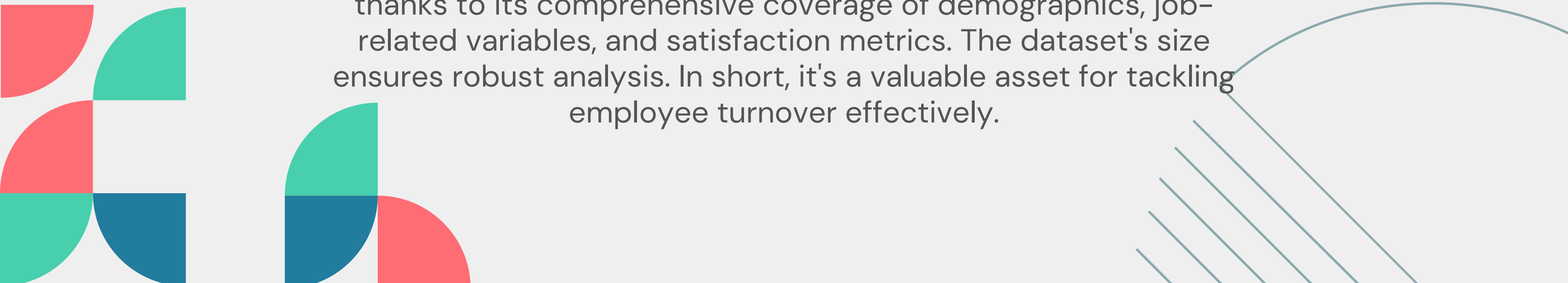# HR EMPLOYEE ATTRITION IN IBM

PROJECT INTRODUCTION

IBM HR Employee Attrition dataset, offers deep insights into employee turnover. With 1,400+ observations and 35 features, it's a rich source for understanding attrition factors. Researchers and HR professionals can utilize it to inform retention strategies, thanks to its comprehensive coverage of demographics, job-related variables, and satisfaction metrics. The dataset's size ensures robust analysis. In short, it's a valuable asset for tackling employee turnover effectively.

SOME INSIGHTS

1 — The workers with Human Resources and Technical Degree are more likely to quit than employees from other fields of educations.

2 — The workers who travel alot are more likely to quit than other employees. Most of the employees in the organization Travel Rarely.

3 — Most of the employees are between ages 30 to 40. The organization has 20% more males than the female employees. Male employees are leaving more compared to female employees.

4 — The worker in Research & Development are more likely to stay then the workers on other departement.

5 — The workers who have Single marital status are more likely to quit than the Married, and Divorced.

