

Big Bug Consulting

WHAT IS CAUSING ATTRITION?

How to prevent it?





Process





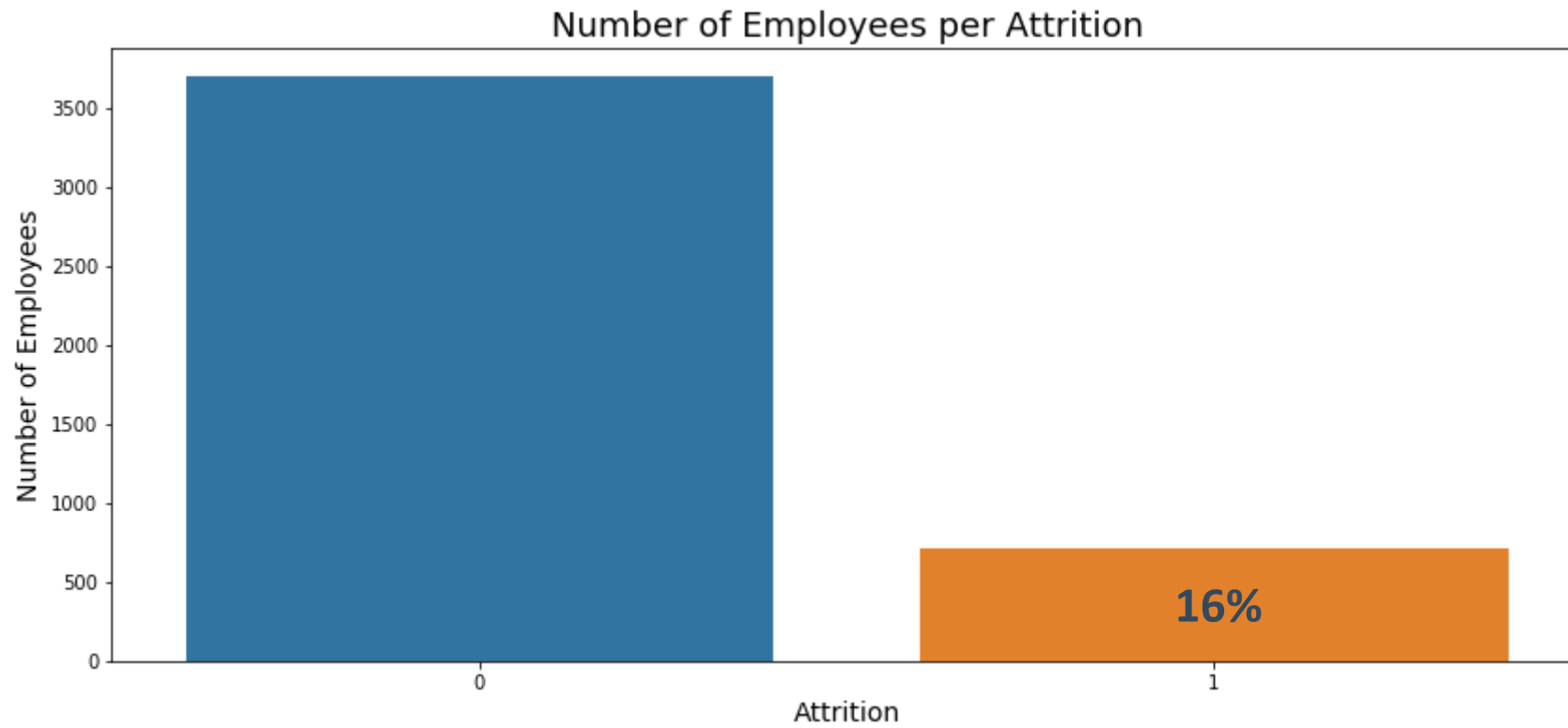


Explore





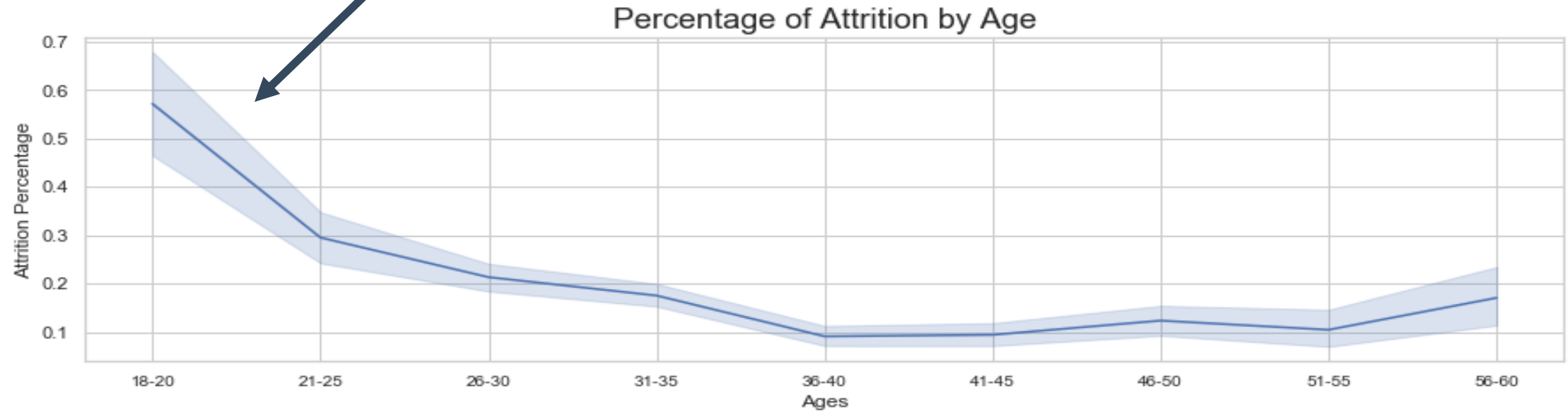
Attrition





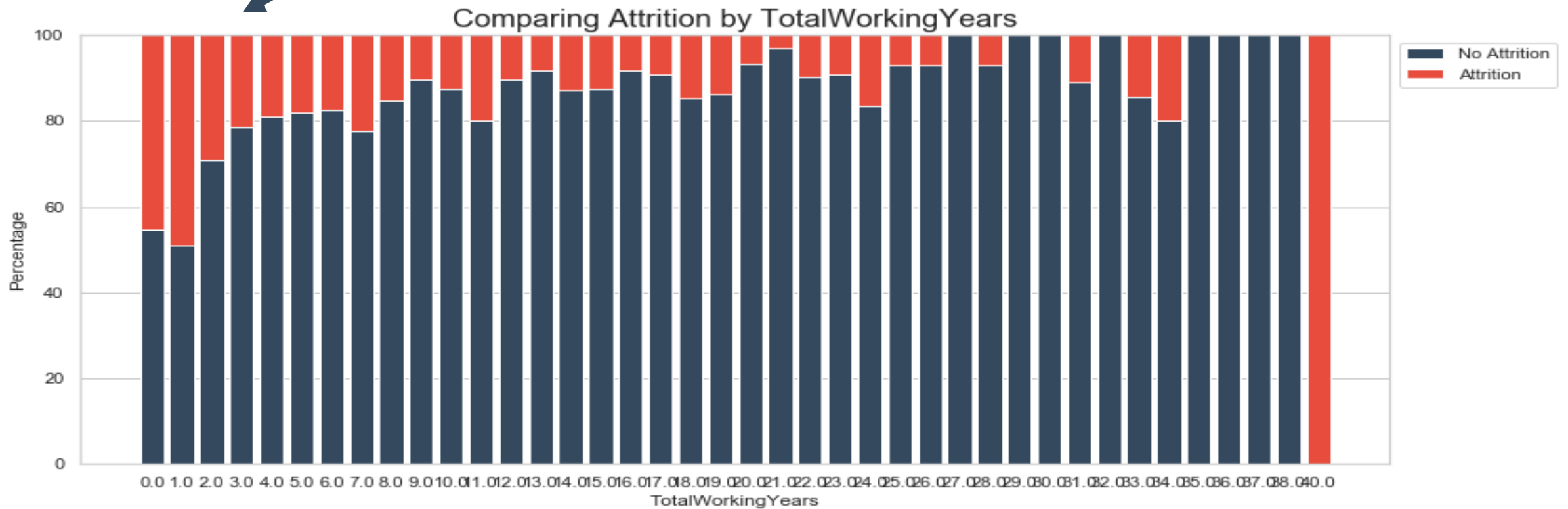
Age

Younger employees are more tend to quit than older employees.



»»» Total Working Years

Employees with less years of experience are more tend to quit.

