HR Analytics Case Study

By:

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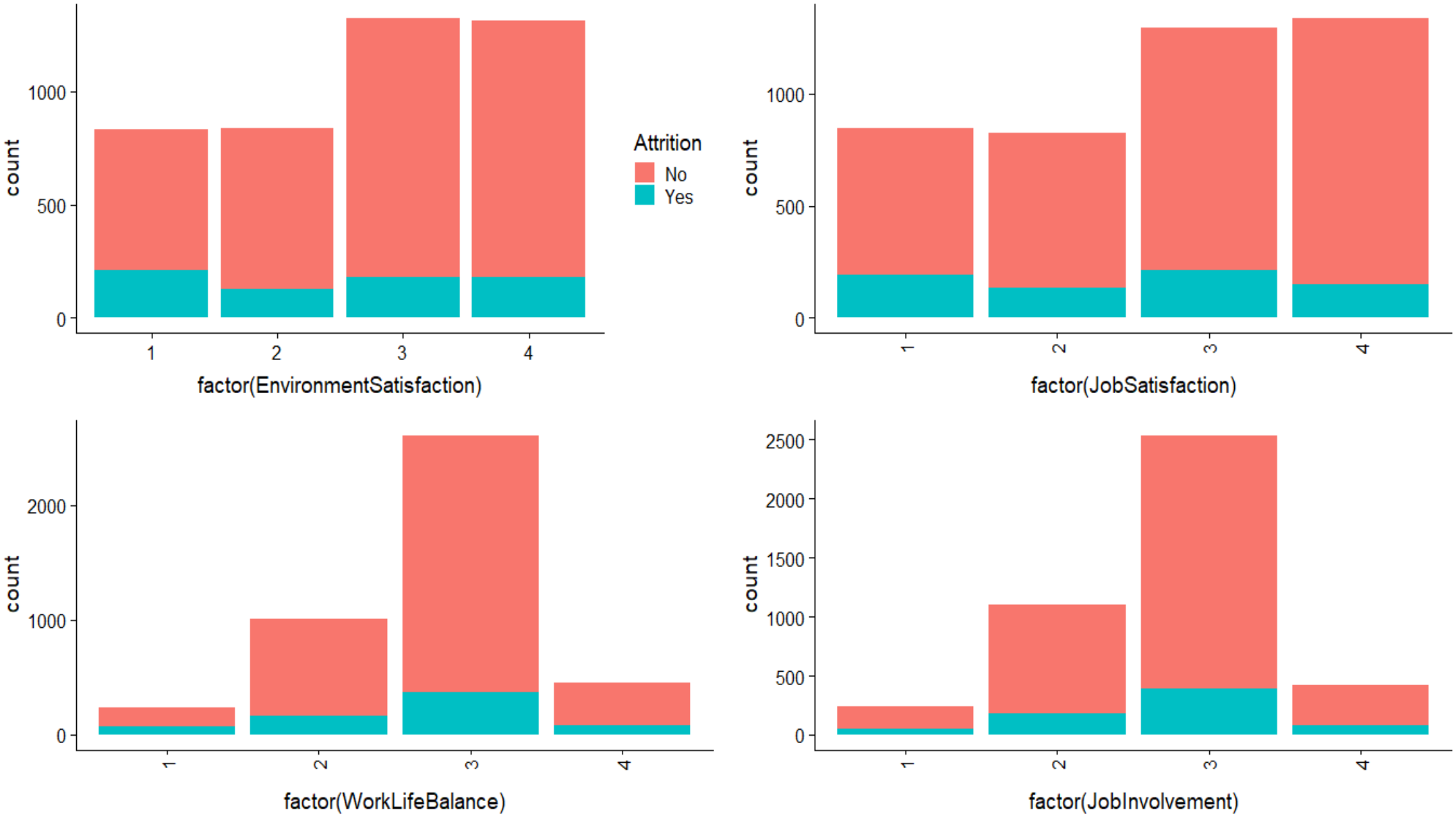