6 — The employee attrition rate of this organization is 16.12%. Ideal attrition rate ranges below 10& & is normal in organization. So we can say the attrition rate of the organization is at a dangerous level.
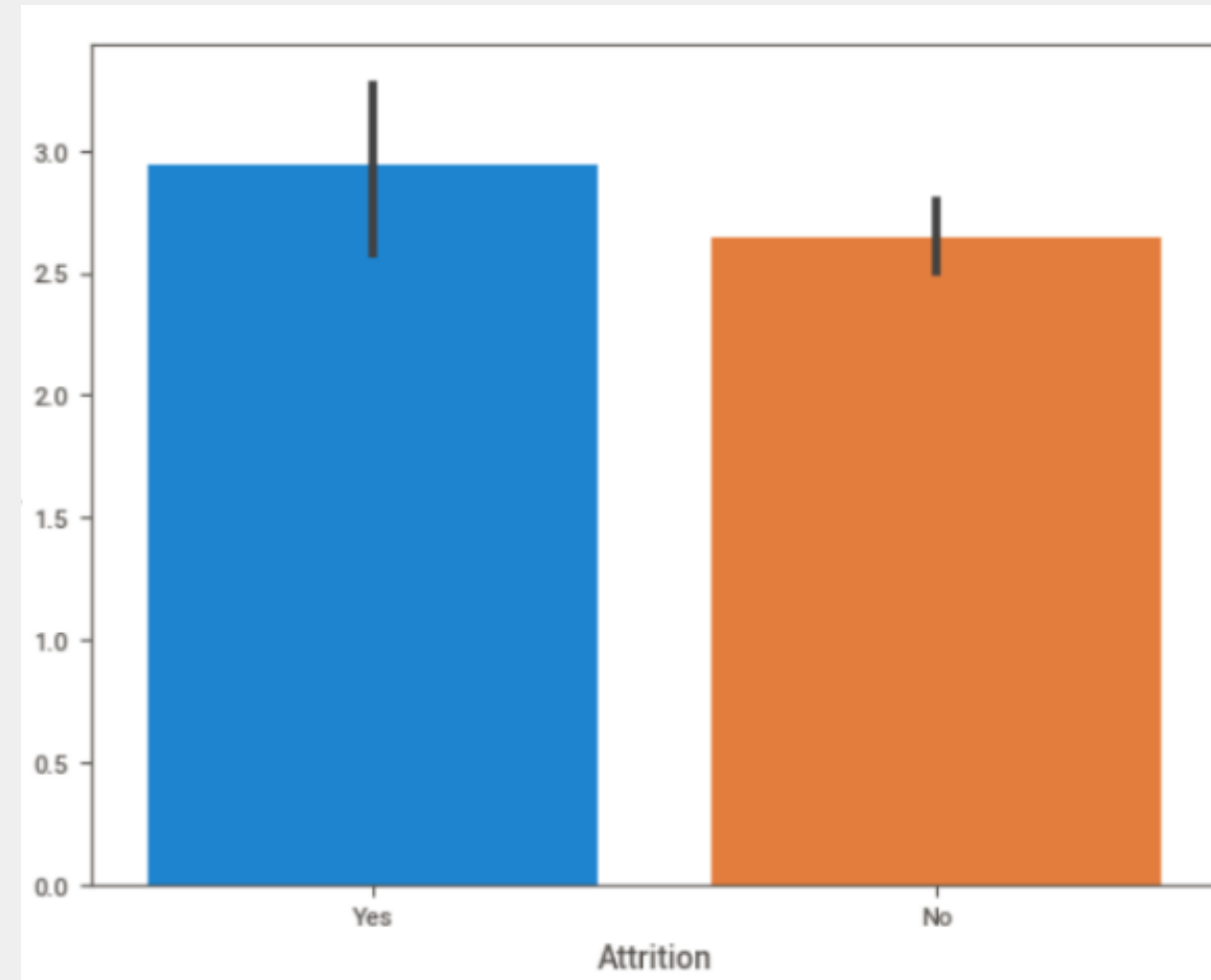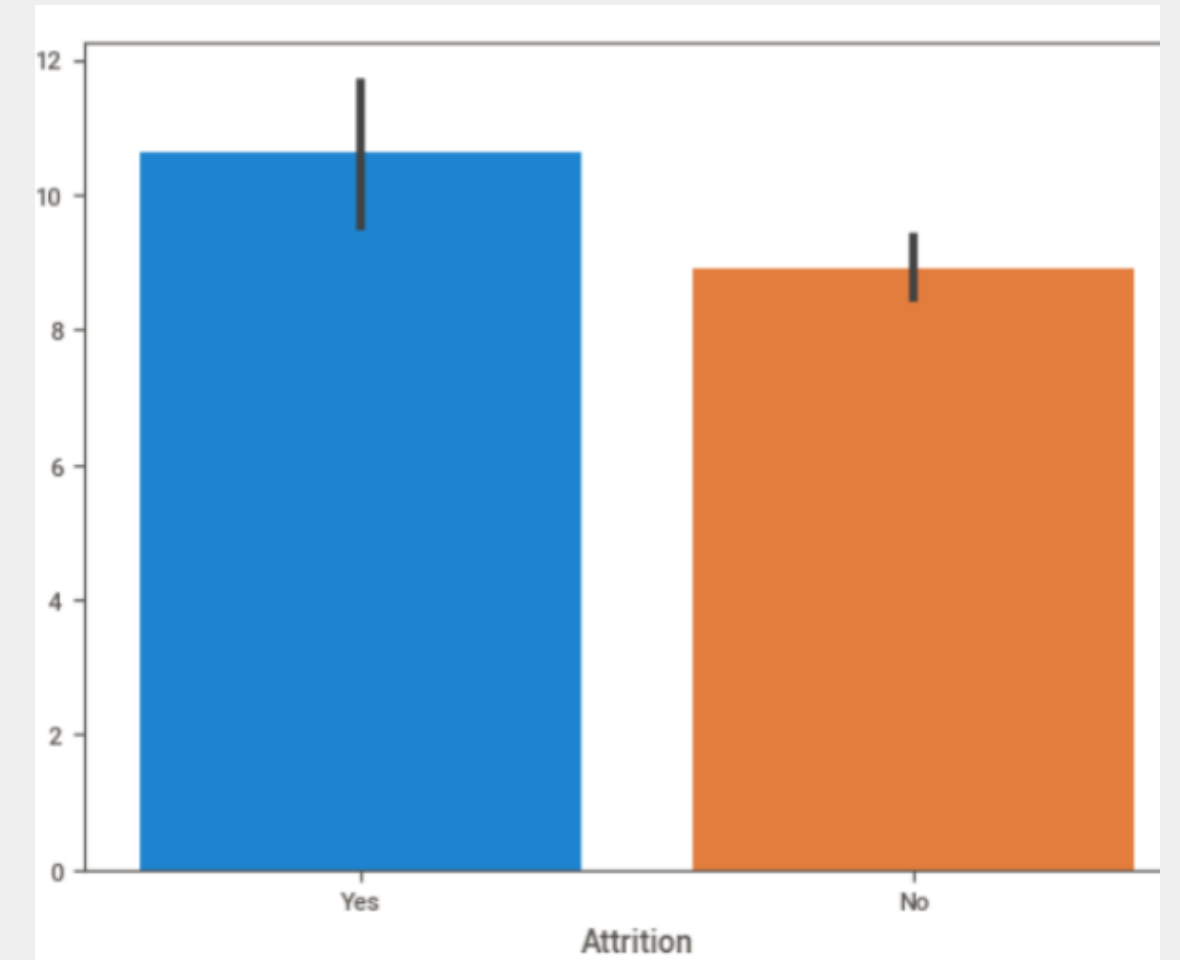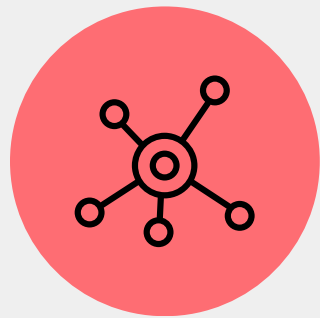
VISUALIZATIONS
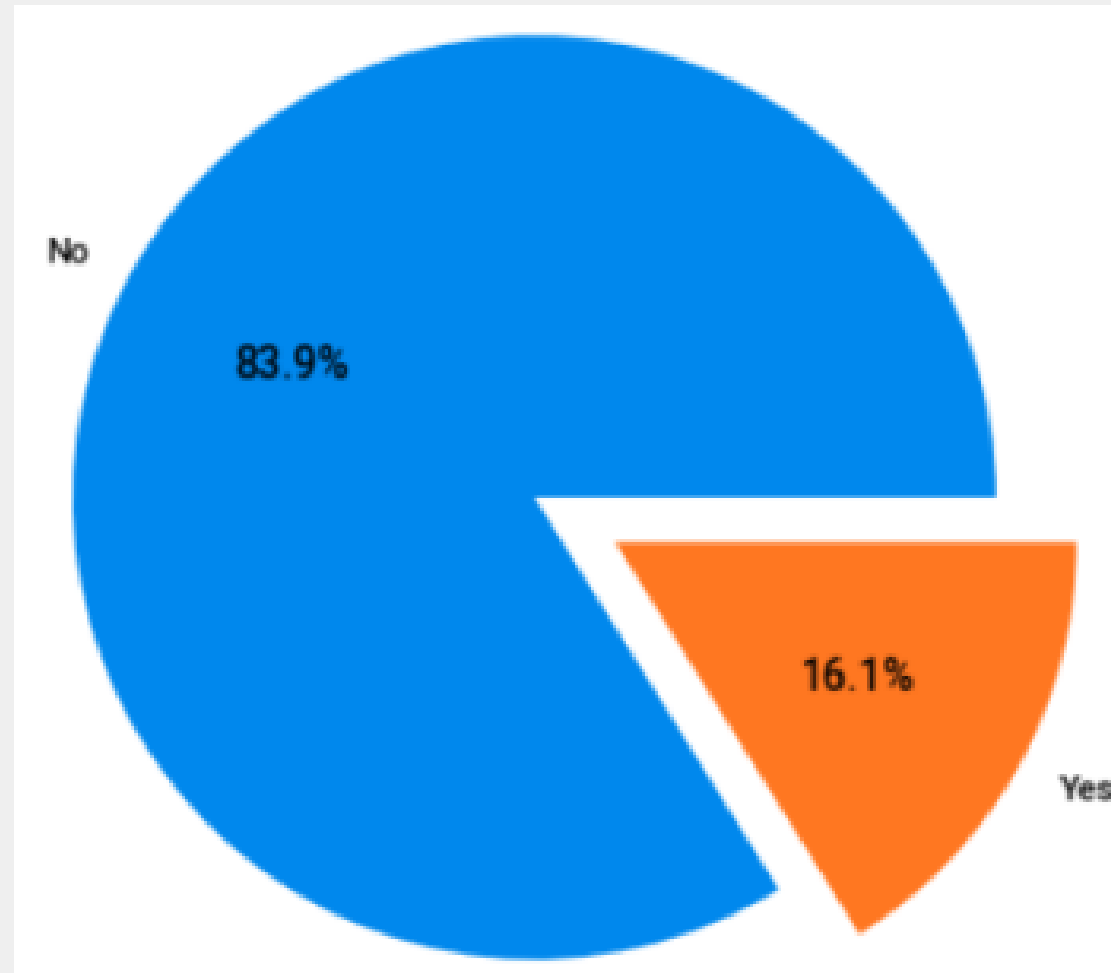
PERCENTAGE OF ATTRITION

