract needed insights to analyze employee relations.

### 3.5 EMPLOYEE TRAINING AND DEVELOPMENT

In collaboration with management, human resources generate professional development programs to help employees succeed in their respective line of work. They'll monitor how many employees are in each program, their performance, their manager's feedback and the results to see if more training is required. Employees need to abreast of the latest trends and developments related to their fields.

AI tools will help in discovering skill gaps and creates training plans for employees based on their needs. AI can help create customized learning paths for new hires based on their skills and match them based on their interest. AI-based tools can also automate the learning process by creating learning and development videos which can be used repeatedly and even translated into different languages easily.

### 3.6 HUMAN RESOURCES INFORMATION AND PAYROLL

In addition to monitoring payroll activity, human resources employees are accountable for keeping track of the working environment of the company. They also must receive feedback from employees on their individual working environments to see if they can do more to service external clients. Overall, working conditions are essential in determining the reputation of the organization and if customers will buy from them. In this case, human resources professionals must take inventory as to what they need to upgrade in the building where they operate and what systems can help increase the productivity of their employees. They'll need to check in with management on the budget they'll have to make necessary changes and purpose the benefits it gives the company.

AI inclusion in this area will give prompt and exact information needed. With AI in payroll, employers get rid of handling payroll data, minimizing the possibility of error due to human involvement. AI technology enhances efficiency, accuracy, data management, data collection, automatic data transfers, global payroll process, payroll tasks and other HR-related decision making processes.

## 4. IMPLEMENTATION AND EFFECT OF ARTIFICIAL INTELLIGENCE IN BUSINESS DECISION MAKING

AI decision making allows businesses or companies to make faster, accurate, and consistent decisions by capitalizing on datasets with AI. Artificial intelligence can analyze large datasets without error. This helps business teams to focus better on work relevant to their field. Decision makers of companies believe in AI available in terms of machine learning, natural language processing, and computer vision. They are the most trusted aspects of any business ground today to increase profits and reach the

set goals. Make business decisions more effective with AI. Learn when and how to complement human decision-making powered by data and analysis and artificial intelligence.

#### 4.1 What is AI decision making?

AI decision-making is of utmost importance when data processing is carried out completely or in part by an AI platform. With no human in the picture, this process helps to quantify data, making accurate predictions and precise decisions.

AI can handle anomaly detection, data crunching, complex analysis, and spotting trends. The final decisions are then either completely automated or taken over by the human end.

#### MODEL OF AI DECISION - MAKING:

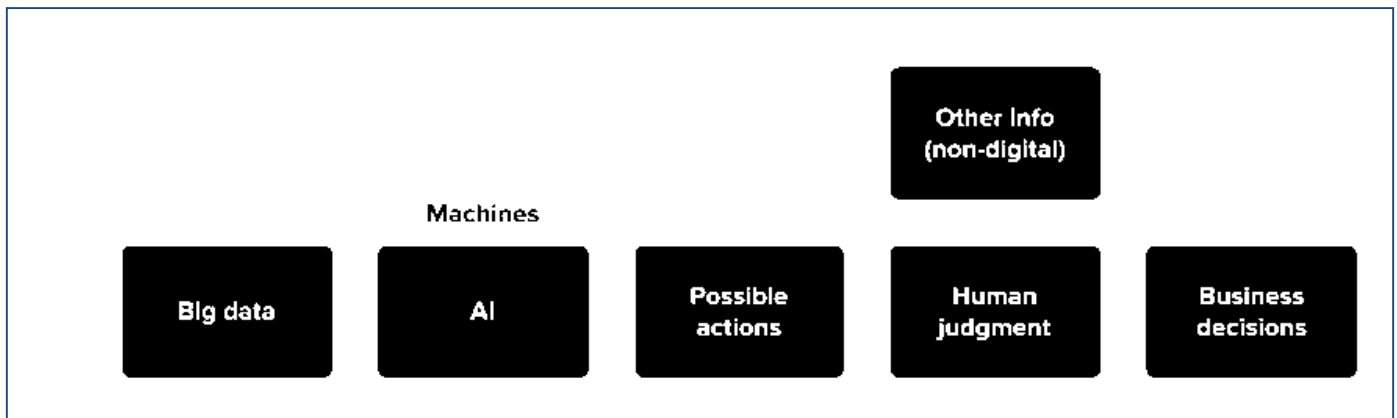


Figure 1 MODEL FRAMED BY OLIVIA BARBER AND ERIC COLSON

#### 4.2 ARTIFICIAL INTELLIGENCE & DECISION MAKING: BENEFITS

On the basis of the reviews collected, Artificial intelligence is a new concept which is becoming popular in almost all sectors becoming extremely important for the future. It forms the foundation of computer learning. Through artificial intelligence, computers can harness massive amounts of data. Besides, the learned intelligence may make optimal decisions in a few fractions of time, unlike humans. Today, AI is becoming responsible for everything; be it medical breakthroughs on cancer research or innovative research on climatic change.