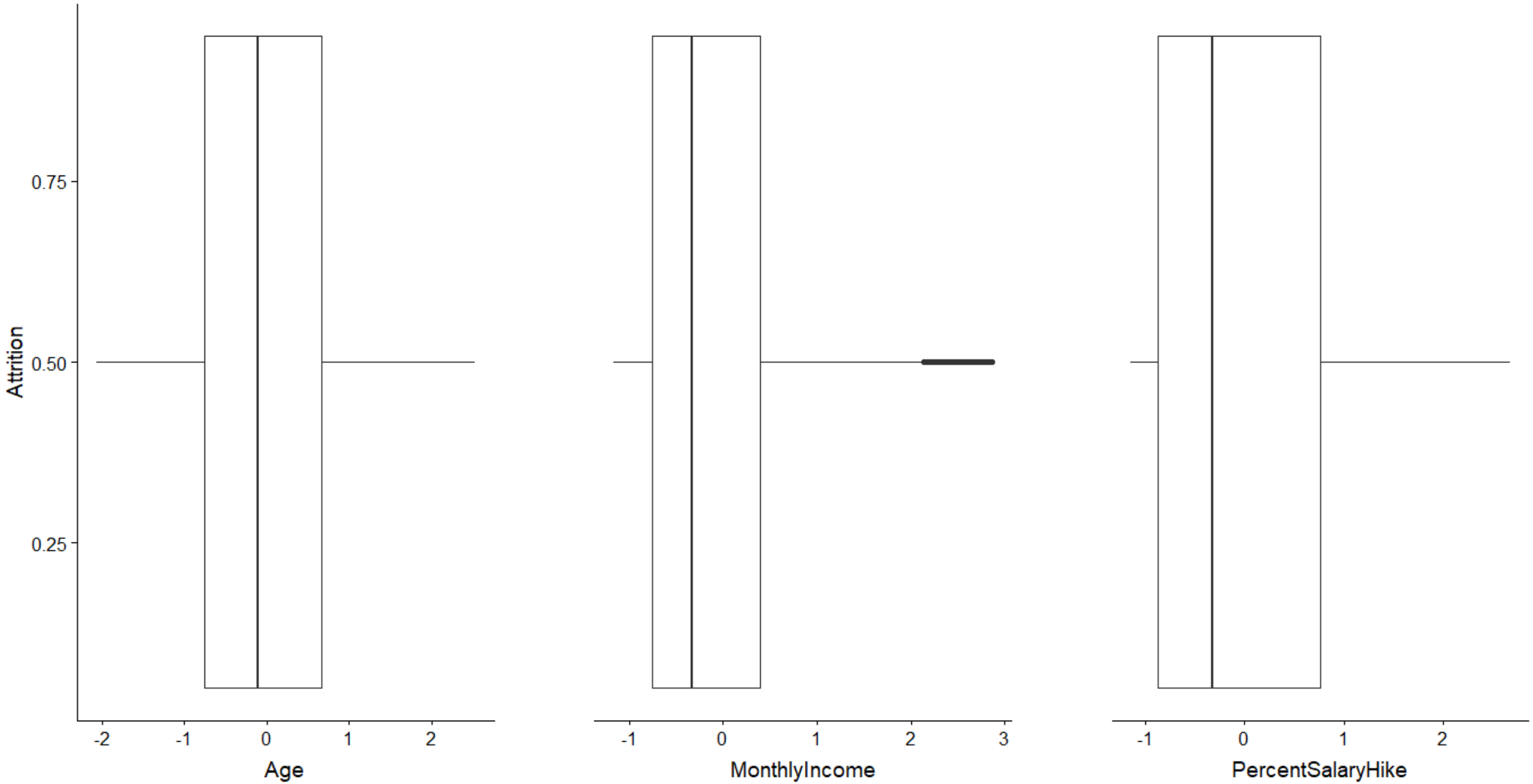
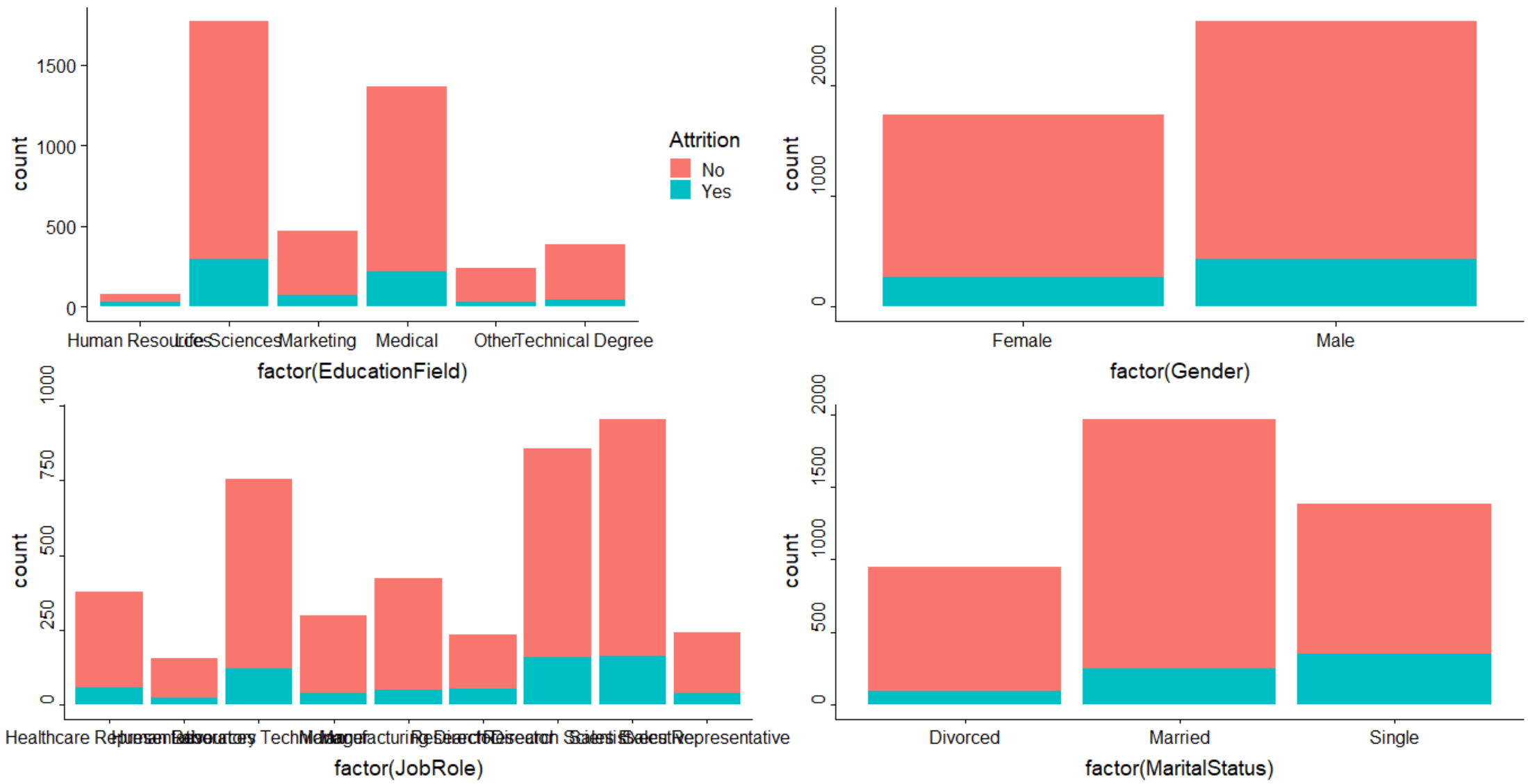
ABSTRACT