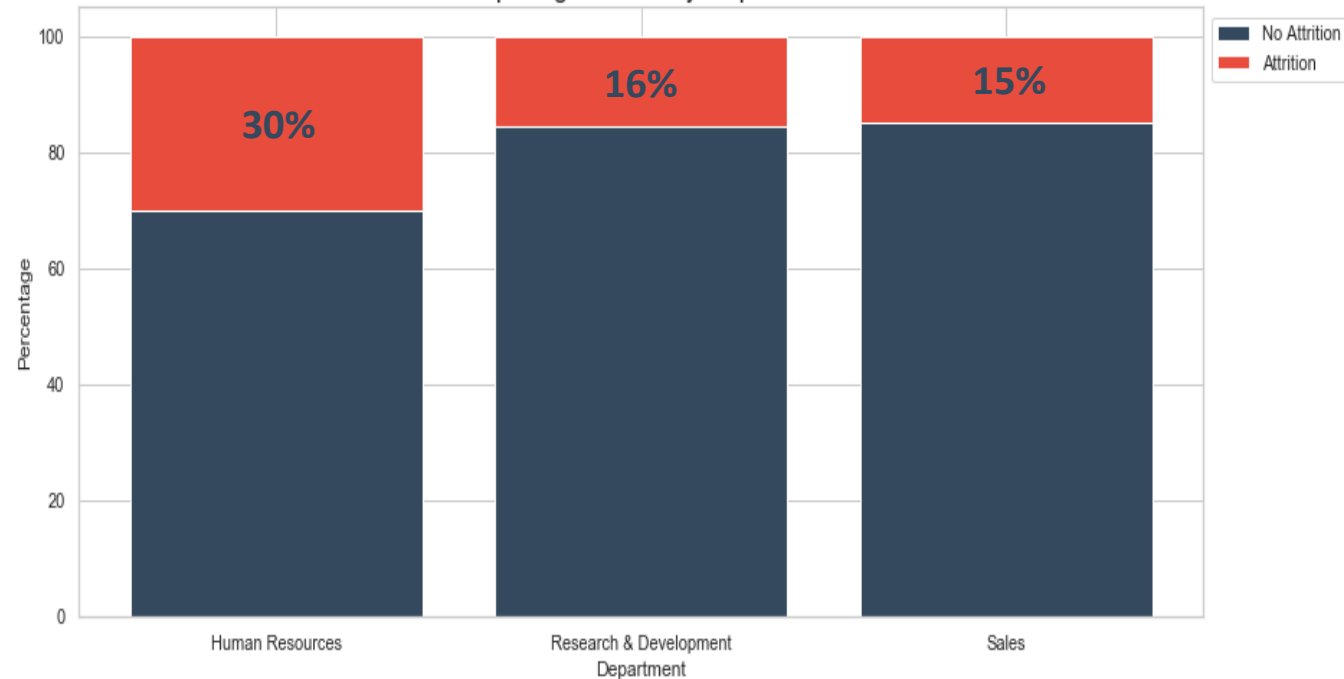




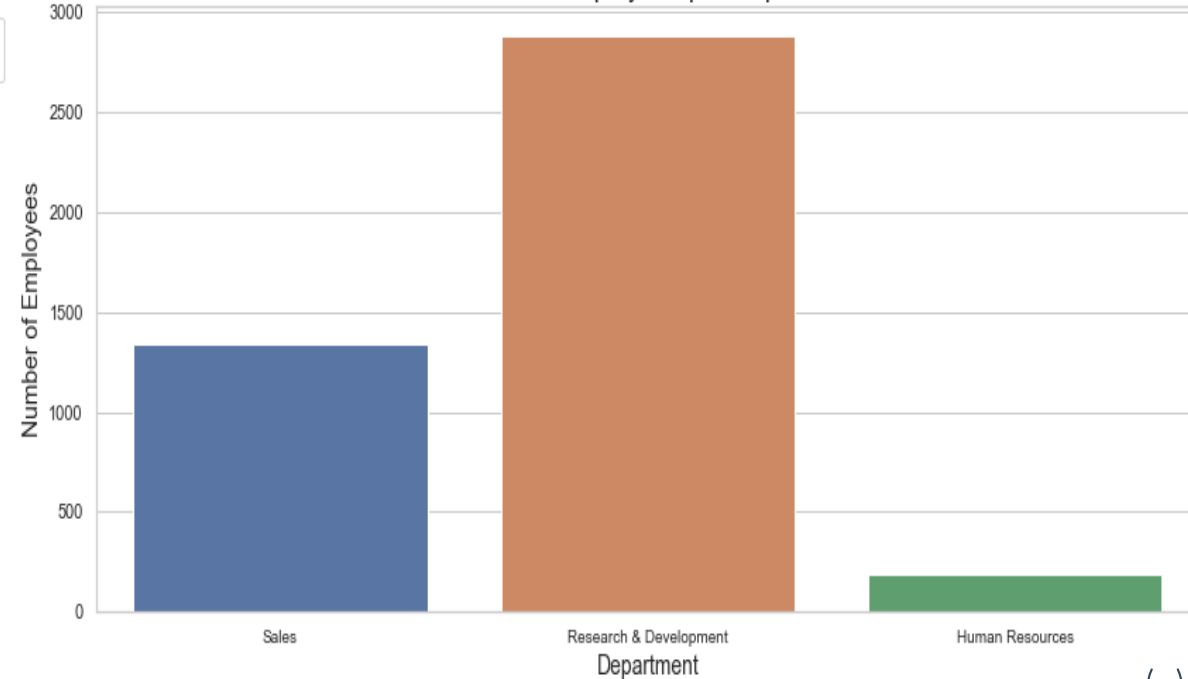
Human Resources Department

- 30% of attrition in HR department.
- 34% of the HR employees that leaved rated the lowest value in the Work Life Balance survey.

