

Analyzing Employee Attrition Drivers: The Impact of Burnout Through Predictive Models

Heno Merlin C P S ¹, Dr. Jayasree Krishnan ²

¹ Research Scholar, Department of Management Studies, Vels Institute of Science Technology and Advanced Studies (VISTAS)

² Professor & Director, School of Management Studies, Vels Institute of Science Technology and Advanced Studies (VISTAS)

ABSTRACT

Employee burnout has become an organizational crisis because of its relation with increasing attrition and decreasing productivity. Predictive analytical modeling was used in the current study to capture the effects of burnout on employee turnover. Demographics include age, marital status, job type, and years of service, whereas burnout indicators consist of emotional exhaustion, physical fatigue, frustration, and job satisfaction. These variables entered the machine learning models developed in Python to identify the patterns and predictors of employee departure. With the data analysis framework approach, the modeling is started with data preprocessing and exploratory data analysis, followed by feature selection and classification. In this study, we analyze the predictive abilities of various algorithms: Random Forest, Logistic Regression, and Support Vector Machine. Much in line with several research works, it shows a quantitative relationship between burnout dimensions and self-reported turnover intentions. To facilitate decisions, an interactive Power BI dashboard was constructed visualizing the profile of high-risk employees and the burnout patterns leading to attrition; the results were then deployed to substantiate targeted interventions.

Keywords: Employee Attrition, Employee Burnout, Predictive Analytics, Machine Learning, HR Analytics, Power BI

1. INTRODUCTION

These fast-paced, competitive, and challenging working environments only allow employee burnout as the most concerning issue for companies in all sectors. Employee burnout rests on psychological syndrome built of chronic workplace stress, which shows poor well-being among employees and thus much-more contributes to increased employee turnover. Symptoms of burnout include emotional exhaustion, physical fatigue, frustration, and less job satisfaction. It directly affects the productivity of that particular organization along with the stability of the workforce. In this scenario of talent retention and development of a better work culture, it has become compulsory to consider the complex relationship between burnout and employee attrition. Burnout has been well established as contributing to turnover by academic and professional societies; however there is still much to be desired in empirical research that incorporates prediction modeling to explain this relationship. Most of the literature in this area is qualitative or correlational with little attention to model-based approaches which incorporate data and predict turnover based on specific burnout indicators. New areas like HR analytics are providing enticing ways to