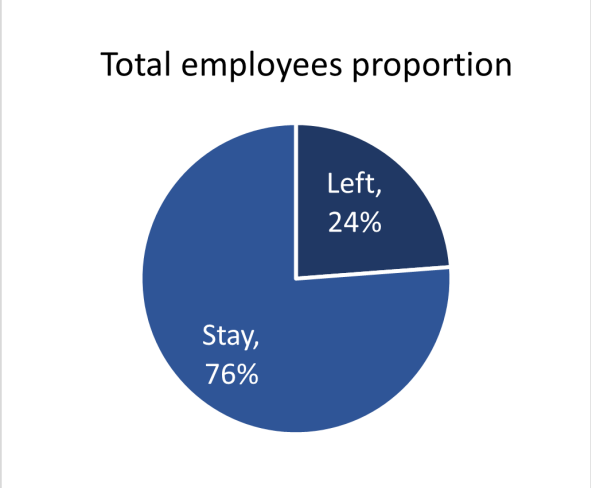
Human Resources Data Analytics

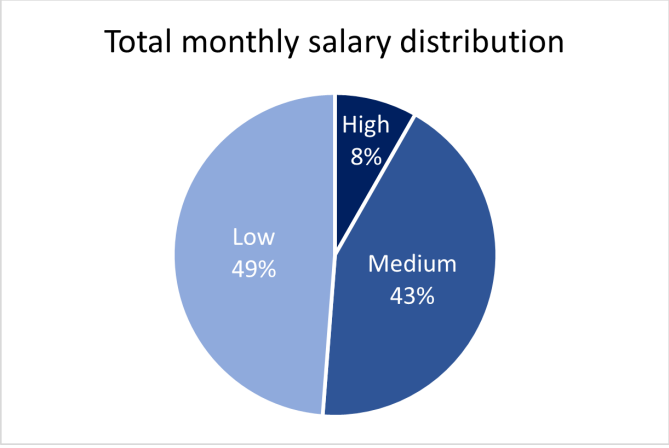
Introduction

The goal of this project is to analyze the data collected by the HR department and to understand which are the factors causing the current employee churn rate. This information can then be leveraged to enhance employee satisfaction and decrease turnover.

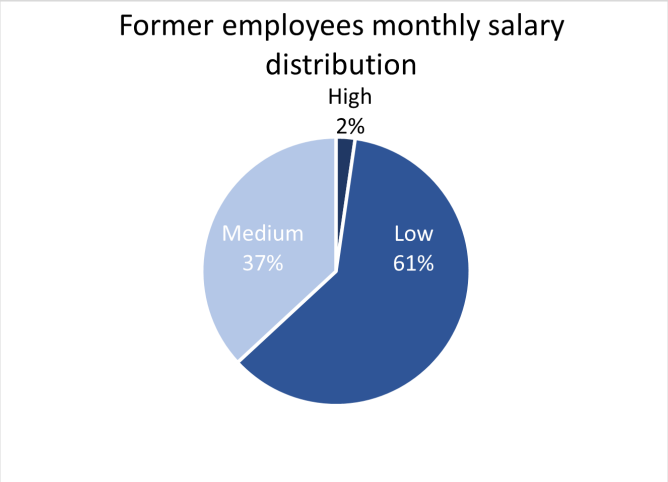


The dataset provided has ~15000 employee records. The graph displays the distribution between currently employed personnel and former staff.

Each employee's monthly salary falls into one of three categories: High, Medium, or Low.

