# International Journal of Research Publication and Reviews

# HR People Data Analytics Using Power Bi Data Visualization Tool

*Monal D. Jadhav, Ashlesha B. Shelar, Assistant Prof. Sujeet More*

Department of Information Technology, Bachelor's of Engineering, Trinity College of Engineering and Research (TCOER),Pune

**ABSTRACT:-**

A subject of vast knowledge in which predictive and descriptive analytics is of its main components which includes employee one turnover analysis, employee work performance analysis and training requirements analysis as results. The main purpose of Human Resource management is to measure the achievement of employees and their role in the work services or business which acts as benefits to the company and to analyze employee period in the company. The main motto of Human Resource analytics is to identify skilled individuals strive extremely for of who the return investment for the organization by considering  several factors  which a  better  understanding  of  the for help predictive analysis. Employee is individual churn by considered a major problem for many organizations. It is one of the crucial problems to identify because it affects sustainability and also the organization' s planning and enhancing work culture harmony. Therefore, the Human Resource department in every organization is striving hard paying attention identify underlying and the to improvements. By identifying this demand, the study aims to increase the ability to identify employee churn using POWER BI with the help of real-time data insights in dashboards for HR management.HR report is an analytical method used to display human resources -related status , insights , and metrics with the primary purpose of improving workforce performance , recruiting procedures and other relevant HR processes with the help of HR dashboards.

## Introduction:-

HR report is an analytical method used to display human resources-related stats, insights, and metrics with the primary purpose of improving workforce performance, recruiting procedures and other relevant HR processes with the help of HR dashboards Human Resource (HR) analytics is  an integrated approach to improvise the decision making capability to achieve organizational goals. High-end predictive modelling is used in HR analytics where the organization faces the scenarios to forecast the consequences of the organization or enterprise policies [4]. Most of the organizations lack a widespread look towards the workforce and require human resources predictive, analysis to perform workforce development and is necessary for the organization to develop various aspects of the company such as IT and financial skills for better ROI(Return On Investment). Predictive analytics is much of forecasting the organization's goals based on the workforce rather than a descriptive analysis .

## Literature Survey:

A distinguishing feature of strategic human resource management research is an emphasis on human resource (HR) systems, rather than individual HR practices as a driver of individual and organizational performance. Yet, there remains a lack of agreement regarding what these systems are, which practices comprise these systems, how these systems operate, and how they should be studied. Our  goal in this paper  is to take  a step  toward  identifying  and addressing several conceptual and methodological issues  regarding HR systems. Conceptually, we argue that HR systems should be targeted toward some strategic objective and operate by influencing  (1) employee knowledge, skills, and abilities, (2) employee motivation and effort, and (3) opportunities for employees to contribute. Methodologically, we explore issues related to the relationships among policies and practices, sampling issue, identifying the appropriate referent group (s), and who should serve as key informants for HR system studies.

| Sr.no | Author | Methodology | Abstract |
|---|---|---|---|
| 1. | Dan Clark | Beginning Power BI | Simplify Data Discovery, Association & Cleansing |
| 2. | Mitchell Pearson | Microsoft Power BI Quick Start Guide | Create Robust interactive data Presentation |
| 3. | Abdul Quaddus  Mohammed | HR Analytics | A Modern tool in HR for predictive decision making |
| 4. | Neeraj Khedekar | Journal of computer Applications | Predictive  Modelling on employability of applicants and job hopping |
| 5. | Surbhi Gupta | Overview of HR Analytics | Build solid analytical data models ,Publish and share dashboards. |

*Deep Learning:*

The seven stages of HR data collection and analysis. 1, Perform the HR function. 2, Desire to make a difference. 3, Organize how you collect HR data. 4, Understand the data. 5, Take action. 6, Analyze and compare. 7, Earn recognition. descriptive, diagnostic, predictive and prescriptive. Descriptive analytics. Descriptive (also known as observation and reporting) is the most basic level of analytics. Diagnostic analytics. Predictive analytics. Prescriptive analytics.

