ROLE OF ANALYTICS IN HR-ATTRITION FOR EFFECTIVE DECISION MAKING

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ABSTRACT

Employee attrition does not only mean the loss of an employee, but it also reflects the loss of the customer from the organization. This in turn plays a pivotal role in employees leaving an institution due to lesser satisfaction at the workplace. This plays a major impact on the decrease in employees and are seen as a negative sign with regard to lesser productivity and lower employee morale. Higher employee rate attrition shows a failure of organizational effectiveness in terms of retaining a qualified employee. The current research study is envisioned with the core objective of investigating the causes of job-related employee dissatisfaction at the workplace. The research study uses secondary data on attrition related aspects to meet the objective of the study. The result of this research they can be used to redesign personnel policies and procedures take corrective action to reduce attrition.

Keywords: Attrition, Productivity, Satisfaction, Decision-Making, Analytics, Human Resource.

I. INTRODUCTION

Employee attrition is defined as a natural process by which employees leave the workforce – for example by resigning for personal reasons or retirement - and are not immediately replaced. Employee turnover is considered a key issue for everyone organizations these days, due to its adverse effects on the workplace productivity and achieving organizational goals time. So that the organization has constantly higher competitive advantage over the competition, should make it an obligation to minimize employee exhaustion Therefore for better development corporations, is essential for corporate leaders know the main reasons why their employees decide to leave society, then they will take appropriate measures to improve their society productivity, overall workflow and business performance. Objectives. In this article we try to select the main causes which contribute to the employee's decision to leave the company and be able to predict whether a particular employee will leave company using machine learning models.

HR Analytics has power early employee movement prediction and organization. In a large organization, it is huge number of employees not working, HR analytical tools or methodologies are very productive for providing data-driven understanding what works well and what doesn't organizations can make changes or improvements and plan more effectively for the future.

1.1 Role of Analytics in HR

Analytics in all functions in the organization is becoming a trend. Although there was there is a lot of talk about human resources, few managers' reports to their employees. Analytics is based on learning from past data or existing data to be forecasted individual behaviours and very accurate. Analytics is practical in nature and can be a significant asset to the human resources (HR) department. The HR department owns a large amount of quality data about people. There will be more departments successful in the organization if the HR manager begins to use and rely on the data driven model or proven model rather than feelings and soft sciences. Here predictive analytics can provide many benefits to an organization, especially to people separation of resources if used in the right way and consistently. Few benefits can be retention of top talent, better HR decision-making, ability to anticipate and requirements for recruiting within the organization, increasing productivity and HR performance, attrition management and loyalty measurement, upskilling workforce and fostering deeper employee engagement and so on.

II.   METHODOLOGY

Employee Attrition is the internal and privacy data, which is difficult to obtain and some of this data has a certain level of confidentiality. Just to overcome this, we have taken the Data set from Kaggle to carry out over research objectives The sample size of the dataset is 1471, there are 34 variable functions, it is mainly divided into three types of variables: personal base information, work experience, attendance. This Research is totally based on Secondary Data Collection method.

In this research, we've worked on Random Forest Learning Method (i.e., is a kind of decision Tree, Regression based machine learning algorithm) used to analyze the data and to work on statistical as well as graphical representation.

Random Forest:

Random Forest is a method which is used for classification and regression that combines multiple decision tree to get the best result. It is one of the most popular machine learning algorithms that provides a unique combination of prediction accuracy and model interpretability. It is simply a collection of decision trees whose aggregates are combined into one final result.

III.   MODELING AND ANALYSIS

In our Study, we've worked upon 34 variables for the analysis and interpretation of data. Some of the variables like employee count, standard hours, and employee number doesn't make any sense in analyzing so we deleted them from the dataset. We built a correlational matrix showing correlation between different variables. This matrix is also called as a Heat map.
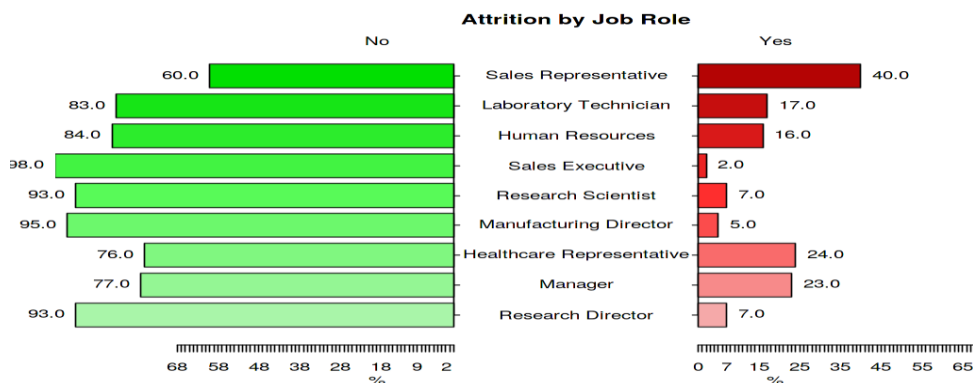