Overview of the advantages of AI:

- Enhances the decision-making process in businesses: It allows businesses to take immediate decisions by a quick analysis of large datasets.
- Boosts sales and marketing campaigns: Decision-making applications in artificial intelligence like Natural Learning Process allows businesses to understand how customers interact with different brands, tone, and words that are most appealing to them.
- Better understand target customers: AI tools like algorithms with machine learning and chatbots offer a better understanding of customer satisfaction and expectations.
- Improves decisions of companies dealing with complex data: AI uniquely positions itself to make sense out of large data quantities. It is especially true when the outcome is clearly defined and measurable.

#### 4.3 How AI helps in decision making?

##### AI and Business Decision

Before the revival of AI and its commercial application, executives used to rely on inconsistent and incomplete data. With AI came data-based models and simulations to look up to. Today, the AI system begins from scratch, feeding on a regular big data business diet.

Businesses put augmented intelligence into action. Eventually, it offers executives, revolutionary models, as the basis of their decision-making process. Several AI applications enhance this decision-making capability. Listed below are some of them. AI makes use of automated cognitive as well as physical tasks. It allows humans to make faster and more accurate decisions. Simply put, it automates decision-making with some human intervention.

AI enhances automation and reduces human-intensive labor and tedious tasks. For instance, smart weather forecasting. Today, AI-powered tasks are known to bridge the gap between climate and data scientists.

With the help of AI, companies are better equipped to fight disasters using AI decision-making algorithms. On the bright side, the world has witnessed the groundbreaking impact of AI on humans and the economy. AI is now working as a capital hybrid, aiding the growth of the economy and humans.

Research was set by the McKinsey Global Institute. It suggested the delivery of 13 trillion dollars of additional output by 2030. This is estimated to boost the global GDP by 1.2 percent per year. This, alongside other researchers, believes AI to have a revolutionary impact on the man-made decision-making process.

#### **4.4 AI FACTORS IN BUSINESS DECISION MAKING**

In view of observance of research papers, authors have summarized the following points as the factors of AI that affect business decision making. (Sanyaolu, E., & Atsaboghena, R.)

##### **4.4.1. EMPOWERING REAL ESTATE INVESTORS TO MAKE INFORMED DECISIONS**

Most independent real estate investors know that the best deals fly under the radar: short sales, foreclosures, and especially unlisted properties. Comprehensive valuation and lead-generation tools like Deal Machine are showcasing the power of AI in real estate. Tools like this go beyond the MLS properties everyone else is chasing to uncover hidden opportunities. They have proprietary valuation models that help investors determine whether an opportunity actually pencils out.

AI-powered real estate tools can't (yet) prevent investors from making the wrong decision. But by providing much more information and capability than non-AI predecessors, they take much of the guesswork and grunt work out of the process.

##### **4.4.2. REDUCING MANUAL PROJECT MANAGEMENT WORKLOADS**

Project management solutions like Airtable and Monday.com already utilize AI and machine learning to drive workflow efficiency. Continued progress in this space will likely be iterative, with future versions automating more and more of the time-consuming legwork.

##### **4.4.3. SYNTHESIZING VAST AMOUNTS OF DIGITAL INFORMATION TO DRIVE EVIDENCE-BASED DECISIONS**

Search engine technology has dramatically improved in the past 20 years, but the basic model hasn't. You type in a query, the algorithm tries to understand what you mean, and then it spits out a bunch of links that it thinks are relevant. Often, the results are outstanding. And often, they're not. Iterative improvements have worked well enough until now, but it's clear that the model has fundamental flaws.

AI could change that, perhaps sooner than we think. Google's new Search Generative Experience (SGE) offers a glimpse at a future where AI responds to your query and analyzes the vast amount of information in that response. In human terms, it clicks the links and summarizes their content without any action on your part. It's easy to see how SGE could streamline business decision-making and help executives and their direct reports synthesize information much more quickly. While it won't become Google's default search model tomorrow, it's coming, and the implications could be profound.

