

## **REVIEW ON ARTIFICIAL INTELLIGENCE AND ITS ROLE IN HUMAN RECOURSE INFORMATION SYSTEM MANAGEMENT**

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### **Abstract**

Digitizing within human recourse information system management (HRISM) has resulted artificial intelligence (AI) becoming gradually popular in human recourse system management and human recourse information system. An enterprise kingdoms alteration, human recourse management is facing different difficulties that could be labeled during the assurance of excellent. The procedure and plan of employing, employee achievement, validation and contentment, repayment, practice and benefits of analysis, management of discipline, training of employee and system development have noticed a growing with artificial intelligence incorporation. For better understanding of the evaluation, we look to investigate the sources of publication and writing that attributes the artificial intelligence application within human resource information system management. With the help of planned review of literature, this research paper determines the role of artificial intelligence in human resource management system and the elements are highlighted in the literature review. It provides view of the artificial intelligence in human resource information system management via quality and quantitative explanatory investigation of conference preceding and journal, recorded in the library base of online knowledge(B-on) in between the year 2000 and 2022.

**Keywords:** *Human Resource Information System Management, Artificial Intelligence, Human Resource, Machine Learning.*

### **I. Introduction**

Human resource management improvement has experienced a wonderful development, as digitization inseminates the heavy procedure which survives within its corresponding functions [1]. By using the inventions of internet and computer, human resource management has identified a path to move further to improve the productivity electronically, affordable prize and competition in the market [2]. The recent technologies help to extend the capabilities of human resource information system management to new higher levels namely artificial intelligence [3].

Determining the deficiency, we analyze the deliberations to present the academicians and working professionals' domain insight to find where the artificial intelligence is actually pending and where it is booming [4]. The main concept of this paper is to highlight artificial intelligence along with human resource information system management [5]. So we did a planned review of literature to present a starting line to know the situation of human resource management system capabilities in literature and its representation and also find the answer to the following questions of research [6].

RQ1. What are the human resource information system management capabilities are there in existing literature?

RQ2. How have been the capabilities of human resource information system management presented in the literature?

The ordering of this paper is described as follows. In the beginning this approach presents the background work of human resource management and human resource information system management, the growth of artificial intelligence with human resource system and approaches of artificial intelligence are acknowledged in this research paper [7]. Next it presents the description of planned literature review methodologies, also it presents the results, that may contain the details of insight to the elements of human resource information system management available in the literature, how they can be presented, which articles explain the research and future considerations of research [8]. In the last this paper summarizes the further opportunities of research.

## **II. Related and Background Progress of Human Resource Information System Management and Artificial Intelligence**

In this division, we describe what planned human resource information system managements contained of, provides a structure which summarizes the framework of human resource information system management detect the already existing reviews in this domain and describes the normal methodologies of artificial intelligence related to this review of literature [9].

The following diagram (figure 1) shows the structure of the basic elements which creates the human resource information system management.

