**Literature Survey**

**Power BI template to analyze Employee Attrition**

refers to the reduction of a company's workforce. The reasons for which employees leave can be both voluntary and involuntary. Attrition, to an extent, can be considered normal in a business environment and can be dealt with. But if the attrition rate increases for a company, the matter becomes of serious concern. It may take a long time to find the people who can fill the positions required. A lot of things come into consideration, their specialization, experience.

In today's world, majority of the people will jump for a new job opportunity. The number of people who work in the same place from their first job till their retirement is very less. People nowadays demand new work life, new experiences, and will happily leave one company for the other. With these attrition rates, HR leaders can step up and work towards reducing the attrition rate. Creating an atmosphere that ensures employee engagement and productivity can help improve the quality of work in the organization.

Problems are bound to increase with such high attrition rates in any company. A relationship between any customer and employee takes some time to build, and many such relationships will suffer due to employee attrition. Now with the understanding of employee attrition and knowing the fact that attrition rates can be improved, you can divert your focus in the process of reducing attrition rates.

Getting an insight into the Employee attrition rate and analyzing the reasons for attrition may help the company in the future. There are tools available in the market, but those tools are either custom-made and require a lot of time or require technical know-how. You can skip these hurdles and leverage tools like Power BI to draw insights relevant to your organization. We have put together a free template for you to get a better understanding of Power BI and how it can serve your organization.

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Learning Technique

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Predicting Employee Attrition Using Machine

Learning

Employee attrition technique by using

There are several areas in which organisations can adopt technologies that will support

decision-making: artiﬁcial intelligence is one of the most innovative technologies that is widely

used to assist organisations in business strategies, organisational aspects and people management.

In recent years, attention has increasingly been paid to human resources (HR), since worker quality

and skills represent a growth factor and a real competitive advantage for companies. After having

been introduced to sales and marketing departments, artiﬁcial intelligence is also starting to guide

employee-related decisions within HR management. The purpose is to support decisions that are

based not on subjective aspects but on objective data analysis. The goal of this work is to analyse how

objective factors inﬂuence employee attrition, in order to identify the main causes that contribute

to a worker’s decision to leave a company, and to be able to predict whether a particular employee

will leave the company. After the training, the obtained model for the prediction of employees’

attrition is tested on a real dataset provided by IBM analytics, which includes 35 features and about

1500 samples. Results are expressed in terms of classical metrics and the algorithm that produced the

best results for the available dataset is the Gaussian Naïve Bayes classiﬁer. It reveals the best recall

rate (0.54), since it measures the ability of a classiﬁer to ﬁnd all the positive instances and achieves an

overall false negative rate equal to 4.5% of the total observations.

Keywords: machine learning; employee attrition; prediction model

1. Introduction

In today’s competitive economy and its growing technological specialisation, acquisition,

study and analysis of data are giving rise to new knowledge, referred to as “knowledge economy”.

Information technologies are not only a source of data but are, above all, an enabling factor for

data analysis, making it possible to process large data collections and allow information to be

extracted from them. Data has become a strategic asset for most organisations across multiple sectors,

including those linked to business processes. All types of organisations beneﬁt from the adoption of

new technologies

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] and collection, management and analysis of data bring numerous beneﬁts in

terms of efﬁciency and competitive advantage. In fact, analysing large amounts of data can lead to

improvements in decision-making processes,