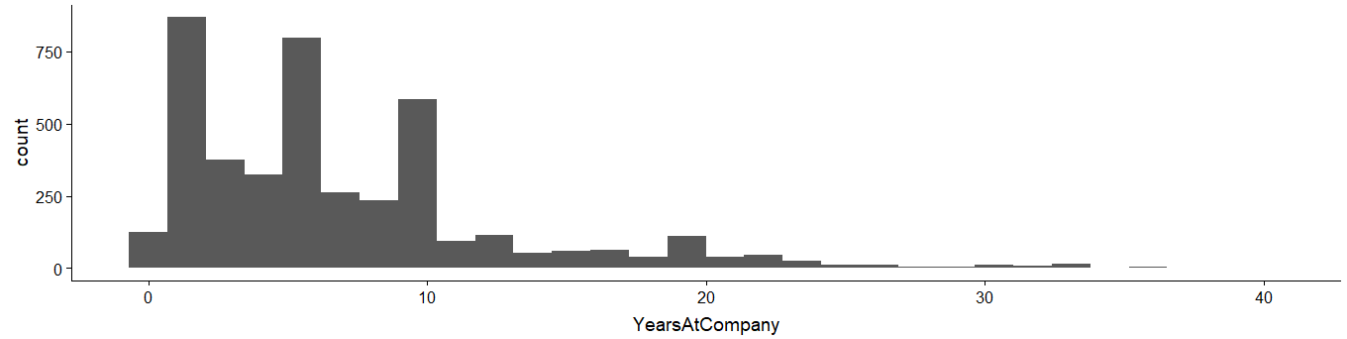
The HR Analytics Case Study is being carried out for company XYX to act upon the cause of attrition. Attrition in any company could be either because of the employees leaving the company voluntarily or the firm had to fire them. Any way of attrition is bad for a company and we will try to understand what factors or variables affect this attrition. We will also look for ways or changes that company should make to their workplace, in order to get most of their employees to stay. Also, we will see which of these variables is most important and needs to be addressed right away.