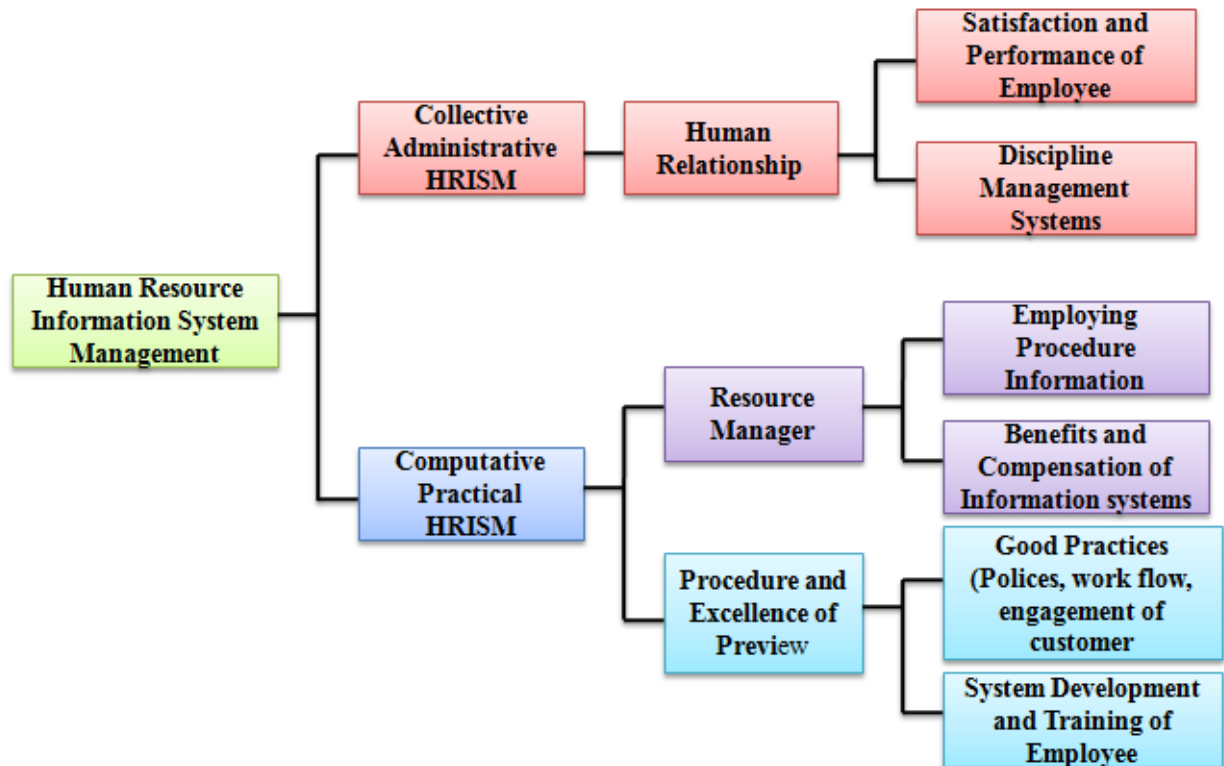


Figure 1. Human Resource Information System Management structure

## 2.1 Human Relationship

The human relationship component of administrative human resource information system management associates the practical possibility that extends the organization's capability to create and sustain effective and professional intrapersonal and interpersonal relationships [10]. Based on the relationship the interpersonal the capacity of organizations link and interchange the idea and information between different individuals by the path of different channels and creating relationships. These kinds of repetitions trends to be in creating relations trend to be in creating relations and creating an expansion professional knowledge on one's industry and they communicate regularly with [11].

The following table (table 1) describes and explains the specified work details of the administrative classification with HRISM to provide outline and insight responsibilities expectations.

Table 1. The specified work details of the administrative classification with HRISM

Name	Description of Task	Citations
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Job workers Performance and Satisfaction	Provide achievements response to job workers by extracting job workers performance at the place of work Productivity job workers Automate achievement filtration Personalized creative Job enhancement recommendations Determining job workers who are at critical for leaving	Tong et. al. [2021]  Ahmed et.al [2020] Garg et.al. [2021] Rathi et.al.[2018] Rathi [2018] Hughes et al. [2019]
Employee Discipline management System	Harassment of fielding claims Employment regulation and relationships viapropermediator, misunderstanding between managers and employers Remain ensure and neutral job workers are consideringopenly Design procedures and policy Stressing rules of disciplinary Presenting legal procedures Providing vide view of industriesprocedures regarding discipline	Eubanks [2018] Jones [2012]  Bourhis [2019]  Jones [2012] Jones [2012] Jones [2012] Jones [2012]

## 2.2 Computative Practical HRISM

Administrative HRISM centers alone human relationship technology that supports accelerate intra/inter personal relationships within the industries. Practical HRISM rotate across technology and information system that accelerate analysis of data, technical knowledge and workflow effectiveness. The HRISM may have a couple of branch that absorbs the accountability within industries [12].

## 2.3. HRISM Evaluation

This literature review presents an insight assessment of HRISM. The continuous development in the Information Technology domain, while the 1990s uprising the roles of human resource professionals. The HRISM analyzed high deals of technology evolution [13]. While using the digital information it may reduces the working time of the employee. So the employee can save time due to this the employee can do more works within a short

duration of time. Digital advertisement and application for the job have provided more impact in the market of job for both the employer and employee.

#### 2.4 HRM and HRISM with AI Review

The recent interesting topic is artificial intelligence in HRM and HRISM. The following table (table 2) shows the overview of literature artificial intelligence and human resource management procedures. Already available review of literature was done based on artificial intelligence and human resource management procedures, even though they are in same nature, offers dissimilar perspectives and methodologies are to be considered [14].