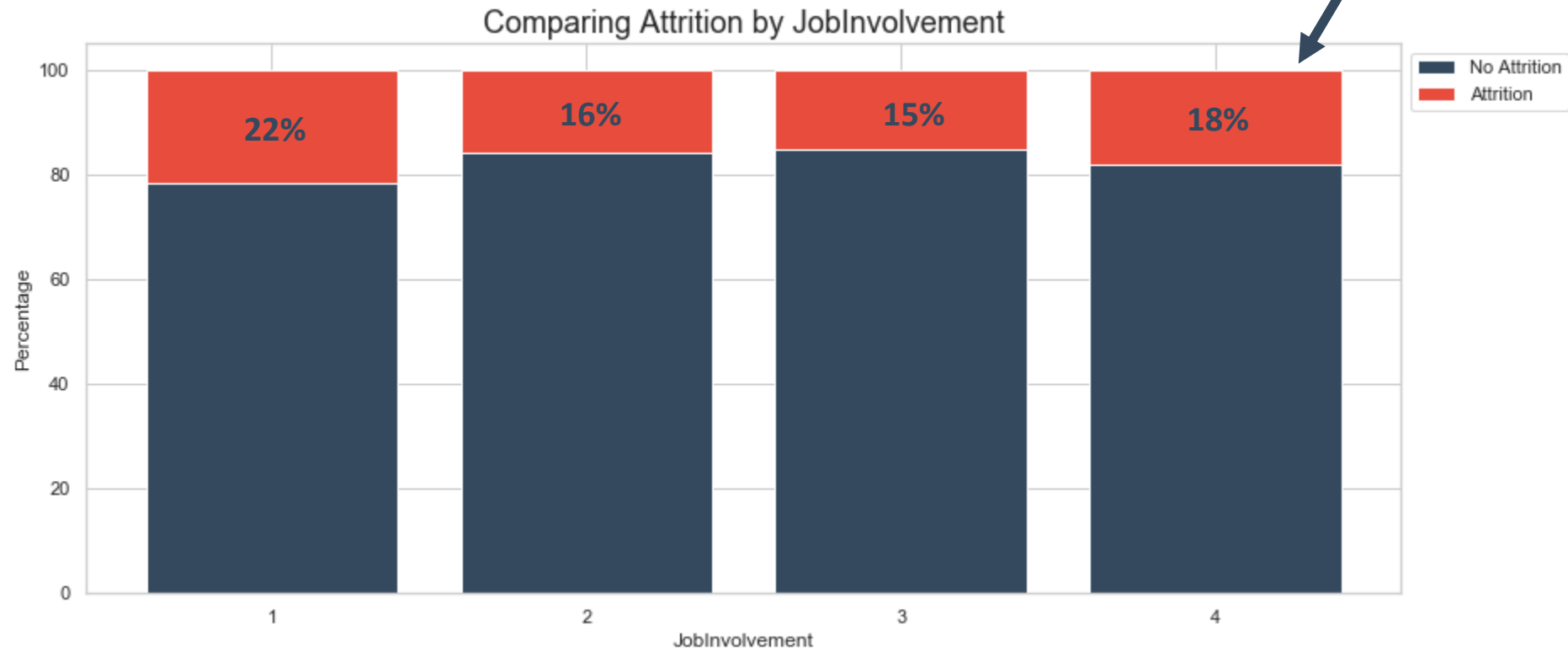
Comparing Attrition by Department



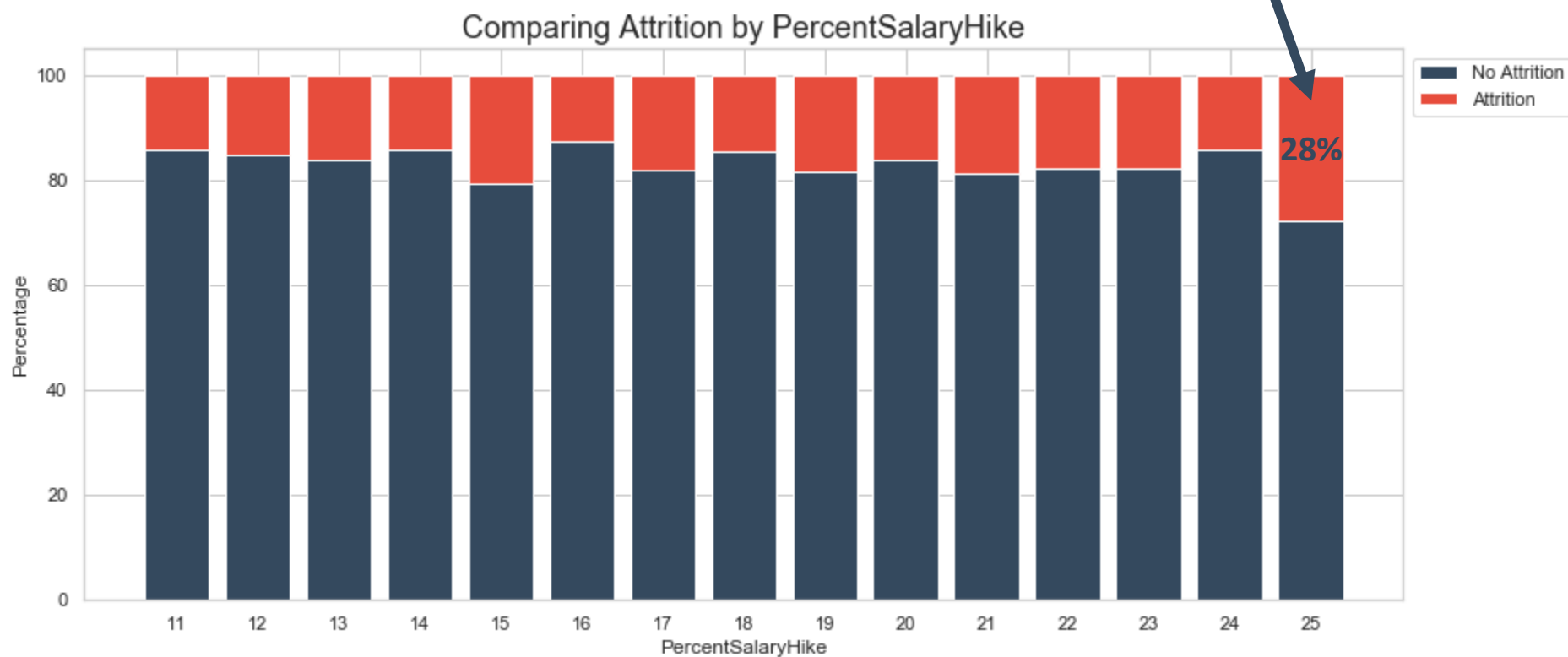