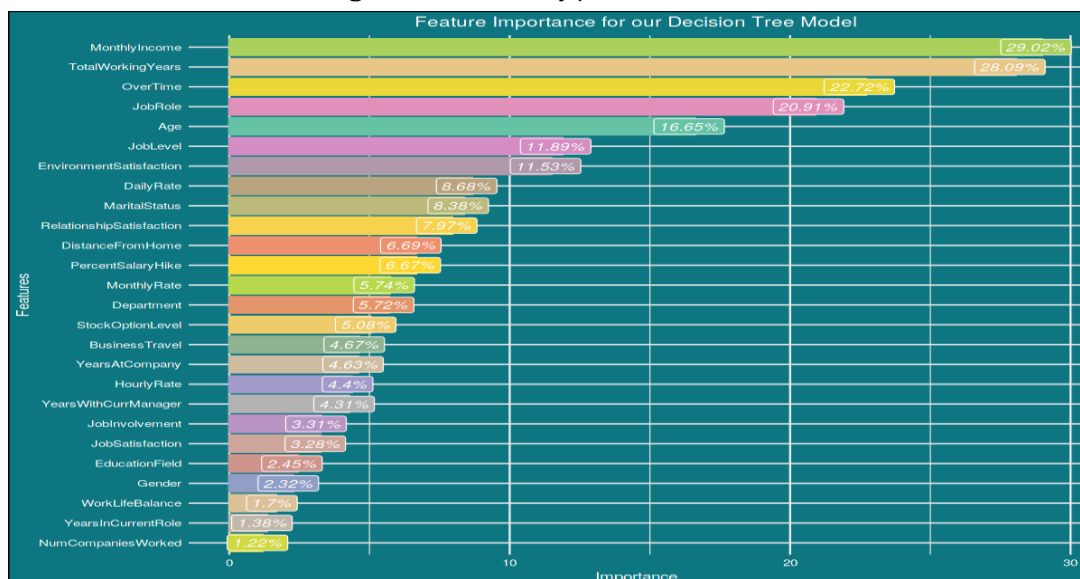
Figure 1: Attrition by job role bar chart

Figure 2: Decision Tree Model

IV.   RESULTS AND DISCUSSION

In this section, we understand what traits have a positive correlation with each other. This tells us if there is an association between two variables. What I like about the correlation section is that it allows us to better understand some of the features we are dealing with.
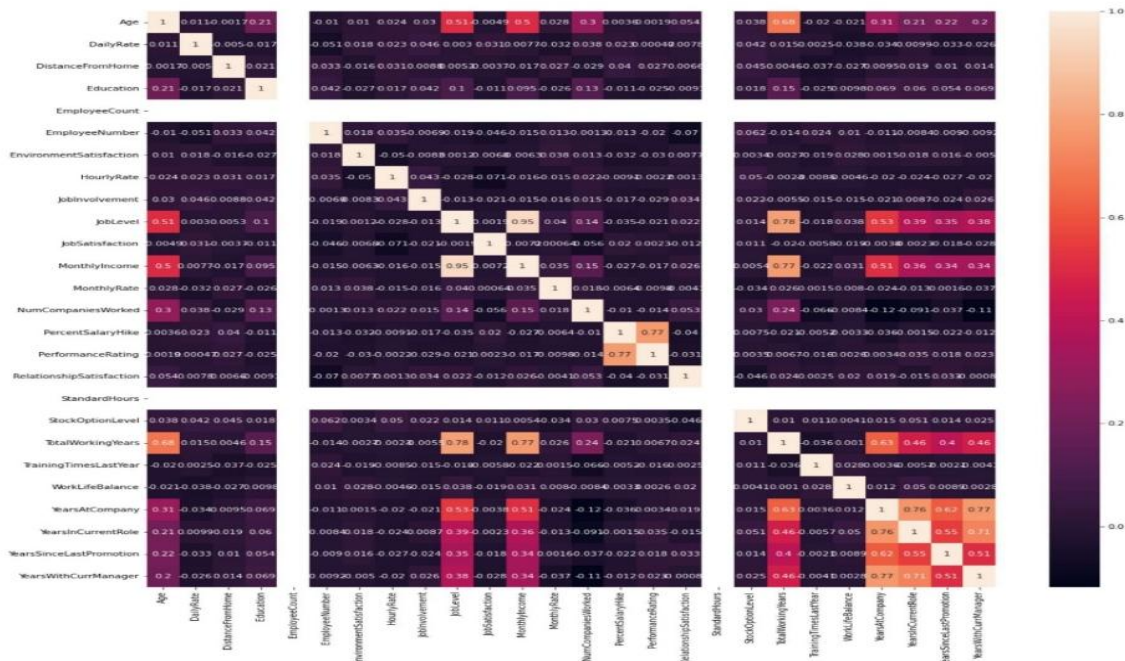

