# A STUDY ON ARTIFICIAL INTELLIGENCE IN HR ANALYTICS

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The phenomenon of AI has been widely studied in several areas. This paper is based on the use of artificial intelligence and its impact on HRM due to  technological advancement in IT landscape. At present almost all companies are implementing AI in their functional areas to increase efficiency of employees in organization. AI role in HR domain starts with recruitment till performance appraisal of employees. The aim of the present research is to examine the relationship between artificial intelligence and Human resource functions in IT industry in Delhi/NCR location weather this relationship is moderated by innovativeness and ease of use at HR operations. This study was conducted among 115 HR professionals at various IT sector in Delhi/NCR region. A multiple regression method was used to test hypothesis and confirmed positive relationship between these two factors establishing about the increased use of AI at work results better HR functional performance. However AI has significant relationship with innovativeness and also with ease of use whichreflects AI effects HR with innovations and ease of use. This study will give insights of Artificial intelligence which is coming as anew revolution in industry with new name Industry4.0.

Key words: Artificial Intelligence , HR operations, Innovation

**Introduction:**

Sustainability means a deliberate continuous attempt to utilize natural resources and other resources to meet the needs of current human beings and non-human beings while not harming the ability of future human beings and non-human beings to utilize natural and other resources to meet their needs (Opatha, 2019). According to Kirtane (2015) sustainable HRM practices include green HR practices, HR analytics and HR Metrics which are being used in various functions of HRM. Rapid digital transformation has increased the requirement of HR analytics solutions and services and this has caused the world including the Asia pacific region to grow fastest in HR analytics (Gurusinghe et al., 2019).

**NEED OF ARTIFICAL INTELLIGENCE IN HUMAN RESOURCE SYSTEM**

The new built human resources information system (HRIS) has established foundation ofAI application in the system.AI developed Human-Computer interaction function enhances management efficiency which helps to improve the functional procedure for collecting, maintaining and validating data required by an organization.

The technological advancement in the form of AI is replacing routine tasks with minimum interference of humans. AI is assisting in the various activities of recruitment processlike screening CV, sending automated text and helps in reference checking. It has  been observed that these machines work better then HR team by reducing the  rate of attrition andalso improving employee retention. It is seen that simple activities of HR is being successfully carried out by AI but it is also needs to check in complex situations is yet to  see. There are many reasons for adopting AI as it gives huge benefits to the organization in less timeline and with more accuracy.

**Scope of the study**

The scope of the study is to increase the employee's emotional intelligence at work place and tohelp  in  future  why some  employees  are  outstanding  performers  while  others  are  no

Emotional

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## OBJECTIVES OF THE STUDY

- To study the required skill set for the collaboration between Human and Machine.
- To study the relation between emotional intelligence & organizational effectiveness.
- To identify and analyze the role of AI in Human Resource Management in IT Industry.
- To identify the factors contributing to emotional intelligence of employees.
  To analyze the importance emotional intelligence influence on employee performance

## REVIEW OF LITERATURE

Sanchez-Ruiz, Jose, Carlos, Prez-Gonzlez and Petride (2019) "Quality enthusiastic knowledge profiles of understudies from various college resources" had analyzed that the attribute passionate insight (characteristic EI or characteristic.enthusiastic self-adequacy) profiles of 512 understudies from five college resources: specialized examinations, regular sciences, sociologies, expressions, and humanities. Utilizing the Characteristic Passionate Insight Survey, analysts conjectured that (a) sociologies would score higher than specialized examinations in Emotionality; (b) expressions would score higher than specialized investigations in Emotionality, (c)expressions would score lower than specialized examinations in Restraint, and (d) there would be an association among sexual orientation and staff, whereby female understudies would score higher than male understudies inside the sociologies as it were. A few other exploratory examinations were likewise performed. Results upheld theories (a), (b), and (d), however not speculation (c), despite the fact that the distinctions were the anticipated way.

