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# HR ANALYTICS

## Predicting Attrition rate

Employee attrition, also known as employee turnover, is a significant concern for human resources departments in organizations of all sizes. It refers to the rate at which employees leave an organization and need to be replaced. High employee attrition can be detrimental to a company's productivity, culture, and financial stability.

In this report, we will analyze and predict employee attrition data for our organization over the past year to identify patterns and potential causes of employee turnover. The goal is to develop actionable insights that can help reduce attrition and retain our valuable employees.

Before going for prediction, this project ensures in exploring the data which will be useful for feature selection for models. Performing hypothesis testing is must to ensure the data being considered is perfect for predicting.

A webpage is created with form being placed there, in-order to predict the employee attrition rate. All the necessary columns are to be filled by the HR in order to understand which employee turns down the company.

Predicting the employee attrition rate can be done using Machine Learning algorithms, the models are being used to predict whether the employee wishes to serve for the company or want to leave the company.

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## Predicting Attrition rate

In this report, we will discuss the use of data analytics to predict employee attrition in our organization. By analyzing historical data on employee turnover and identifying patterns and trends, we aim to develop a predictive model that can help us anticipate which employees are at risk of leaving and take proactive steps to retain them.

01 Performing excel operations

### Performing excel operations

Basic excel analysis had been performed to understand the functionality of each column. Finding unique variables and count for each unique variables is performed for both nominal and ordinal data. Finding the type of column is the motto of this excel analysis. Analysis would become easy if finding the kind of data, it is.

02 Extracting data through database

### Extracting data through database

Exporting the cleaned data from excel into database. A database is maintained to have efficiency and transparency in data. Database is designed in such a way, new data can also be imported directly into database and can be reused again for prediction.

03 Performing Exploratory Data Analysis

### Performing Exploratory Data Analysis

Checking for the columns that are co-related with the dependent feature. Exploring through each and every column, performing hypothesis testing for obtaining accurate decision.

04 Predicting the attrition rate

### Predicting the attrition rate of a employee

Predicting the attrition rate of an employee, displaying all the inputs and outputs in a webpage for easy transition for non-technical user. Using Several Machine Learning algorithm for training and testing it. Performing feature selection and extracting useful amount of data.

Of a employee

In conclusion, the use of data analytics to predict employee attrition can be a powerful tool for HR professionals in reducing the negative impact of high turnover rates on organizations. By analyzing historical data on employee turnover and identifying patterns and trends, HR professionals can develop predictive models that can help them anticipate which employees are at risk of leaving and take proactive steps to retain them.