Table 2. Overview of literature artificial intelligence and human resource management procedures

Name of the authors	Literature purpose	Years	Basic studies number
Di Vaoi	Review of comprehensive relation between AI and models of business, knowledge and AI research gap	1990 -2020	74
Vrontis	Knowledge of AI on HRISM standards and activities	Undetermined	46
Qamar	To find the new research agencies and state of art	2020	60
Garq	Partial systematic review of literature and knowledge about the recent machine learning	2002-2019	106
This research paper	Knowledge about the elements and literature also further representations	2014 -2022	34

#### 2.5 Description of Normal AI Approaches within HRM and HRISM

According to Meattig et.al.2020, the AI utilizes different analytical approaches. In this research paper, we concentrate four different applications that repeated AI and HRISM literature. The following table (table 3) shows the descriptions of four dissimilar classifications of AI.

Table 3. The descriptions of four dissimilar classifications of AI

Approaches	Descriptions of AI
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Machine learning	The aim is described and the goals to attain are trained by the machine. Utilizing the algorithms of deep learning to train automatically and presenting insights
Processing of natural language	Automatically manipulating natural languages namely text and speech. Goal to find the input from the human speech and also creating response from human language
Vision of the machine	Analyses of machine visual data with the help of camera, digital to analog conversation and digital signal processing.
Engines recommendations	Technique to present a personal recommendation to the consumer by analyzing the proper content or product based on the interactions though digital channels.

### III. Method

In this division we present a detailed description about the planned review of literature procedure used in this research study. With the help of planned literature review approach we did the following, the first one is creating numerous amount of literature investigation and the second one is to find the response to specified questions to research [15] [16]. The final one is extracting related domain of managerial literature related systematic AI, HRM and HRISM.

#### 3.1 Process of Review

Here we conducted the research in two different phases, the first one is used to filter the literature and the second one is used to concentrate the contents of the article. The main aim of the simple language refining is to know the details of the already available literature and the difference between the particular elements of already available literatures [17]. The RQ1 finds the complete knowledge about the elements available in the existing literature. The RQ2 finds the knowledge about how the elements are represented in the existing literature by finding the investigation of this paper (investigation regarding conceptual, qualitative and empirical) [18].

By utilizing the SLR, we noticed to present the reviewer domain with review that analyses AI in HRM and HRIM. According to Vrontis et.al.2021 By considering the artificial intelligence and human resource management are interdisciplinary, we planned to use the

below mentioned databases: 1.EBSCO (Business Source Complete) 2.AIS (eLibrary of AIS) 3.WOS (Web of Science) 4. ABI-INFORM

### **3.2 Action Methodologies**

Selecting the constructed string to the database collectively yielded 315004 articles, out of which 1618 from EBSCO, 16111 from AIS, 46789 from WOS and 250486 from ABI. We extracted the article related to inclusion and exclusion approach that is already discussed [19]. We then filtered via academic journal articles to which they related, yielding 700 articles, out of which 30 from EBSCO, 246 from AIS, 80 from WOS and 344 from ABI.

The selecting process of phase one is inserted into the input of phase 2. From the selected 700 articles we filtered the articles based on the article title, keywords and abstract. In phase 2 beginning filtration process was done, articles actually based on AI in HRM and HRISM [20]. We deleted duplicated articles to store the list of unique article. Seventy four articles are selected for final process, and then 29 articles are selected based on the criteria out of which 15 from EBSCO, 5 from AIS, 4 from WOS and 4 from ABI.

## **IV. Analysis and Findings**

Academic HRISM presents an approach to concentrate the responsibilities of human centric HRs are responsible for nurturing and managing. The following figure (figure 2) represents the different divisions that falls in academic HRISM literature domain. Here the analysis is based on AI, literature review, conceptual, qualitative and empirical [21]. Different kinds of strategies are there which may consists of discipline management system, employee satisfaction and performance, benefit and compensation information system, employee training and development, recruitment information system and best practices.