Nelis, Quoidbach, Mikolajczak and Hansenne (2018) "Passionate Insight Intercessions to Expand Understudy achievement" concentrated on the build of enthusiastic knowledge (EI) which alludes to the individual contrasts in the observation, preparing, guideline, and use of passionate data. As these distinctions have been appeared to significantly affect significant life results. This examination researched, utilizing a controlled trial structure, regardless of whether it is conceivable to expand EI. Members of the test bunch got a brief experimentally determinedEI preparing while control members kept on living typically. The specialists found a huge increment in feeling ID and feeling the executive's capacities in the preparation gathering. Follow-up measures following a half year uncovered that these progressions were determined. No noteworthy change was seen in the benchmark group. These discoveries propose that EI canbe improved and open new treatment roads.

## RESEARCH METHODOLOGY

### RESEARCH DESIGN:

The research design had been the combination of Exploratory and Descriptive designs. Thisstudy had been conducted in various steps:

- Firstly, the relevant information had been collected to meet the need of objective.
- Secondly, an analysis had been made.
- Thirdly, the finding and suggestion has been given.

### DATA COLLECTION METHODS:

The data will be collected using both by primary data collection methods as well assecondary sources.

### PRIMARY DATA:

Most of the information will be gathered through primary sources.The methods that will be used to collect primary data are:

- Questionnaire
- Interview

SECONDARY DATA:

Secondary data that will be used are web sites and published materials related to Emotional.

STATISTICAL TOOLS:

- ☐ Correlation
- ☐ Chi – square
- ☐ Standard deviation

RESEARCH HYPOTHESIS

**H0:** There is no significant impact on the role of emotional intelligence in enhancingorganizational effectiveness.

**H1:** There is a significant impact on the role of emotional intelligence in enhancingorganizational effectiveness.

**RESEARCH QUESTIONS AND OBJECTIVES**

Following research questions were formulated under this conceptual study on HR analytics.

1. What is HR analytics? What is its importance?
2. What is the process of HR analytics?
3. What are the possible HR questions that can be answered by HR analytics?
4. What are the challenges that exist for HR analytics?

This research paper has its objectives to find answers for the above mentioned four specific research questions and to introduce a new model on HR analytics.

**A NEW MODEL FOR HR ANALYTICS**
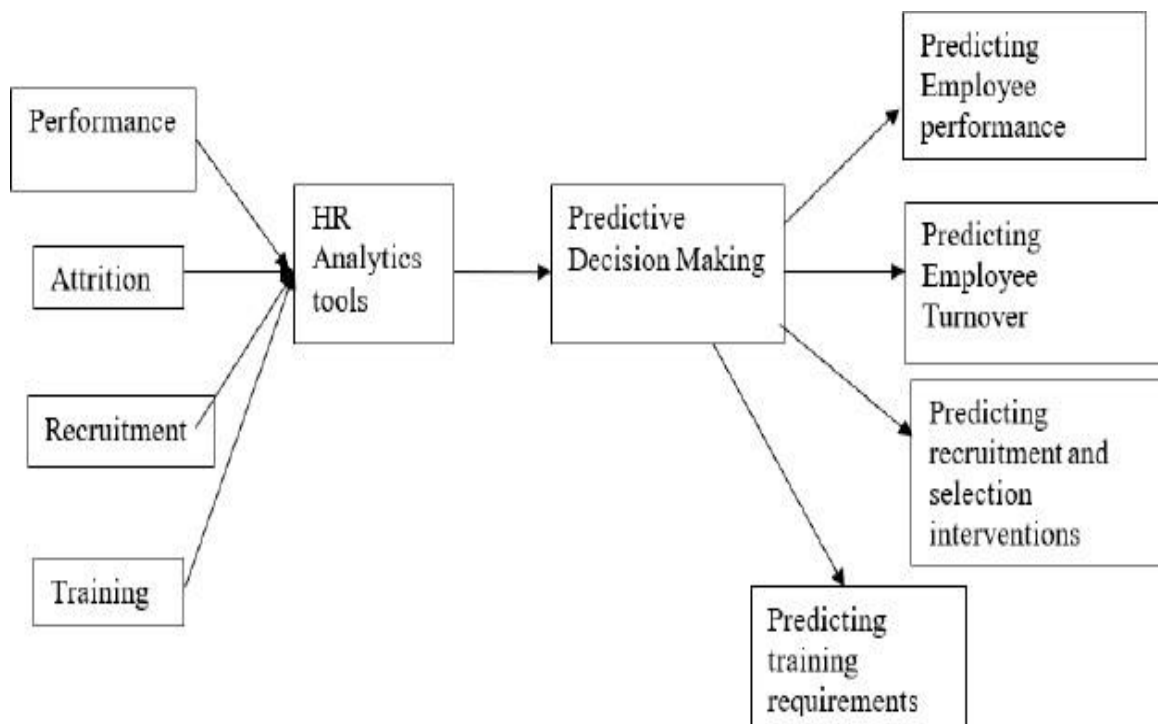
**INDIAN IT& BPM INDUSTRY REPORT(NOVEMBER, 2020)**