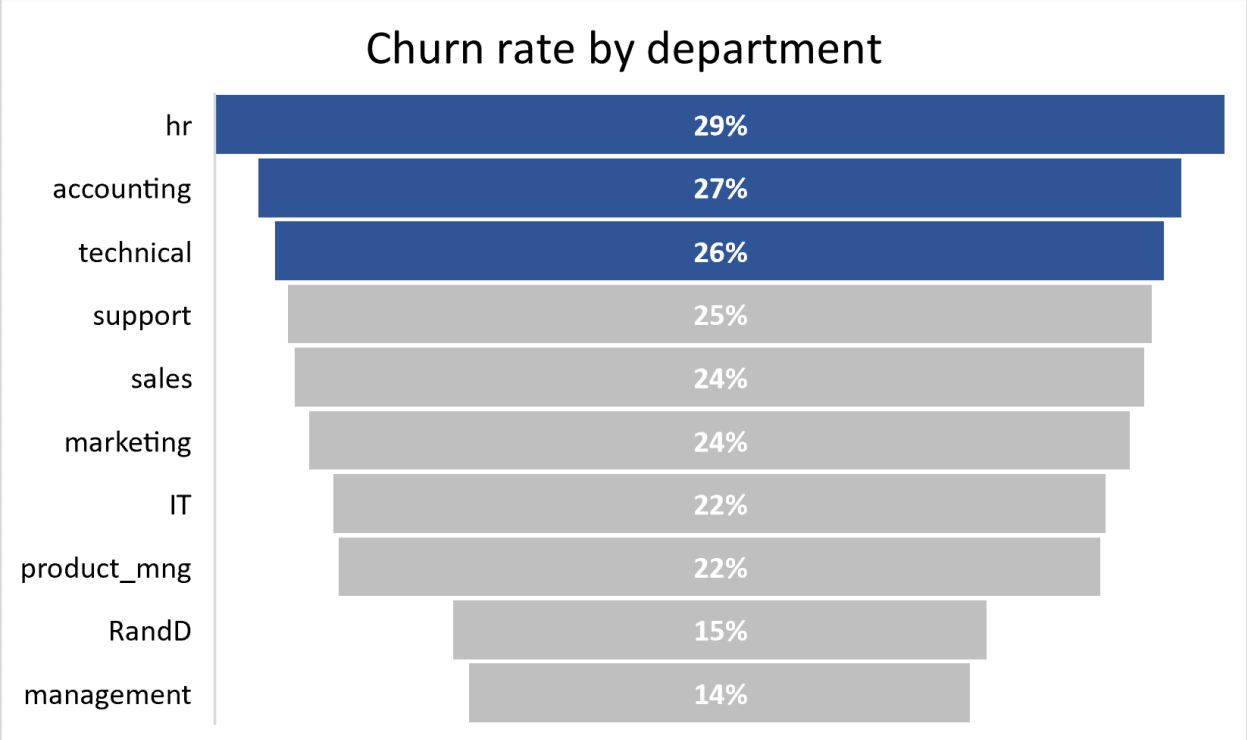


When examining the monthly income of the former employees, it is evident that the majority earned a low-tier salary. Together, the low and medium salary levels accounted for 98% of the total salary distribution among these employees.