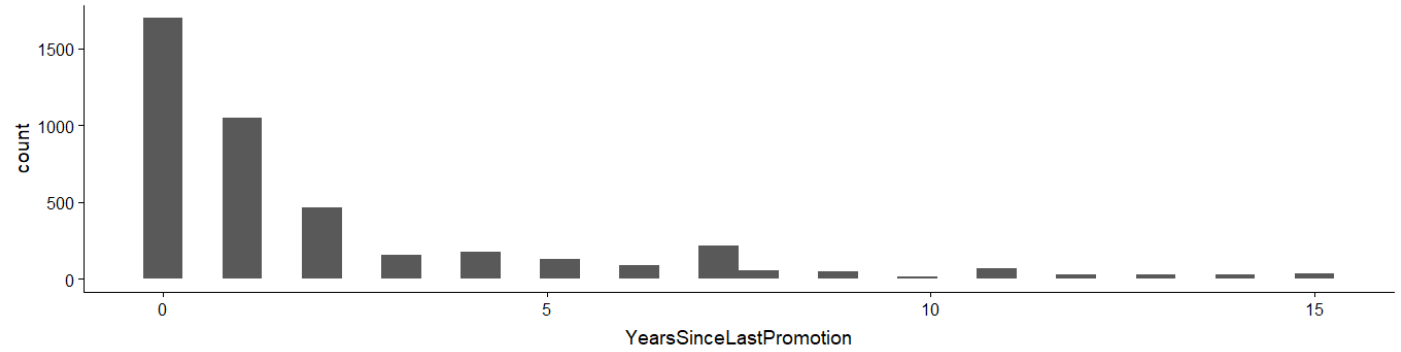

count
1000
500
0
1
2
3
4
factor(EnvironmentSatisfaction)
Attrition
No
Yes
count
1000
500
0
1
2
3
4
factor(JobSatisfaction)
count
2000
1000
0
1
2
3
4
factor(WorkLifeBalance)
count
2500
2000
1500
1000
500
0
1
2
3
4
factor(JobInvolvement)