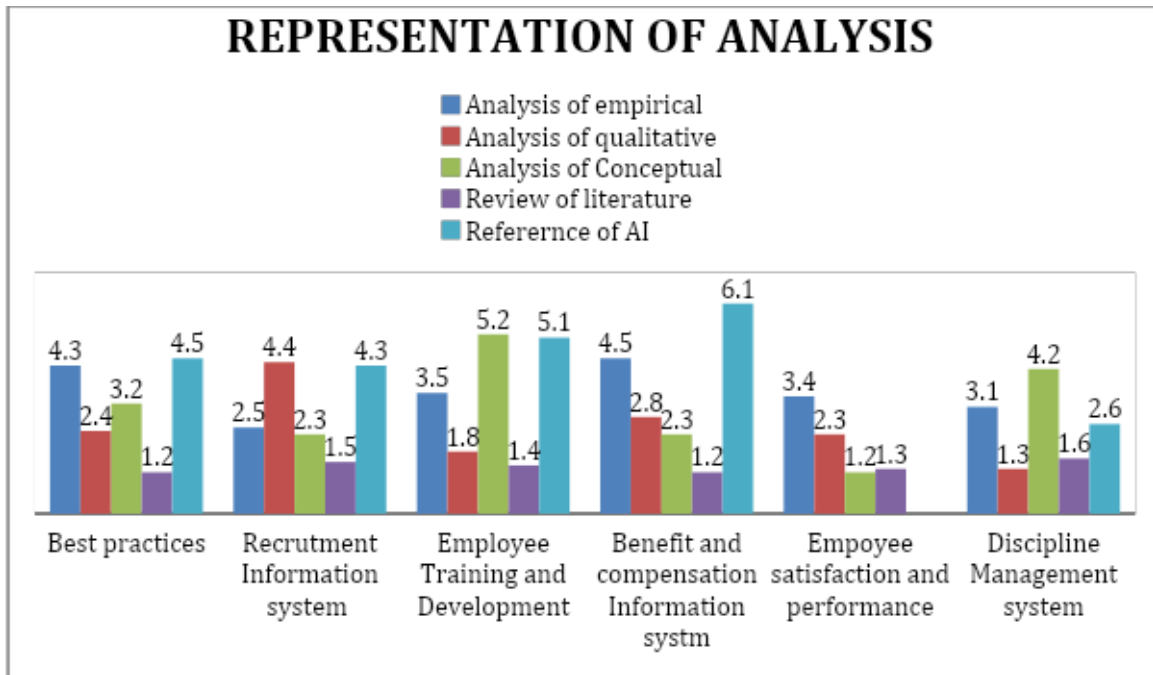


Figure 2. Representation of Analysis

## V. Discussion

According to the analysis of research, the request of AI in HRISM procedures requires future exploration in academic and also some other domains. In the first, we noticed the assistants, the developed SLR has presented to the already available surroundings and literature domains [22]. In second, we describe the further research chances the developed SLR has glow a little to further initiative in this domain and schedule. Finally, we describe the restrictions of this research and how further research authors can enhance the restrictions we met.

We identified different space which might support and enhance the AI schedule in HRM. In the beginning, finding space in existing literature in between technical and managerial HRISM procedures[23]. Data driving and task oriented HRISM elements see high presentation in the literature, high emotional and intuitive excellent procedure lack in concentration. By comparing, this approach presents an chance to dive into why this space in survey exist and future exploration as to industries veer away from AI incorporating to procedures that need perspective of human centric, genuine and intuitive[24].

## VI. Conclusion

The basic concept of this paper is to analysis the probabilities of AI within HRISM elements, these are some restrictions and identified during the research that are highly exploring in the beginning we utilizing huge amount of keywords namely artificial intelligence and human resource management in our string search to present us a huge amount of contents in AI and HRISM. This can be indented our capability to capture insights from some other research



authors. Moreover, we restricted our string search to the particular amount of numbers we are capable to create and investigate within our research. Finally we are restricted to access the database.

In addition to that, this research paper may provide an SLP investigation AI expanded managerial and technical HRISM. The analyzed literature provides a gap in research between managerial and technical HRISM, this is the proof for surveying thirty three articles over four dissimilar databases, 6 HRISM elements, 4 dissimilar AI technologies and 4 different types of articles. This survey analyzed that task oriented and data driven request engorgement in research literature. The survey of already available research presents the direction and foundation of further research to represent the space between managerial and technical HRISM and AI request.

To summarize, we recognize the advancement of literature and academic of AI in HRM and HRIS and are departed feature the survey potentially that exist in HRISM elements. This article presents the needed justification to future lengthen research schedule and to acquire deep knowledge about why the detected space exist in the review of literature and where academic and professional investor could concrete their attentions to future cultivation of the domain.

#### **CONFLICT OF INTEREST:**

The authors declare that we have no conflict of interest.

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