The global sourcing market in India continues to grow at a higher pace compared to the IT-BPM industry. India is the leading sourcing destination across the world, accounting for approximately 55% market share of the US$ 200-250 billion global services sourcing business in 2019-20. Indian IT & BPM companies have set up over 1,000 global delivery centers in about 80 countries across the world.

India has become the digital capabilities hub of the world with around 75% of global digital talent present in the country.

### MARKET SIZE

IT-BPM industry's revenue was estimated at around US$ 191 billion in FY20, growing at 7.7% y-o-y. It is estimated to reach US$ 350 billion by 2025. Moreover, revenue from the digital segment is expected to form 38% of the total industry revenue by 2025. Digital economyis estimated to reach Rs. 69, 89,000 crore (US$ 1 trillion) by 2025. The domestic revenue of theIT industry was estimated at US$ 44 billion and export revenue was estimated at US$ 147 billion in FY20.

Total number of employees grew to 1.02 million cumulatively for four Indian IT majors (including TCS, Infosys, Wipro, and HCL Tech) as on December 31, 2019. Indian IT industry employed 205,000 new hires; up from the 185,000 jobs added in FY19 and had 884,000 digitally skilled talents in 2019.

### INVESTMENTS/ DEVELOPMENTS

Indian IT's core competencies and strengths have attracted significant investment from major countries. The computer software and hardware sector in India attracted cumulative foreigndirect investment (FDI) inflows worth US$ 62.47 billion between April 2000 and September 2020. The sector ranked 2nd in FDI inflows as per the data released by Department for Promotion of Industry and Internal Trade (DPIIT).

Leading Indian IT firms like Infosys, Wipro, TCS and Tech Mahindra are diversifying their offerings and showcasing leading ideas in block chain and artificial intelligence to clients using innovation hubs and research and development centers to create differentiated offerings.

### SOME OF THE MAJOR DEVELOPMENTS IN THE INDIAN IT AND ITES SECTOR ARE AS FOLLOWS:

- In December 2020, Tata Consultancy Services (TCS) has expanded its business operations in Austin, Texas, with the construction of a new facility. By 2022, TCS plansto hire an additional 130 new employees in Austin. Over the next seven years, TCS plans to invest more than US$ 100 million in Austin.

- In December 2020, Tata Consultancy Services (TCS) has expanded its strategic partnership with Star Alliance (airline alliance) to provide predictive and real-time business analytics, improve customer experience and accelerate digital transformation.

- In December 2020, Infosys partnered with Rolls-Royce for aerospace engineering in India.