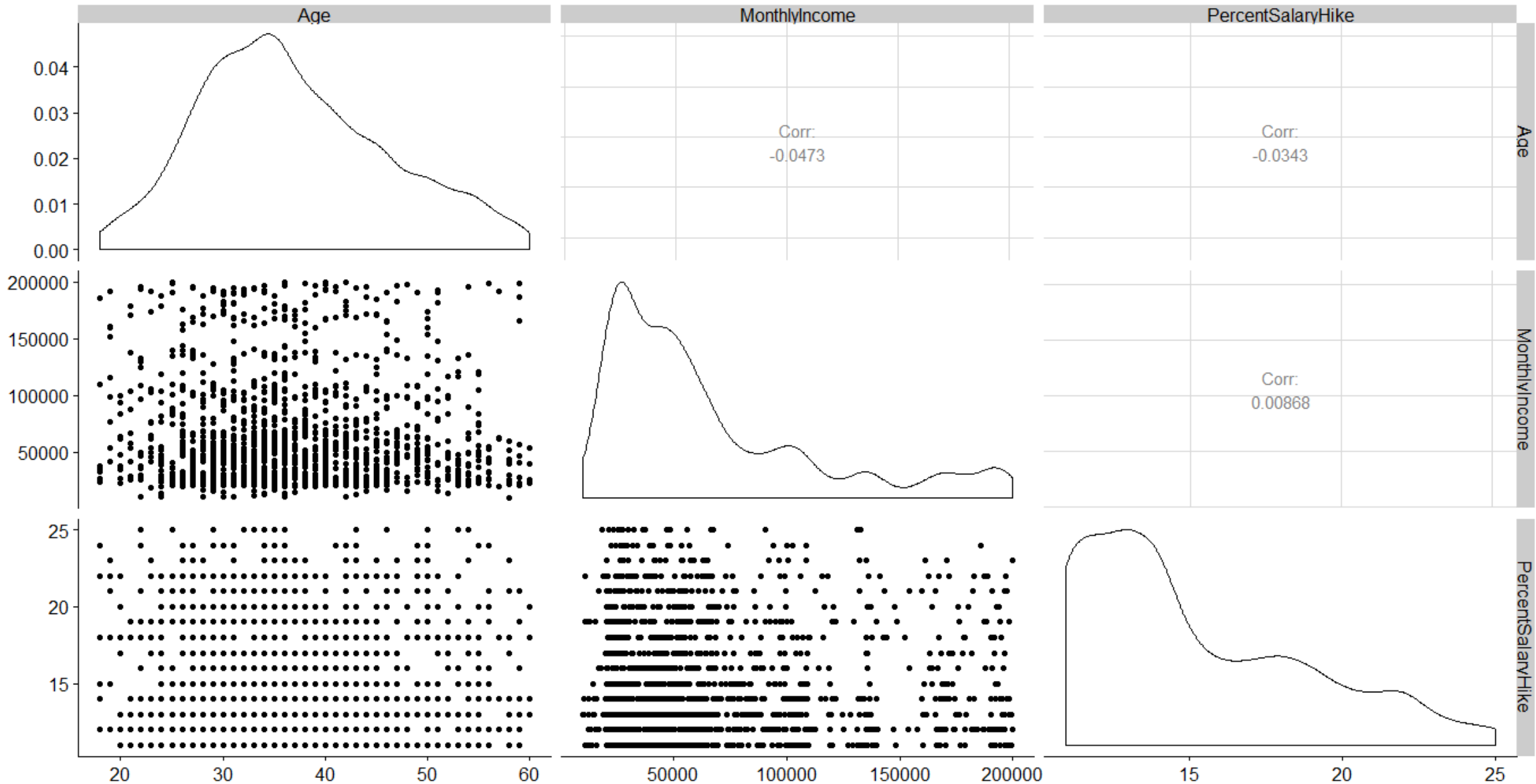

Attrition
0.75
0.50
0.25
-2
-1
0
1
2
Age
-1
0
1
2
3
MonthlyIncome
-1
0
1
2
PercentSalaryHike



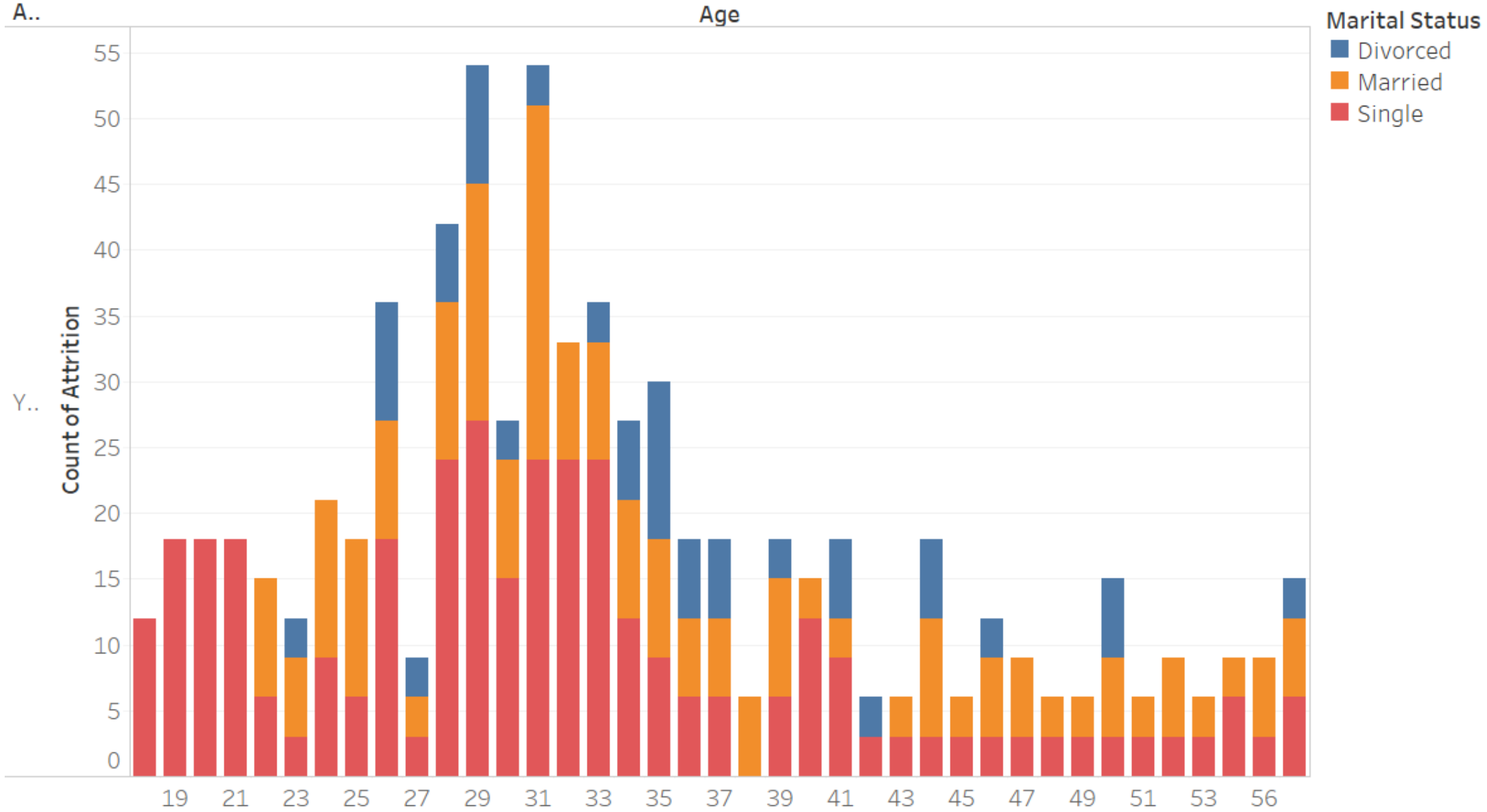
count
1500
1000
500
0
Human Resources
Life Sciences
Marketing
Medical
Other
Technical Degree
factor(EducationField)
Attrition
No
Yes
count
2000
1000
0
Female
Male
factor(Gender)
count
1000
750
500
250
0
Healthcare Representative
factor(JobRole)
count
2000
1500
1000
500
0
Divorced
Married
Single
factor(MaritalStatus)