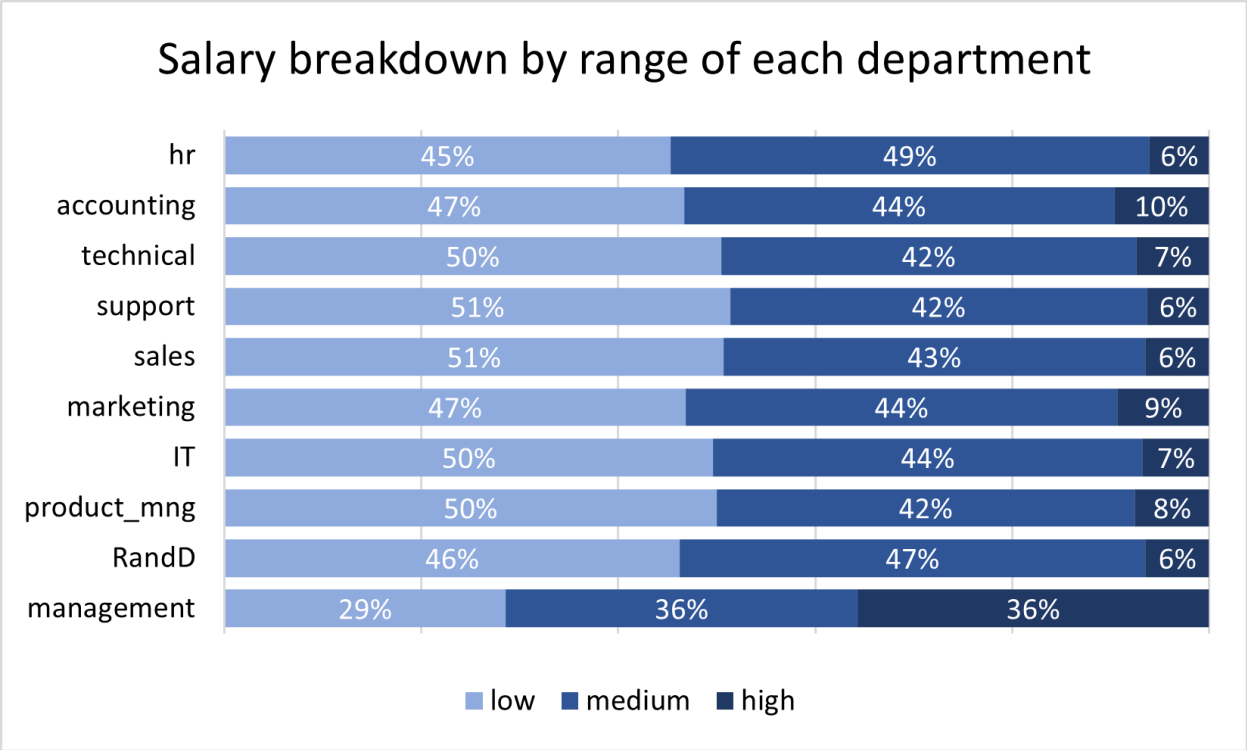


Focusing on Departments

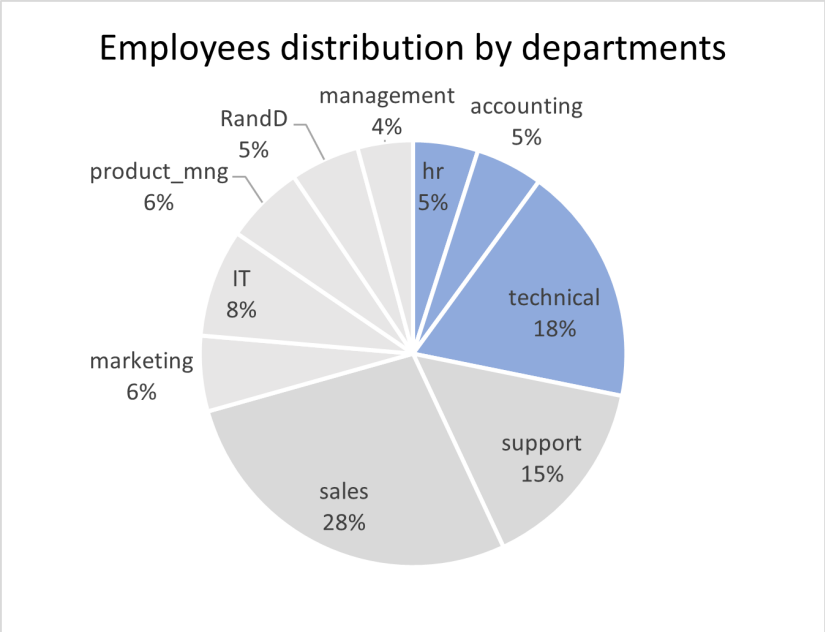
The company's churn rate is 24%. The following graph provides a detailed view of the churn rate in each department.



Now, our analysis will focus on the three segments with the highest churn: HR, Accounting, and Technical. As seen in the following graph, departments with the most churn also have the majority of employees in the low and medium salary range.

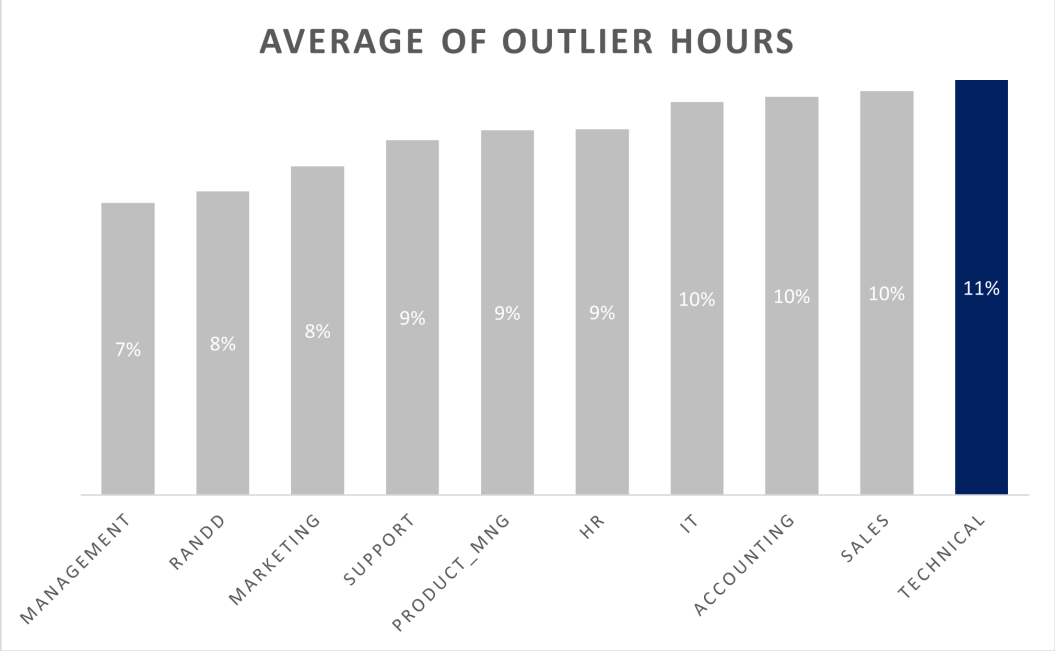


The graph indicates that medium and high salaries boost the retention rate to some extent.



Even though the departments with the highest turnover might not have a large number of employees, we should assess the challenge of recruiting skilled employees in these areas.

Upon examining those who work exceptionally long hours, specifically employees in the 90th percentile for total monthly working hours, it is evident that the Technical department has the majority of these employees.



Summary and Recommendations

The company's overall churn rate is currently at 24%, which suggests potential issues as the industry average lies between 7% and 8%.

We have identified employees from the Technical, Accounting, and HR sectors as candidates for a pilot program aimed at reducing the churn rate. Among these, the Technical sector comprises the largest employee segment with 18% of the total company headcount and a 26% churn rate. The other two sectors combined account for 10% of the total employee count.

Low salary ranges and extensive working hours could be contributing to the high churn rate. The Technical sector, where 11% of employees work more than 267 hours monthly —surpassing the 90th percentile—is a prime candidate for a pilot program. This program would aim to enhance the retention rate by addressing working hours and salary range.