

Ideation Phase

Define the Problem Statements

Date	02.09.2022
Team ID	PNT2022TMID27605
Project Name	Project - Corporate Employee Attrition Analytics

Corporate Employee Attrition Analytics LITERATURE SURVEY

1. TITLE: From Big Data to Deep Data to Support People Analytics for Employee Attrition Prediction.

YEAR: 2021

AUTHORS: Nesrine Ben Yahia; Jihen Hlel; Ricardo Colomo-Palacios

DESCRIPTION:

In the era of data science and big data analytics, firms and their HR managers can reduce attrition by using people analytics, which transforms how businesses and their human resources (HR) managers find and keep talent. Staff attrition is a big problem for businesses in this situation since it affects both production and the continuity of planning. The main contributions that this study has made in this situation are listed below. We start by proposing a people's The analytics approach to employee attrition prediction shifts from a large data environment to a deep data one by focusing on data quality rather than quantity.

2. TITLE: Towards Understanding Employee Attrition using a Decision Tree Approach

YEAR: 2019

AUTHORS: Saadat M Alhashmi

DESCRIPTION:

The severe issue of employee attrition has been the subject of research for several decades. This problem has been approached using a variety of methods, including psychological studies and exit interviews. The goal is to prevent or minimise employees leaving a company before hiring a replacement. Recently, researchers in the field of artificial intelligence have also addressed this problem due to the amount of data. With the aid of publicly available data and a decision tree approach, this study tackled the problem of staff attrition. The results of this work-in-progress study are encouraging, and subsequent work-studies will add more factors and test the model using data from a nearby supermarket.

3. TITLE: Employee Attrition System Using Tree Based Ensemble Method

YEAR: 2022

AUTHORS: Vimoli Mehta; Shrey Modi

DESCRIPTION:

Around the world, employee churn has grown to be a serious issue. The loss of the best personnel is one of the major problems that company owners deal with in their organisations. A competent employee is always a benefit to the company, and when they leave, it can cause a number of issues, including financial losses, performance declines, and knowledge loss. In addition, compared to recruiting new personnel, hiring new workers is far more expensive, time-consuming, and labor-intensive. It takes a long time to find a new employee because it takes him months to get trained and get used to the surroundings. Therefore, commercial organisations must take advantage of emerging trends and technology that uses machine learning algorithms. Companies can reduce this loss by knowing the cause of staff churn before it happens. Using the dataset "IBM HR Analytics Employee Attrition Performance" and the tree-based Ensemble Machine Learning Model, this article offers a thorough analysis of employee attrition. The decision of an employee to quit the company is connected to a number of statistically important factors. To acquire the best outcomes from the currently available tree approaches, the study assesses the tree-based ensemble.

4. TITLE: Early Prediction of Employee Attrition using Data Mining Techniques

YEAR: 2019

AUTHORS: Sandeep Yadav; Aman Jain; Deepti Singh

DESCRIPTION:

Take away our best 20 employees, and we [Microsoft] become a mediocre firm, according to a comment attributed to Bill Gates. Bill Gates' comment brought our attention to one of the main issues with employee churn in the workplace. Any firm must pay a hefty price for employee attrition (turnover), which could ultimately affect how efficiently it operates as a whole. According to CompData Surveys, total turnover climbed from 15.1 percent to 18.5 percent over the previous five years. Finding a qualified and experienced employee is a difficult endeavour for any firm, and replacing such workers is even more difficult. In addition to raising the major cost of human resources (HR), this has an effect on an organization's market worth. Despite these realities, the literature that has contributed to numerous misunderstandings between HR and employees receives little attention. As a result, the purpose of this study is to present a methodology for predicting employee churn by applying classification algorithms to analyse the particular behaviours and qualities of the employee.

5. TITLE: Prediction of Employee Attrition Using data mining

YEAR: 2018

AUTHORS: R. Shiva Shankar; J. Rajanikanth; V.V. Sivaramaraju; K.V.S.S.R. Murthy

DESCRIPTION:

Employee attrition has recently grown to be a significant issue in enterprises. Employee attrition is a significant problem for firms, particularly when skilled, technical, and critical people leave for another company that offers greater opportunities. As a result, replacing a skilled person costs money. As a result, we examine the frequent causes of employee attrition using data on both present and historical employees. On the human resource data, we employed well-known classification algorithms, such as Decision tree, Logistic Regression, SVM, KNN, Random Forest, and Naive Bayes, in order to reduce employee attrition. To do this, we apply the feature selection approach to the data and analyse the outcomes to stop staff attrition. The ability to foresee employee turnover helps businesses expand economically by lowering the cost of their human resources.