750
500
250
0
count
0
10
20
30
40
YearsAtCompany


1500
1000
500
0
count
0
5
10
15
YearsSinceLastPromotion


Age
MonthlyIncome
PercentSalaryHike
Corr:
-0.0473
Corr:
-0.0343
Corr:
0.00868
Age
MonthlyIncome
PercentSalaryHike
0.04
0.03
0.02
0.01
0.00
200000
150000
100000
50000
25
20
15
20
30
40
50
60
50000
100000
150000
200000
15
20
25

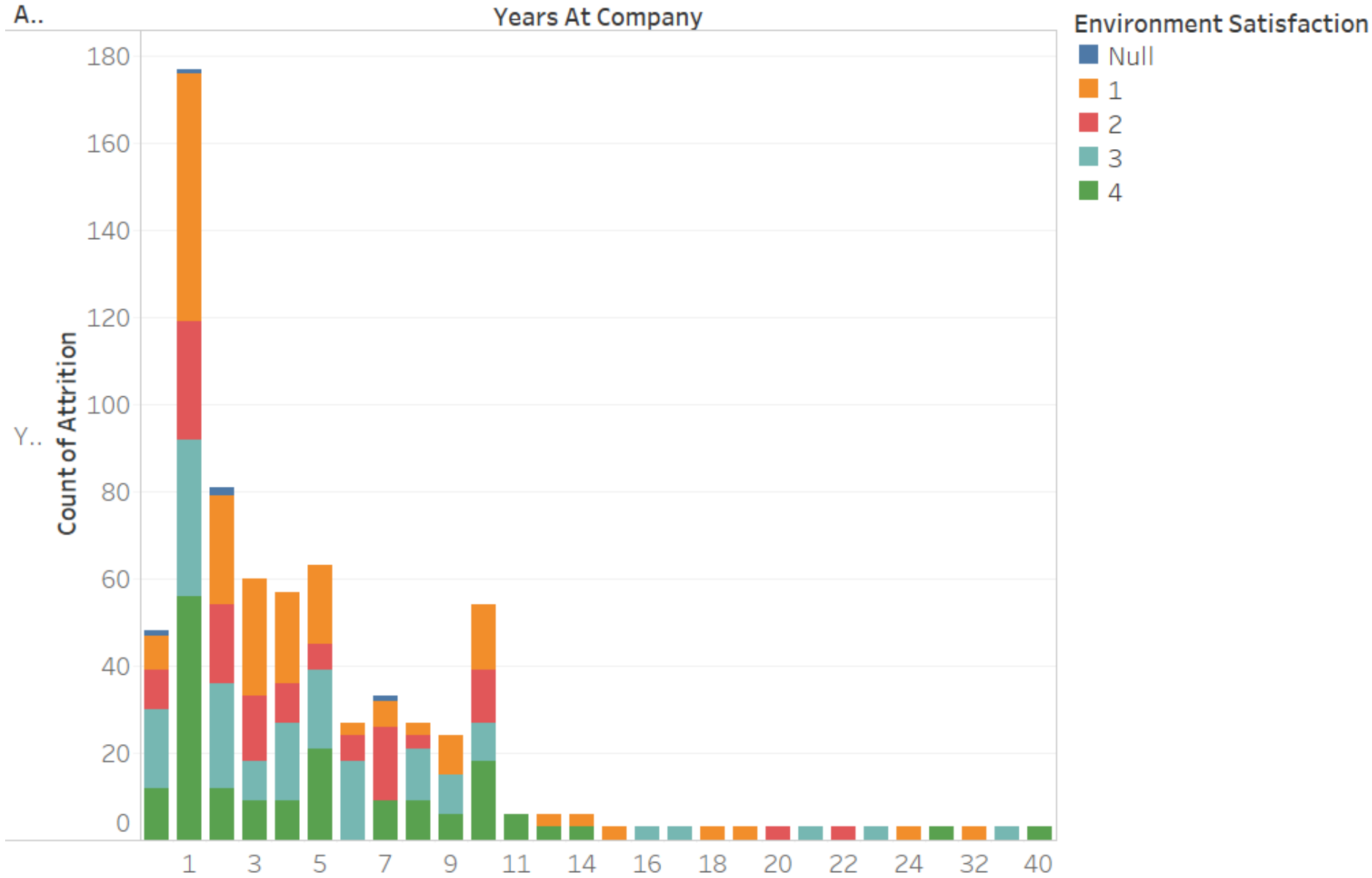
Plot: 1 Attrition varying with Age and Martial Status