Number of Employees per Department



Job Involvement

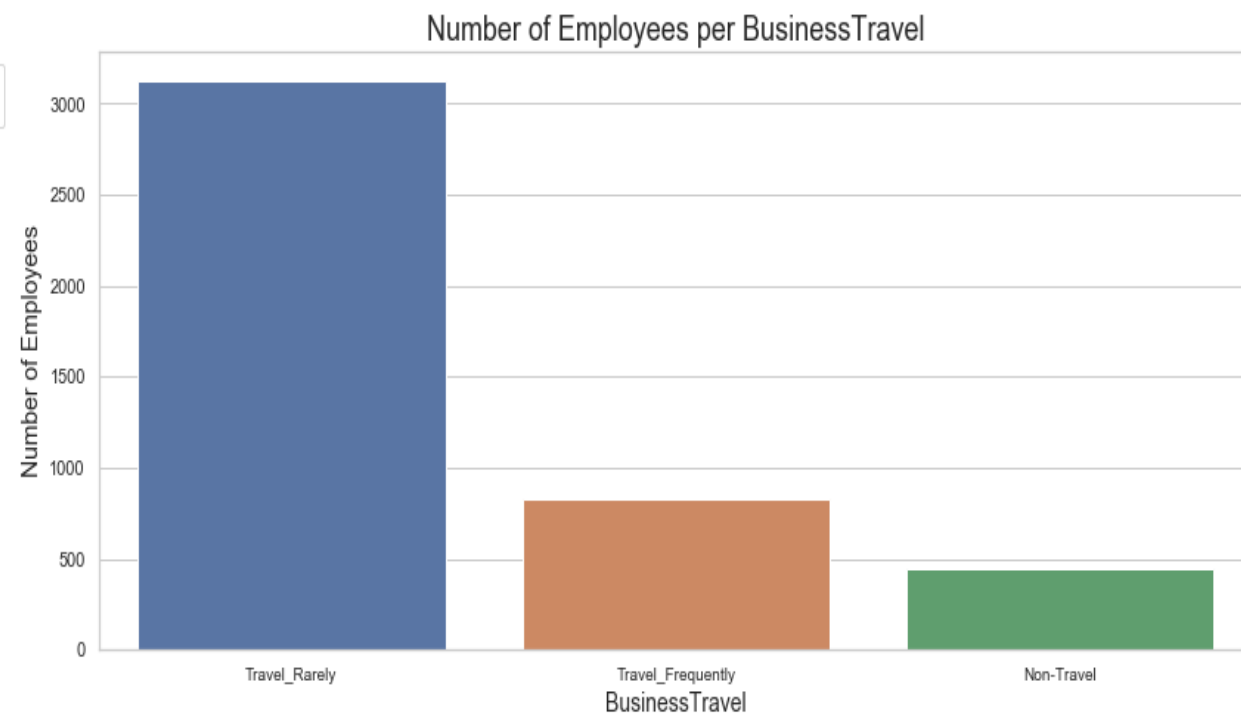
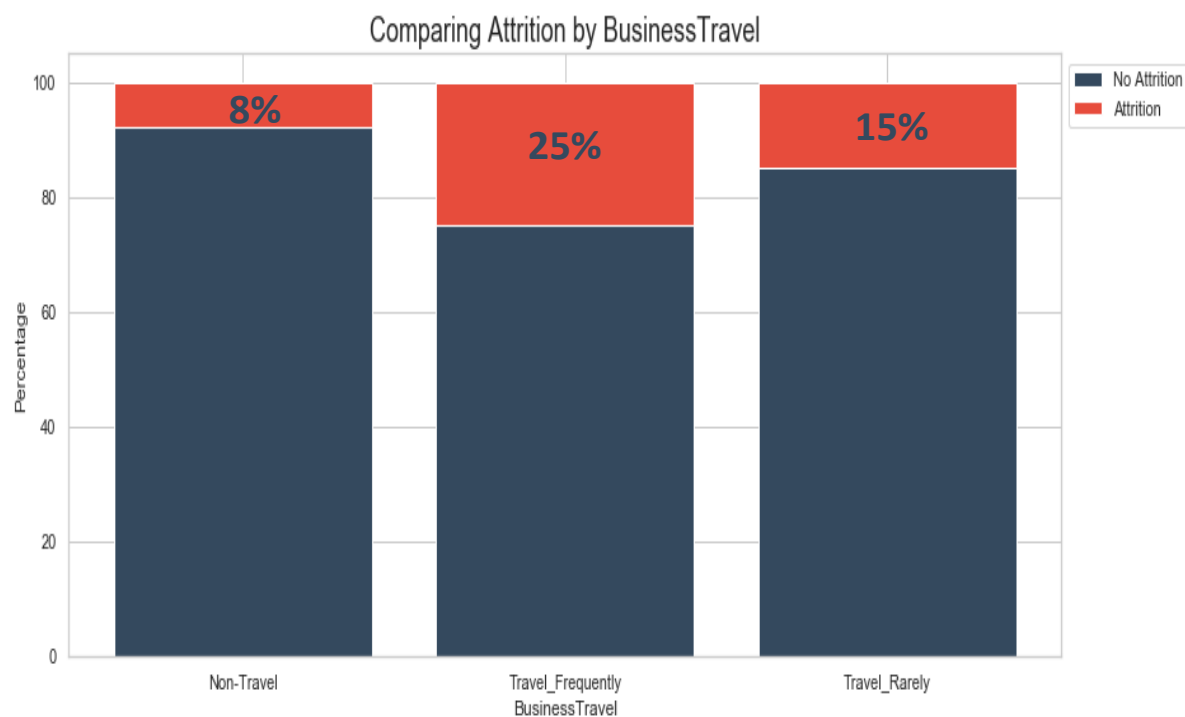


