Chapter 9
Detection and Identification of Employee Attrition Using a Machine Learning Algorithm

Rama Krishna Garigipati
Koneru Lakshmaiah Education Foundation, India

Kasula Raghu
Mahatma Gandhi Institute of Technology, India

K. Saikumar
Koneru Lakshmaiah Education Foundation, India

ABSTRACT

This chapter proposes that employee attrition is the major circumstance faced in many organizations. Usually, organizations face this attrition when there is pressing need of employees due to mass retirements or while expanding the organization. Generally, any organization faces higher attrition rate for employment when they have more employment opportunities in market or recession time. Due to the demand for software goods across all industries, the software industry once suffered a significant attrition rate from employers due to large openings globally in the software business. The purpose of this research is to look at how objective elements influence employee attrition in order to figure out what factors influence a worker's decision to leave a company and to be able to predict whether a particular employee will leave the company using machine learning algorithms.

INTRODUCTION

Attrition is a major issue, and it is very, very high up in the industry these days. This is the most important issue, which is covered by any organization. Although the term "ATTRITION" is widely accepted, numerous has loss to identify what is real and fatigue-Fatigue is alleged to be the progressive diminution of the number of employees, pensions, retirement, or death. Employee exhaustion, it is referred to as an Employee, abandonment, or lapse of the staff. This can be interpreted as a gradual decrease in

the number of employees, pensions, retirement, or death explained in Fallucchi, F., Coladangelo, M., Giuliano, R., & William De Luca, E. (2020). When it comes to the recycling of standards, where the average worker will vary from sector to sector, both in terms of their own standards, and those standards may be differences between the skilled and unskilled positions. The rapid completion of the wages for the payroll package is primarily responsible for the sluggish growth in employment, and, as a result of an increase in the attrition rate. Companies are faced with a huge challenge in the recruitment and retention of talent, and at the same time, they must deal with the loss of talent due to friction, which is related with the industry's decline of the voluntary activity of the rotation. The level of staff turnover leads to productivity losses, which could have long-term adverse consequences for the company, especially when considering the talent of leaves gaps in its ability to deliver, and the role of human resources is not just the loss of productivity, but also in a loss of performance from the team, and social assets. In view of the fact that the rate of staff turnover is a serious problem in every industry, companies are developing innovative business models to sustain success, talent in Yedida, R., Reddy, R., Vahi, R., Jana, R., GV, A., & Kulkarni, D. (2018). There is no way that allows you to have full control of the fatigue, but you can, of course, we are limiting these indicators for the planning of the appropriate retention strategies. Every time you visit a well-trained, and well-suited employee leaves the organization; it creates a vacuum. Thus, the organization will lose important skills, knowledge, and business relationships. Modern managers, personal managers are very concerned about diminishing the level of consumption in the organization, and so that they can help to maximize productivity, the growth, and development of the organization. Employee proceeds are one of the most important issues that an association may face during the entire life cycle because it is difficult to predict, and often makes rather obvious shortcomings in the organization of the workers Alduayj, S. S., & Rajpoot, K. (2018). Service companies have to recognize that the use of the services may be affected, and the overall performance of the company can be significantly reduced, and, therefore, customers can be reduced when employees are suddenly left. Retention of staff is a serious and continuous process. One of the main challenges for managers is to understand that it is their accountability to generate and maintain a good service, a friendly environment. Managers have to accept it and understand it, and that it is of such fundamental principles, show their objectives, the nature, and motivation of their employees. However, the employee has been dismissed is an actuality for every business. If the situation was not handled well, the departure of key personnel could result in a decline in productivity. The organization may need to hire new people and learning from them is the tool that can be used, that is, it takes a long time to come. Most of organizations are interested in knowing who is at risk of leaving.

RELATED WORK

The progressive loss of personnel over time is referred to as employee attrition. The majority of literature on employee attrition divides it into two categories: voluntary and involuntary. Involuntary attrition is defined as an employee's error in which the organization fires the employee for a variety of reasons. When an employee departs a company voluntarily, it is known as voluntary attrition. Age, wage, and job satisfaction were found to be the strongest predictors of voluntary attrition in a meta-analytic evaluation of voluntary attrition. Other research has found that a variety of other factors, like as working environment, job satisfaction, and possibility for advancement, all play a role in voluntary attrition. Organizations strive to avoid employee attrition by utilizing machine learning algorithms to forecast the

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