**Tool Design:**

Dashboard designed and developed base on Hr base line data , view are Overall, geographically, age, expertise wise and joiner and leaver etc.

**Database**:

HR data Visualization using Microsoft Power BI toll . Analyse the large amount dataset using Ms Excel.

**Pre-Processing:**

The First Step collected HR data **The Dataset** For This Power BI Project , We 'll Use The HR or People Dataset ; This Is The Text and numeric deceptive data MS Power BI downloaded form Microsoft URLand Excel file use for base data preparation

**Prerequisites**

Need to install MS Power BI Desktop

**Problem Statement**

Element of performance management Difficult to make hiring and recruitment plan (How long does it take to hire employees) Difficult to Measuring employee performance management identify patterns of employee engagement, employee satisfaction and performance. Difficult to make plan for employee learning and development, Are learning and development initiatives having an impact on employee performance.
Tracking employment contract status, Develop strategies and make decisions that will improve the work environment and engagement levels. Having data-backed evidence means that organizations can focus on making the necessary improvements and plan for future initiatives .What amount of investment is needed to get employees up to a fully productive speed?
Which of our employees are most likely to leave within the year?

**Develop strategies and make decisions Pre-Processing:**

The First Step collected HR data **The Dataset** For This Power BI Project , We 'll Use The HR or People Dataset ; This Is The Text and numeric descriptive data.

MS Power BI downloaded form Microsoft URLand Excel file use for base data preparation.

- **Software Requirements**

  - Power BI Desktop

  - □S Excel

**Existing System:**

Technology/Tool used:
 -Power BI Desktop

Also we use following Power BI functionality:
- Import Function
- Power Query
- DAX
- Visualization charts

- Import Data

 Data import form the folder excel File andload in to Power BI

- Power Query:

    Power Query is the dataconnectivity and data preparation technology that enables end users toseamlessly import and reshape data from within a wide range of Microsoft products , including Excel , Power BI,Analysis Services, Data verse, and more.

- Convert data types – text, numbers, dates
- Remove columns, rows, blanks.
- Add calculated columns
- Aggregate or summarize data.
- Find & replace text.
- Unpivot data to use for pivot tables

- DAX:

    DAX stands for Data Analysis Expressions.DAX is a collection of functions ,operators, and constants that can be usedin a formula, or expression, to calculate and return one or more values. Stated more simply, DAX helps you create newinformation from data already in yourmodel.

    Used Dax for data calculation;
- Time intelligence, Aggregation, Text Filter and Math function

4. Visualization charts

    Visualizations (known as visuals for short) display insights that have been discovered in the data. A Power BI report might have a single page with one visual or it might have pages full of visuals. In the Power BI service, visuals can be pinned from reports to dashboards.
Used visualizations:
 Bar chart and column chart
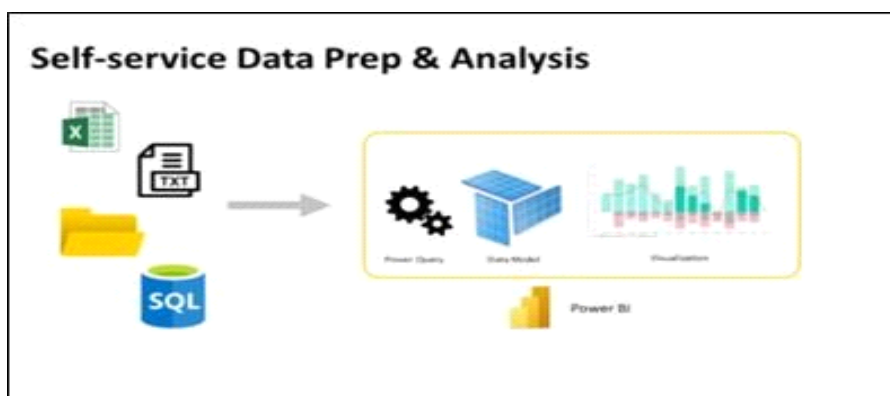 Tales
 Slicers
 Cards
 Filter



Fig Framework for HR Data Analysis in Power BI

## Conclusion:

Provide the quick insights on People data like Demography, People data, hiring, Improves talent acquisition. HR analytics is an essential part of data management and its implementation can yield positive returns for any organization.