Percent Salary Hike



Travel Frequency

- 25% of attrition on employees whose travel frequently and 15 on those who travel rarely.
- Is it necessary to travel nowadays?

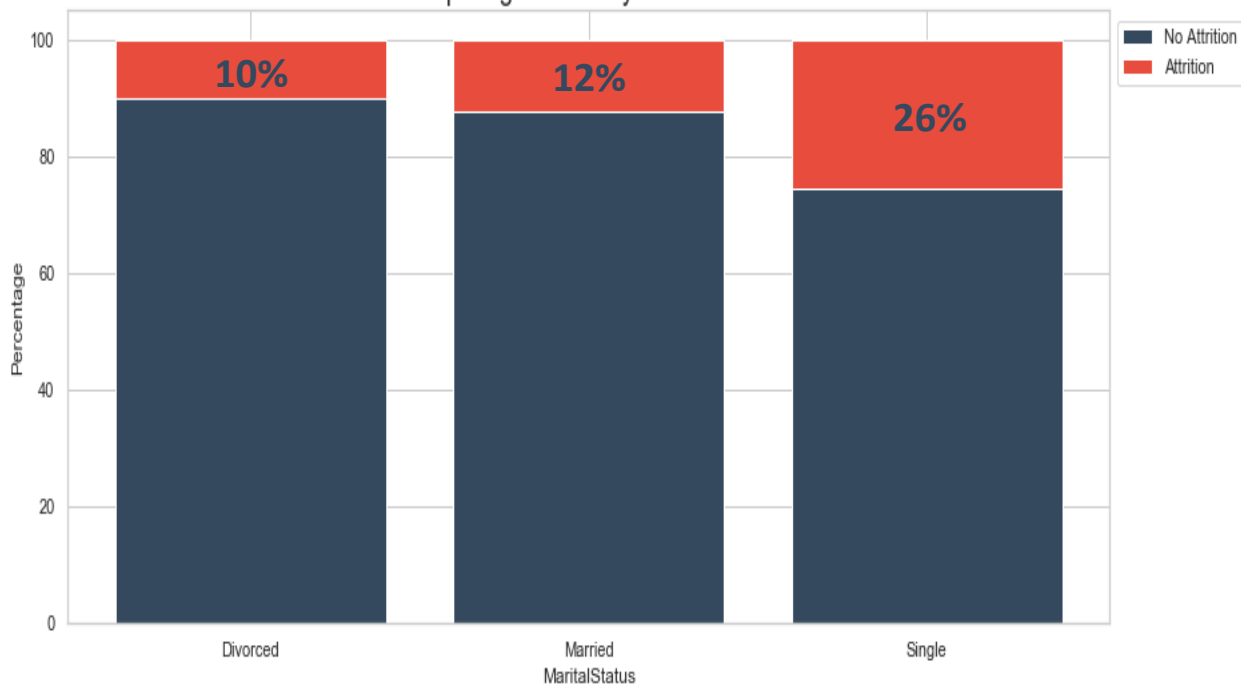




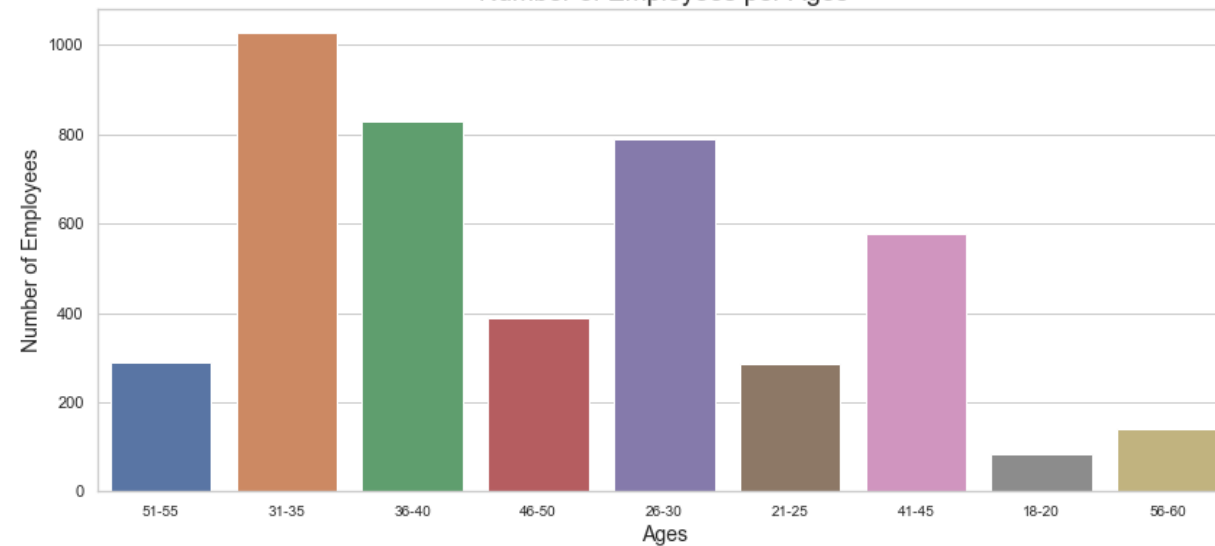
Marital Status

- Single employees are 26% prone to leave the company.