##### **4.4.4. UNCOVERING HIDDEN PATTERNS AND PREFERENCES IN CONSUMER BEHAVIOR**

AI chatbots have been a customer service staple for years now. Machine learning algorithms have steadily expanded their influence in digital marketing as well. The next frontier is AI-driven behavioral analysis and predictive marketing. That is, figuring out what the customer wants before they know it themselves. You could argue that talented human marketers already do this, and you'd be correct. However, humans don't work as quickly as algorithms and often miss opportunities hiding in plain sight. Like other applications for AI in business decision-making, predictive marketing's value lies in freeing up humans to focus on strategic tasks that (for now) they can still do better than algorithms. People can direct campaigns and make connections at a high level, while automation takes care of the rest.

#### **4.5 LEVERAGING THE POTENTIAL OF AI IN BUSINESS**

AI tech is already indispensable for business decision-makers in industries as diverse as real estate, human resources, and healthcare. And its ability to support and improve human decision-making is advancing fast. Wherever you work and whatever your role now is the time to get comfortable leveraging its potential, because while AI might not replace your job anytime soon, it could advance one's career (Sheel, N., Verma, L. P., Kumar, S., & Singh, T. P., 2022). The impact of artificial intelligence continues to make its way through our daily lives



#### 4.5.1. Transportation

When it comes to automating transportation, self-driving cars top the chart. In a decade or two, autonomous cars will take over transport optimization.

#### 4.5.2. Manufacturing

AI-fueled robots work along the human workforce to perform a limited range of tasks. For instance, stacking and assembling. Besides, predictive analysis sensors help to run the equipment more efficiently and prevent failures.

#### 4.5.3. Healthcare

In the era of the AI-incipient field of healthcare, diseases are diagnosed more accurately and quickly. Besides, it has sped up and streamlined the process of drug discovery. Virtual nursing assistants are taking over round-the-clock patient monitoring. Not to mention, big data development and consulting have given rise to more personalized patient assistance.

#### 4.5.4. Education

AI research has revolutionized learning with digitized textbooks and teachings. Human instructors are assisting early-stage virtual tutors. Besides, facial analysis gauges emotions felt by students. This helps to determine and tailor-make experiences to suit individual needs.

#### 4.5.5. Media

Today, journalism is harnessing AI. Decision making applications in artificial intelligence like the natural learning process are used to make quick sense of insights.

#### 4.5.6. Customer assistance

AI assistants and chat bots are better at understanding nuance and context. For instance, it helps to quickly make human-like call appointments with ease.

## 5. CONCLUSION

HR management will reach a successful stage when technical shift towards Artificial Intelligence is taken. New shifts will definitely face obstacles, but it is imperative that one can continuously seek solutions to its obstacles. Artificial Intelligence has been incorporated into HRM procedures to improve business planning and decision making. Businesses can survive and flourish only by showing growth with current technology. As this study focus only on descriptive nature, future studies can be made on experimental and statistical aspects. Thus, this study can be concluded that deploying AI technology in HRM can open doors to unforeseen possibilities, which can keep businesses at the forefront of technological advancement. Lastly, we cannot claim that AI will be able to perform the work with 100% efficiency but to a great extent it can eliminate human errors and bias. (George and Thomas, 2019). Despite these challenges, many companies are making efforts to integrate AI in HR because the advantages overshadow the challenges with AI integration in HR.

## REFERENCES

- [1] Madhavi, M., & Vijay, D. R. (2020). Artificial Intelligence in Business Decision Making. *Institute of Scholars (InSc)*.
- [2] Kumar, V. Artificial Intelligence in Business Decision Making.
- [3] Strohmeier, S., & Piazza, F. (2015). Artificial intelligence techniques in human resource management—a conceptual exploration. *Intelligent Techniques in Engineering Management: Theory and Applications*, 149-172.
- [4] Sheel, N., Verma, L. P., Kumar, S., & Singh, T. P. (2022). Artificial Intelligence and Analytics for Better Decision-Making and Strategy Management. *Decision Intelligence Analytics and the Implementation of Strategic Business Management*, 31-43.
- [5] Guest D. (2002). Human Resource Management, Corporate Performance and employee wellbeing: Building worker into HRM. *Journal of Industrial Relations* 44:3 335-358
- [6] Wheeler, A. R., & Buckley, M. R. (2021). The current state of HRM with automation, artificial intelligence, and machine learning. In *HR without People?* (pp. 45-67). Emerald Publishing Limited.
- [7] Sanyaolu, E., & Atsaboghena, R. Role of Artificial Intelligence in Human Resource Management: Overview of its benefits and challenges.
- [8] George, G., & Thomas, M. R. (2019). Integration of artificial intelligence in human resource. *Int. J. Innov. Technol. Explor. Eng*, 9(2), 5069-5073.
- [9] <https://indatalabs.com/blog/artificial-intelligence-decision-making>
- [10] <https://www.adp.com/resources/articles-and-insights/articles/h/human-resource-management>.