PLOT 1 ANALYSIS

- As we see from the plot 1, we see that single people with age group of 18-21 years are more likely to leave a company.
- From the overall plot, we see that single people are more likely to leave a job when compared to married or divorced people.
- As a person ages, they are less likely to leave a company.
- This also implies that married or divorced people look for a stable job rather than changing it frequently. Single people on the other hand may have less dependent people so they tend to leave jobs more often.
- More number of people tend to leave a company between the age group of 28-32 years

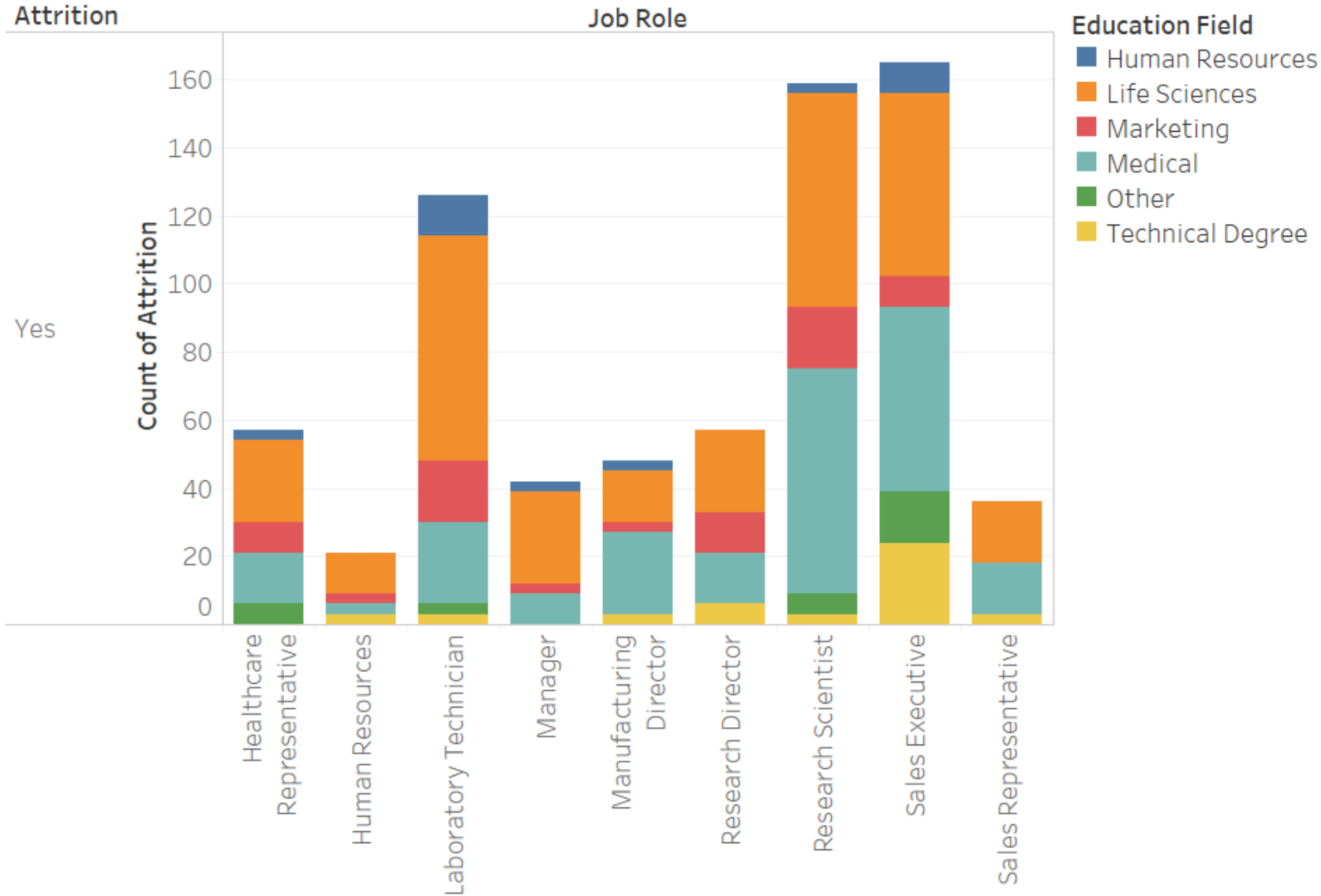
Plot: 2 Attrition varying with years spent in current company