- In December 2020, Wipro collaborated with VeriFone for a multi-year contract to drive agility across its (VeriFone) cloud service offerings.

- In December 2020, Infosys Finacle, part of Edge Verve Systems, (a subsidiary of Infosys), and RBL Bank, announced a collaboration to migrate the bank's on-premise deployment to a containerized ecosystem, which is managed by Kubernetes and has been certified by Cloud Native Computing Foundation (CNCF).

- In December 2020, Infosys launched Infosys Modernizations Suite to help organizations accelerate their cloud modernization needs.

## GOVERNMENT INITIATIVES

Some of the major initiatives taken by the Government to promote IT and ITeS sector in India are as follows:

In 2020, the government released "Simplified Other Service Provider" (OSP) guidelinesto improve the ease of doing business in the IT Industry, Business Process Outsourcing (BPO) and IT-enabled Services.

The Government has identified Information Technology as one of 12 champion service sectors for which an action plan is being developed. Also, the Government has set up a Rs. 5,000 crore (US$ 745.82 million) fund for realizing the potential of these champion service sectors.

As part of Union Budget 2018-19, NITI Aayog was to set up a national  level programme to enable efforts in AI^ and leverage AI^ technology for developing the country.

In the Interim Budget 2019-20, the Government announced plans to launch a national programme on AI* and setting up of a National AI* portal.

National Policy on Software Products-2019 was passed by the Union Cabinet to developIndia as a software product nation.

Tata Consultancy Services (TCS) is an IT services, consulting and business solutions organization that delivers real results to global businesses, ensuring a level of certainty no other firm can match. TCS offers a consulting-led integrated portfolio of IT, BPO, infrastructure, engineering, and assurance services. This is delivered through its un...



Figure 5.1: Infosys Ltd

Established in 1981, Infosys Ltd is today one of the largest  IT companies in India and the world. The company provides business information technology (IT) services comprising application development and maintenance, independent validation, infrastructure management, engineering services comprising product engineering and life cycle solutions and...



Figure5.2: Wipro Limited

Wipro Limited is a global leader in information technology, consulting, and business process services. It harnesses the power of cognitive computing, hyper-automation, robotics, cloud, analytics, and emerging technologies to help its clients adapt to the digital world and make them successful

**Data Analysis**

**STATISTICAL TOOLS**
**CORRELATION:**
**1)**

| OPINION | ARE YOU ABLE TO PUT ACROSS YOUR IDEAS EFFECTIVELY. | WILL YOU TAKE INITIATION TO MEET PEOPLE IN ANY SOCIAL CONSEQUENCES. |
|---|---|---|
| **YES** | **33** | **32** |
| **NO** | **6** | **7** |

**CALCULATION PART:**

| YES | NO | $x = (X - \bar{X}$ | $y = (Y - \bar{Y}$ | $x^2$ | $y^2$ | xy |
|---|---|---|---|---|---|---|
| 33 | 6 | 0.5 | -0.5 | 0.25 | 0.25 | -0.25 |
| 32 | 7 | -0.5 | 0.5 | 0.25 | 0.25 | -0.25 |
| 65 | 13 | 0 | 0 | 0.5 | 0.5 | -0.5 |

$$\bar{X} = \frac{\sum X}{n} \qquad \bar{Y} = \frac{\sum Y}{n}$$

$$\bar{X} = \frac{65}{2} \qquad \bar{Y} = \frac{13}{2}$$

$$\bar{X} = 32.5 \qquad \bar{Y} = 6.5$$

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}}$$

$$r = \frac{-0.5}{\sqrt{(0.5)^2(0.5)^2}}$$

$$r = -2$$

**VALUE $= -2$**

**INTERPRETATION:** There is a strong relationship between two variables ideas effectively and social consequences that is -2.