HR analytics enables strategic decision- making that can drive business solutions through improving: Productivity. In this research paper, the model shows the real time human resource processes, gathering related data and then using this data to make informed decisions to manage employees and reach business goals.

## REFERENCES:

- .1) Sujeet Narendra Mishra, Dev Raghavendra Lama, shri Rama Swaroop, "A Decision Making Model for Human Resource Management in Organizations using data mining and predictive analytics", International Journal of Computer Science and Information Security (IJCSIS), Vol 14, No. 5, May 2016.
- Abdulquddus Mohammed, "HR ANALYTICS: A modern tool in hr. for predictive decision making", Journal of Management · May 2019
- Alao D & Adeyemo A.B "Analyzing employee attrition using decision tree algorithm's" Computing, Information Systems & Development Informatics Vol. 4 No. 1 March, 2013
- Ben-Gal, H.C. (2018), "An ROI-based review of HR analytics: practical implementation tools", Personnel Review.
- Bhattacharyya, D.K. (2017), HR Analytics: Understanding Theories and Applications. New Delhi: SAGE Publications.
- Chib, S. (2019), "Monograph on HR reporting using using HR dashboards", International Journal of Scientific and Research Publications.
- Fred, M.O. and Kananga U.M. (2015), "Overview of HR Analytics to maximize Human capital investment".
- Gurusinghe, N, Arachchige, B.J.H. and Dayarathna, D. (2019), Identified Research Gaps in HR Analytics, Conference: Challenges to Humankind in the Face of New Technologies at Colombo, Sri Lanka. 6. Jabir, B., Falih, N. and Rahmani, K. (2019)
- Momin, W.Y.M. and Mishra, K. (2016), "HR analytics: Re-inventing human resource management", International Journal of Applied Research, Vol. 2, No. 5, pp. 785-790. 15. Opatha, H.H.D.N.P. (2009).
- Jabir, B., Falih, N. and Rahmani, K. (2019), "HR analytics a roadmap for decision making: case study", Indonesian Journal of Electrical Engineering and Computer Science, Vol. 15, No. 2, pp. 979-990

- Singh, P., Upadhyay, R.K. & Srivastava, M. (2017), "The role of HR analytics in higher education institution", International Journal of Engineering Sciences & Research Technology, Vol. 6, No. 7, pp. 92-100.
- Reena, R, Ansari, M.M.K. and Jayakrishnan, S.S. (2019), "Emerging trends in human resource analytics in upcoming decade", International Journal of Engineering Applied Sciences and Technology, Vol. 4, No. 8, pp. 260-264
- Reddy, P.R. and Lakshmikeerthi, P. (2017), "'HR Analytics' - An Effective Evidence Based HRM Tool", International Journal of Business and Management Invention, Vol. 6, No. 7, pp. 23-34
- . Reena, R, Ansari, M.M.K. and Jayakrishnan, S.S. (2019), "Emerging trends in human resource analytics in upcoming decade", International Journal of Engineering Applied Sciences and Technology, Vol. 4, No. 8, pp. 260-264
- Momin, W.Y.M. and Mishra, K. (2016), "HR analytics: Re-inventing human resource management", International Journal of Applied Research, Vol. 2, No. 5, pp. 785-790

**You Tube Channels:**

- Guy in a Cube
- BI Elite..
- SQLBI..
- Curbal
- Enterprise DN

**Website :**

https://docs.microsoft.com/

Link : https://docs.microsoft.com/en-us/learn/powerplatform/power-i?WT.mc_id=powerbi_landingpage-marketinpage/