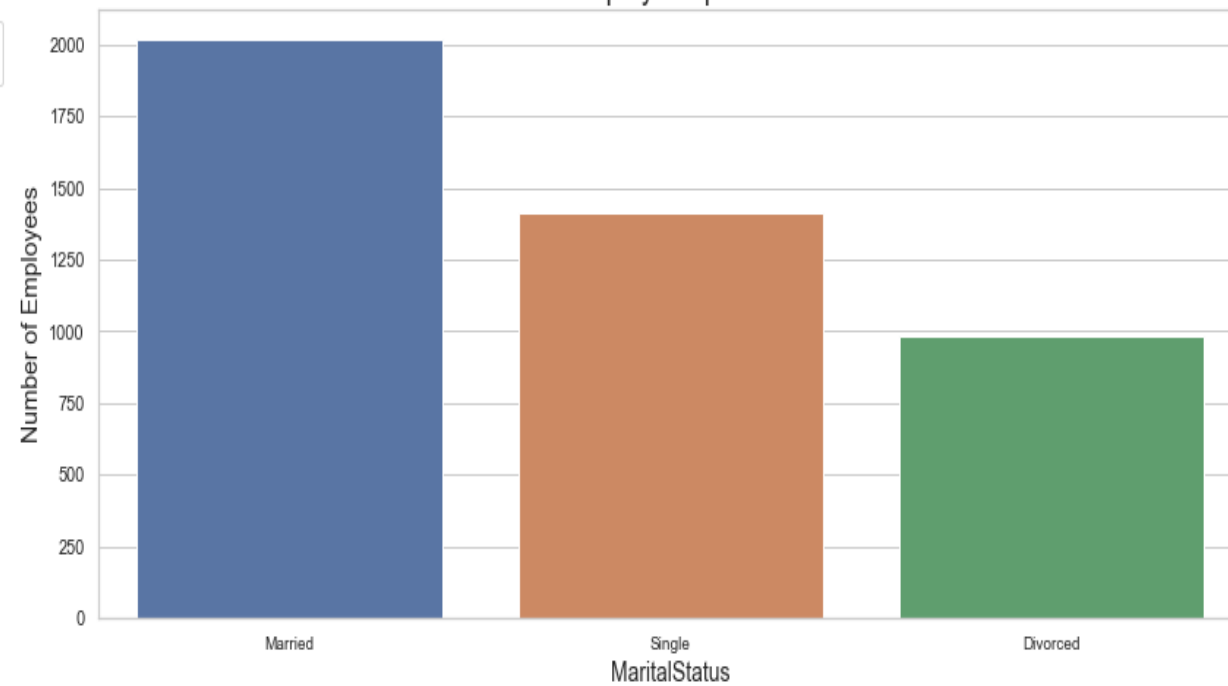
Comparing Attrition by MaritalStatus



Number of Employees per Ages



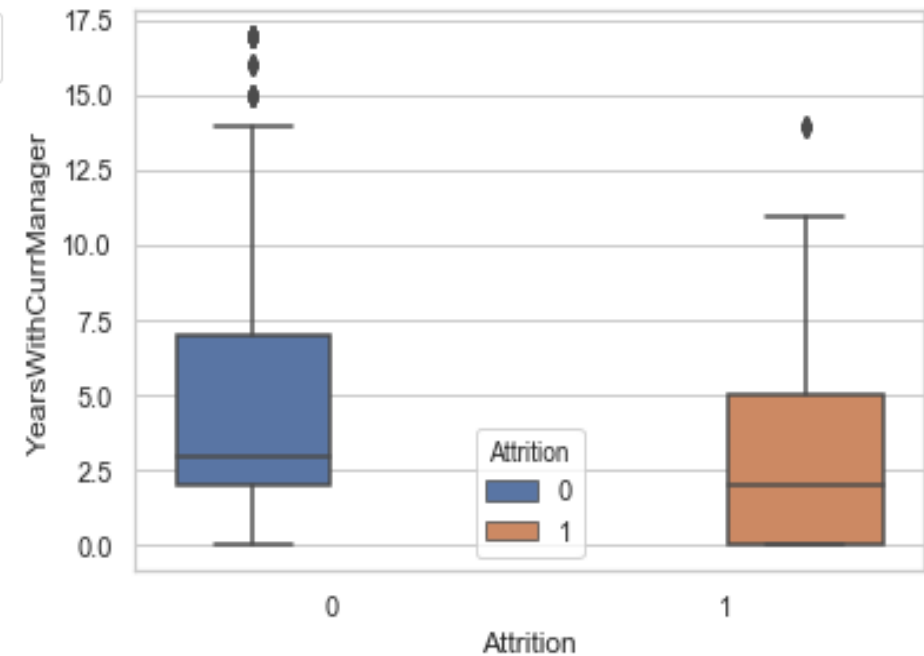
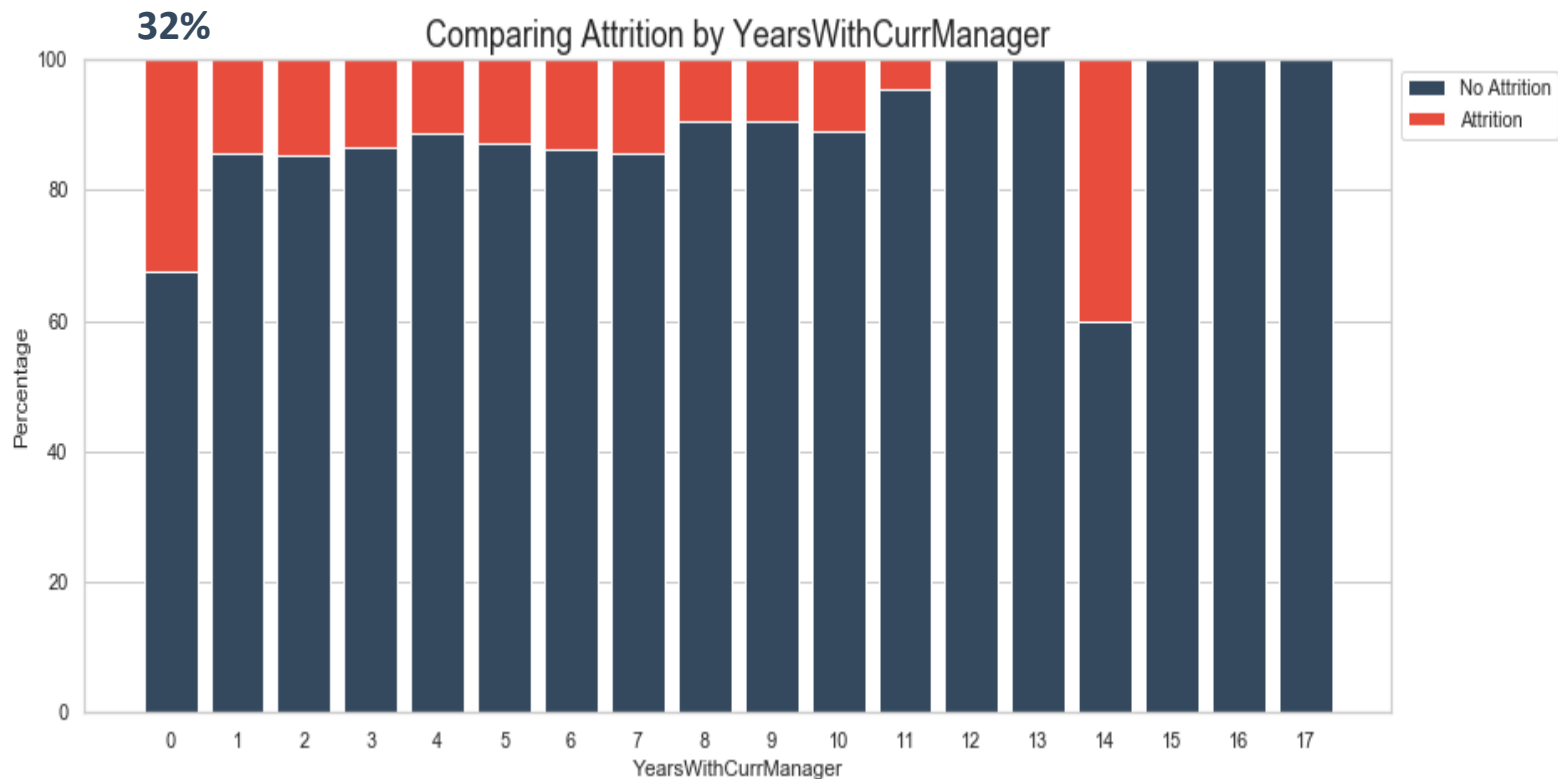
Number of Employees per MaritalStatus

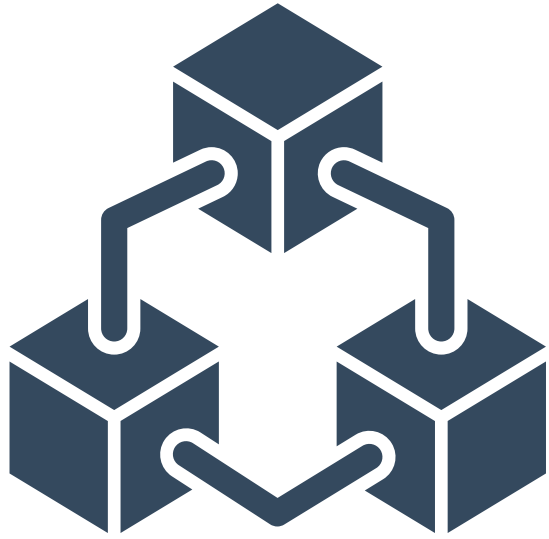




Years With Current Manager

- 14% (42) managers leaved the company last year.