NO. OF COMPANIES WORKED IN

ATTRITION BASED ON DISTANCE FROM HOME
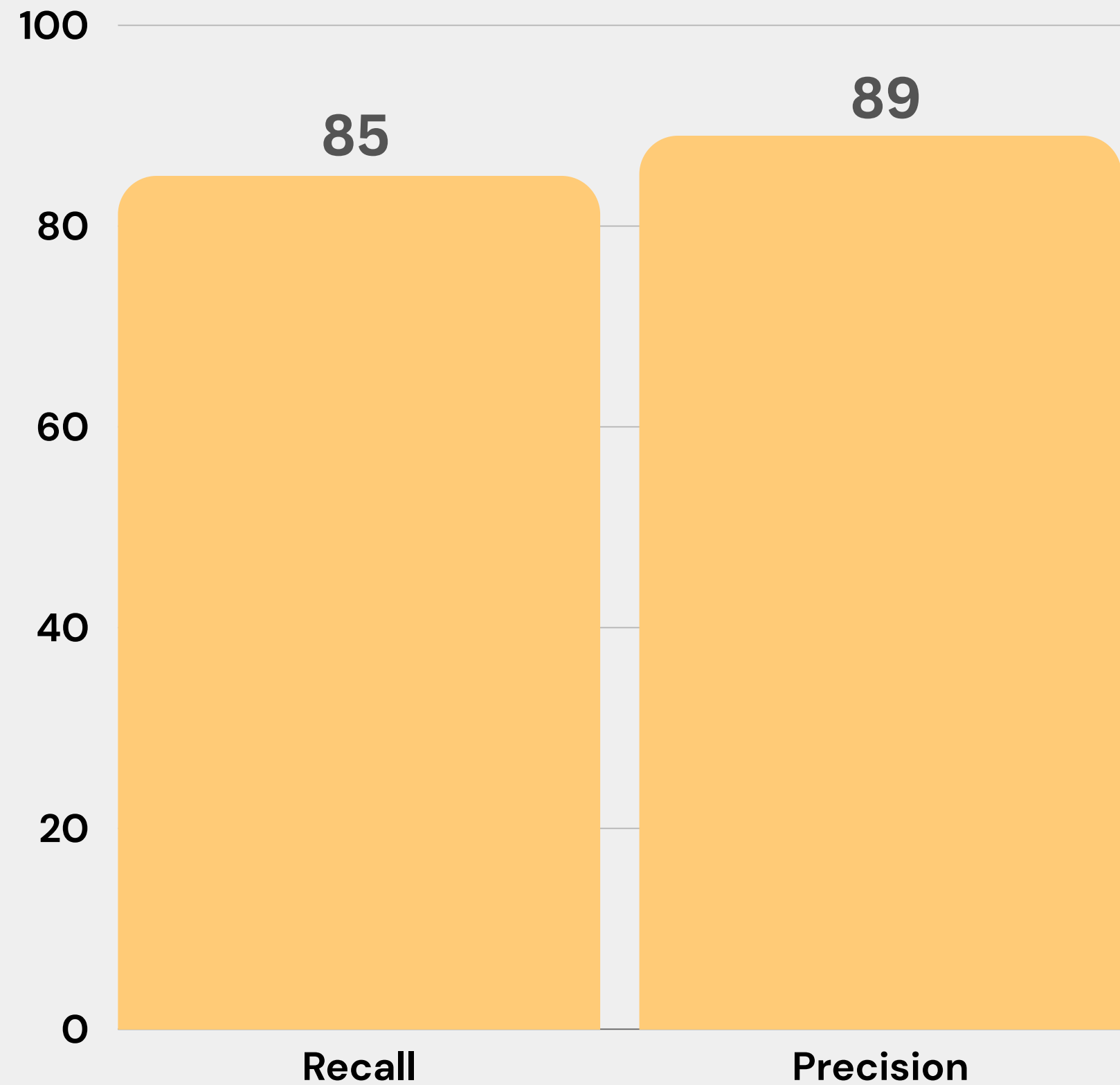
DECISION TREE CLASSIFIER

TRAINING & TESTING DATA
Using Sklearn library, we split the data into training and testing set. 25% of the entire dataset is given for testing, rest is for training.

PERFORMANCE METRICS
The classification report shows us that the dataset has 85% recall score and 89% precision score.

CONCLUSION

Employee attrition is a major concern for companies, but by using data analysis, companies can gain valuable insights into why employees leave and take proactive measures to improve retention. The IBM HR Dataset is a valuable resource for this, providing a wide range of variables that can help companies understand the root causes of attrition and improve employee engagement. By using this dataset, companies can reduce turnover rates, identify areas of impovement, and create a positive work environment for their employees.