Figure 3: correlational matrix (Heat map)

Bivariate analysis defines the strength of two associated variables and the direction of the relationship of those two particular variables. The analysis is been done between multiple variables for systematic correlational analysis chart. Variables taken for consideration are monthly income and working years, Percent salary hike and performance rating, years since last promotions and years with current manager and the last monthly income and age.
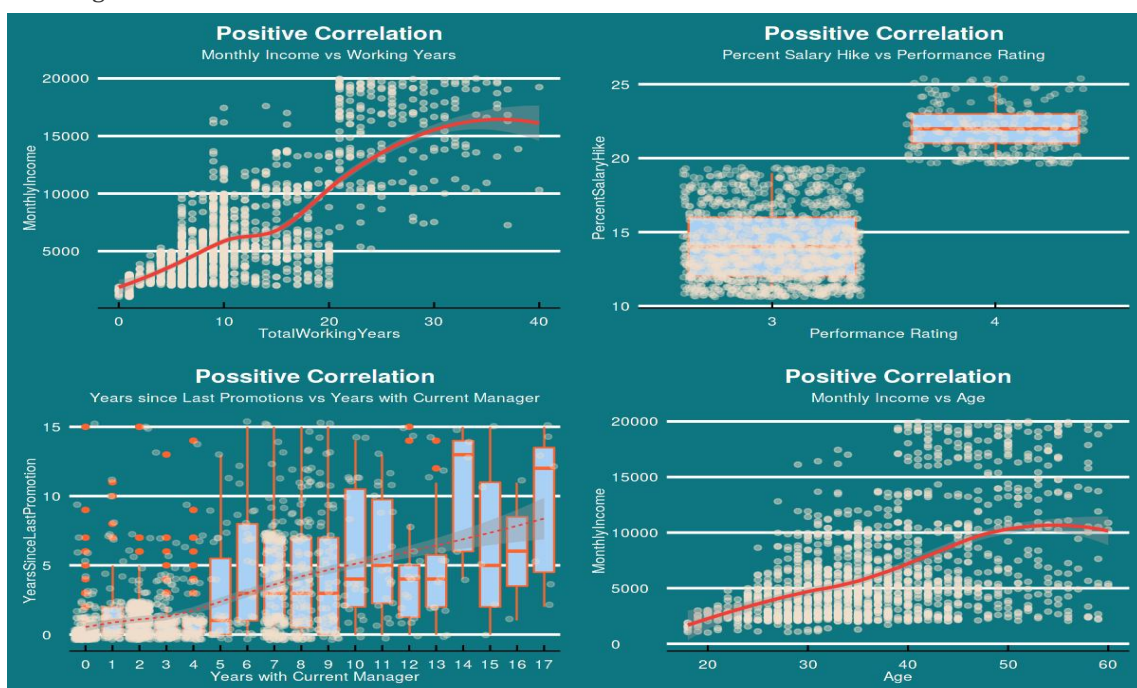

Figure 4: Bi-variate correlational analysis

V.   CONCLUSION

The purpose of this study was to identify the role of analytics in human resource for analyzing the attrition rate and helping the company for better decision making. After the successful research and analysis, we found that Attrition rates are higher at IBM, with men leaving the company more often than women, according to the analysis. according to the analysis. Employees whose marital status is single are more likely to leave the company. It is better for a company not to recruit at a young age because they are more likely to leave. It is better for the company to get individual employees because they are more likely to stay. Data analytics makes it easier for companies to visualize data and act on it for better decision-making for the benefit of the organization.

VI.   REFERENCES

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