Model





RANDOM FOREST
SCORE : 93%



DECISION TREES
SCORE : 86%

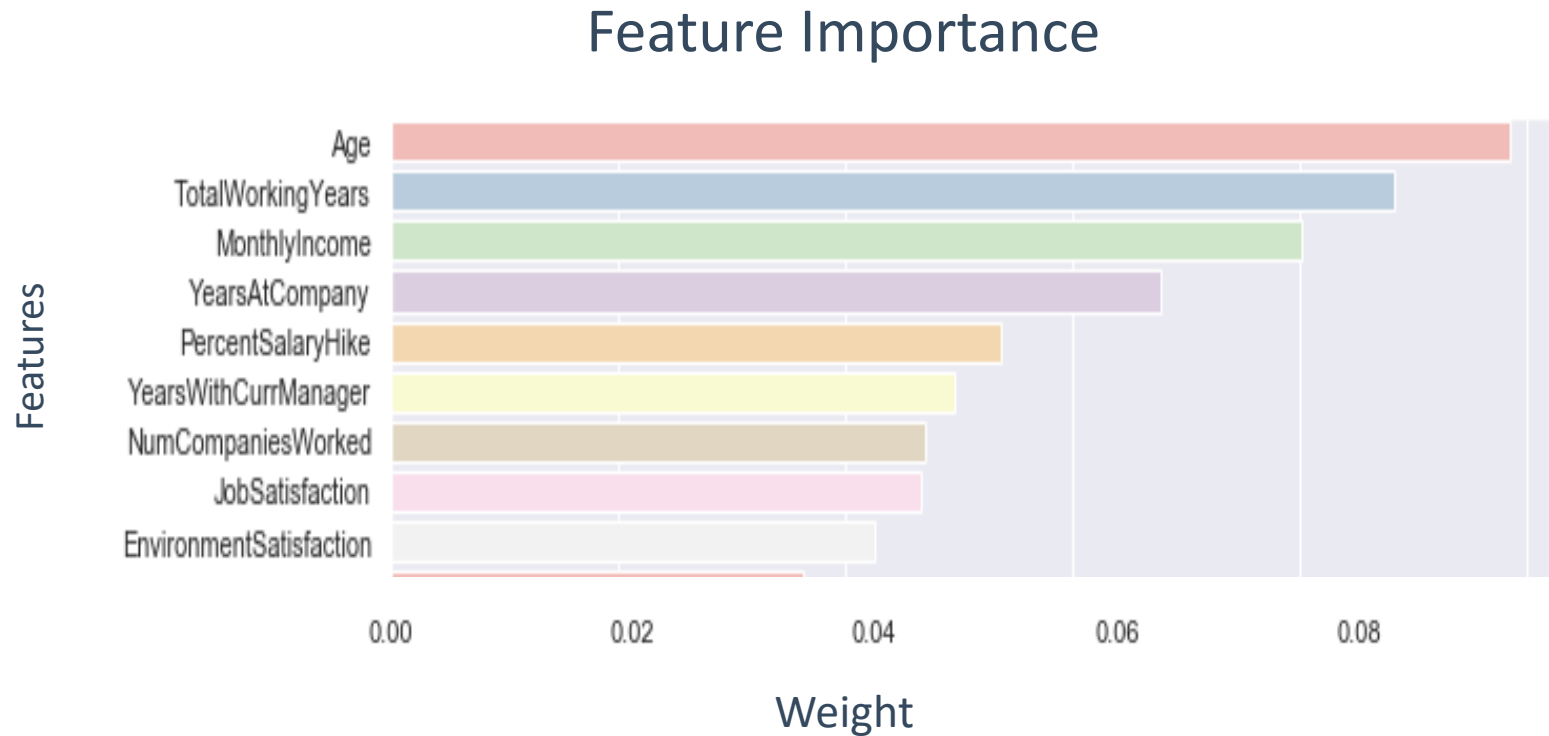


ADABOOST SCORE :
84%



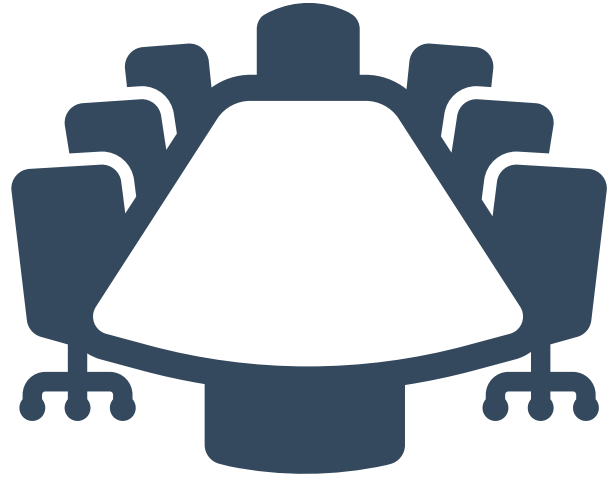
LOGISTIC
REGRESSION SCORE :
84%

Model Selected: Random Forest Classifier



Model accuracy: 93%





Results



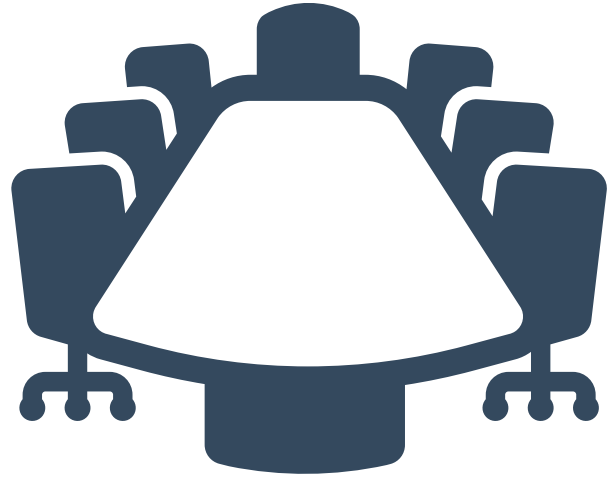
- Employees with less worked years have more probabilities to leave the company than employees with more years worked.
- 57% of employees from 18 to 20 years old leaved the company last year.
- 29% of employees from 21 to 25 years old leaved the company las year
- Human Resources department has problems, Are they hiring under the right profile? Are they hiring on time?
- We can see more turnover on 4 rated employees in Job Involvement than those who got 1.
- We can also see that the highest percentage of turnover is in those employees who had the highest salary increasing. Why are they increasing 25% their salary and leaving the company?
- Those employees with 1 year with their current manager tend to leave more than those with more. This is particularly interesting assuming that 14% (42) of the managers leaved the company last year.
- Single employees are 26% prone to leave the company.



RecommenData



- **Increase age target from 30 to 45 if possible.**
- **Hire more married or divorced employees if possible.**
- **If experience is needed, more than two previous Jobs.**
- **Review Human Resources work conditions and people management.**
- **Develop programs to retain talent.**



Future Work



- **Are the employees leaving the company or getting fired? Does the company save the employee's resignation reasons?**
- **Determine the cost of internal/external trainings and why some employees have 1 and others 6.**
- **When an employee leaves, the company needs to know why. If is going to a better position we can assume that we are losing talent.**
- **Is the salary increasing the only incentive that the company offers to employees to stay?**
- **It would be great to have some business results.**



Thanks!