**2)**

| OPINION | ANTICIPATE CHANGES AND PLAN IN ADVANCE TO ENHANCE OPPORTUNITIES. | WHAT MATTER IN THE ORGANIZATIONAL DYNAMICS. |
|---|---|---|
| YES | 36 | 29 |
| NO | 3 | 10 |

**CALCULATION PART:**

| YES | NO | $x = (X - \bar{X})$ | $y = (Y - \bar{Y})$ | $x^2$ | $y^2$ | xy |
|---|---|---|---|---|---|---|
| 36 | 3 | 3.5 | -3.5 | 12.25 | 12.25 | -12.25 |
| 29 | 10 | -3.5 | 3.5 | 12.25 | 12.25 | -12.25 |
| 65 | 13 | 0 | 0 | 24.5 | 24.5 | -24.5 |

$$\bar{X} = \frac{\sum X}{n} \qquad \bar{X} = 32.5$$

$$\bar{X} = \frac{65}{2}$$

$$\overline{Y} = \frac{\sum Y}{n}$$

$$\overline{Y} = \frac{13}{2}$$

$$\overline{Y} = 6.5$$

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}}$$

$$r = \frac{-24.5}{\sqrt{(24.5)^2(24.5)^2}}$$

$$r = -0.001$$

**VALUE = −0.001**

**INTERPRETATION:** There is a     relationship  between    two variables enhancing opportunities and organizational dynamics that is -0.001.

## CHALLENGES FOR HR ANALYTICS

As the attributes of human resources are very difficult to measure and quantify understanding and predicting the human behavior is a big challenge that every organization has to face today (Momin and Mishra, 2016). Due to the fact that human aspects are hard to measure HR managers face various challenges. To face these challenges HR analytics is introduced. However, performance of HR analytics also not easy as HR professionals have to face challenges when implementing HR analytics. According to Malla (2018) HR analytics challenges are:

Curating data: It is vital to organize and integrate data, collected from many operations and departments within the organization in order to implement HR analytics. Further, HR professionals need to properly present the data in a way that they can be evaluated meaningfully and these collected data should be remained carefully for future purposes.

Lack of data analytics knowledge and skills: Even though HR analytics has become a major source for competitive advantage, the truth is that the analytics abilities of most HR professionals are limited and not enough to carry out the process of HR analytics. Thus, organization needs to invest on training of suitable managers to perform HR analytics in order to make decisions relate to human resources efficiently and effectively. Training on statistical methods is highly important to convert data into meaningful insights. Without analytical capabilities HR professionals and business leaders cannot take accurate conclusions (Reddy and Lakshmikeerthi, 2017).

CONCLUSIONS

Passionate knowledge assumes a significant job for representatives in the association. This paper has improved a comprehension about the different purposes behind feeling and better power over the feeling. . Dealing with feelings is a significant necessity for a HR for himself and among the workers too. This will assist with expanding hierarchical responsibility, improve profitability, proficiency, hold best ability and persuade the representatives to put forth a valiant effort. This examination affirms that both enthusiastic knowledge and work life balance together make hierarchical achievement and create upper hand for associations. Understanding the potential and the ability that the representatives and guarantee the distinction that workers bring to the work spot and worth them to make it a piece of the hierarchical achievement. The work spot ought to be better with the goal that the representatives can have a superior cooperation, discover answers for issue, improved occupation duty, bunch crucial, routine work, self-assurance among laborers. Passionate insight will get better versatility, sympathy towards worker, authority characteristics, bunch compatibility, participative administration, dynamic, and comprehension among partners. The greater part of the associations are these days taking those representatives who are sincerely canny, with the goal that they can confront the work environment issues effectively and they can turn out to be increasingly beneficial for the association. Sincerely insightful association can be made through authoritative procedures, administration aptitudes, advancement programs, mindfulness and self administration apparatuses. The scientist from the investigation infers that enthusiastic insight is connected at each purpose of working environment execution and it is of most extreme significance these days. Subsequently, to be effective in life Passionate knowledge assumes an indispensable job.

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