

## ABSTRACT

Decision-making plays an essential role in the management and may represent the most important component in the planning process. Employee attrition is defined as the natural process by which employees leave the workforce through resignation for personal reasons or retirement and are not immediately replaced. Attrition is considered a well-known problem that needs the right decisions from the administration and need to immediately analysis employee surveys to identify the root cause of demographics-based attrition (such as age, gender, education, or other factors) before it affects your workplace culture.

To preserve high qualified employees, the proposed work utilizes the machine learning technique along with some preprocessing steps to improve the prediction of employee attrition. Several factors lead to employee attrition. Such factors are analysed to reveal their intercorrelation and to demonstrate the dominant ones. The study begins with an exploration of the various drivers of attrition including but not limited to, job dissatisfaction, lack of career growth opportunities, inadequate compensation, poor work-life balance, and organizational culture issues. Through data analysis, the project identifies demographic trends and patterns associated with attrition, shedding light on the differential impact across diverse groups within the workforce.