PLOT 2 ANALYSIS

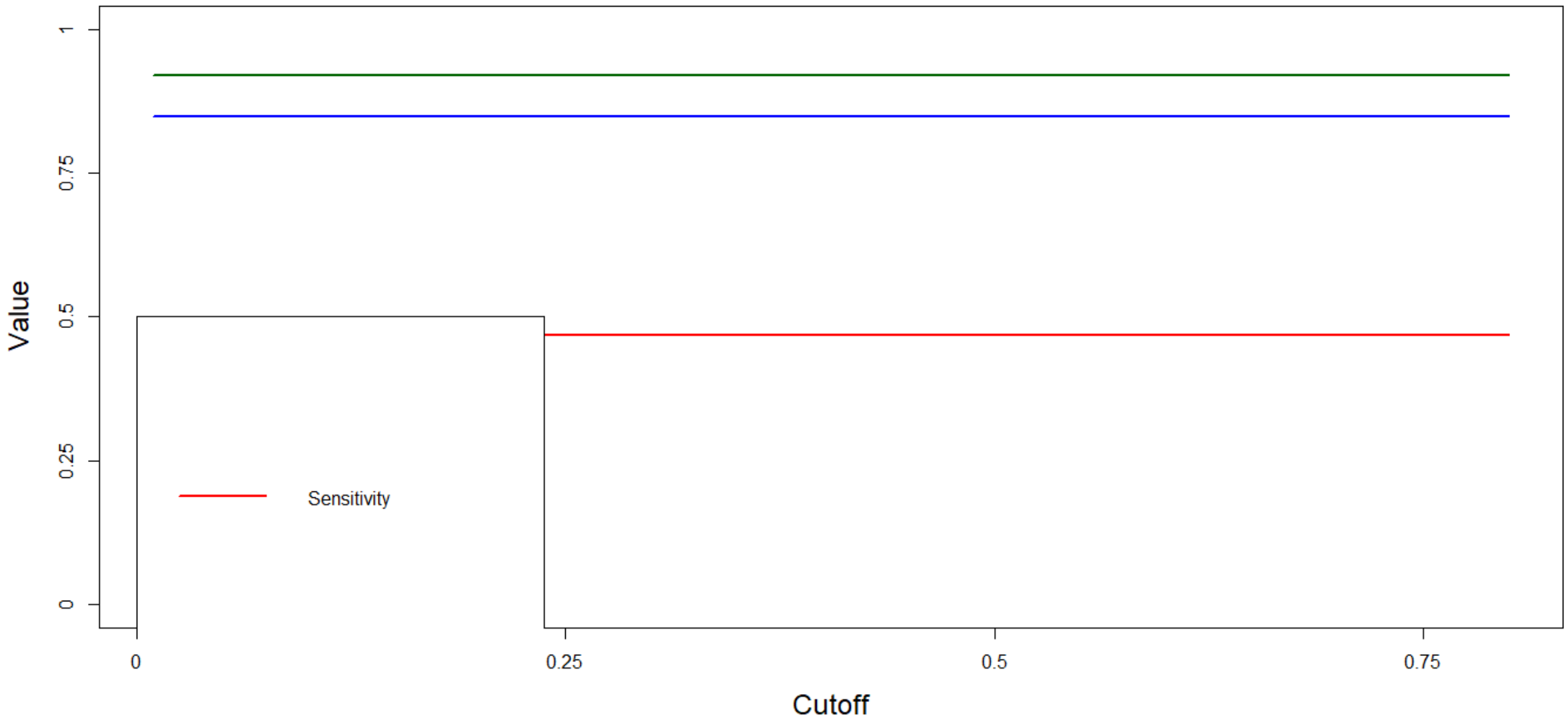
- We have combines number of years a person has worked in a company and environment satisfaction in a single plot.
- People who have worked for less than 2 years in a company are more likely to leave a job regardless of the environment satisfaction.
- As people spend more number of years in a company, they are less likely to leave a job as they get comfortable with the environment are satisfied with the jobs
- Also, we see that as person has spent around 10 years in a company they tend to leave a company

PLot 3: Attrition varying with departments and eductation field.

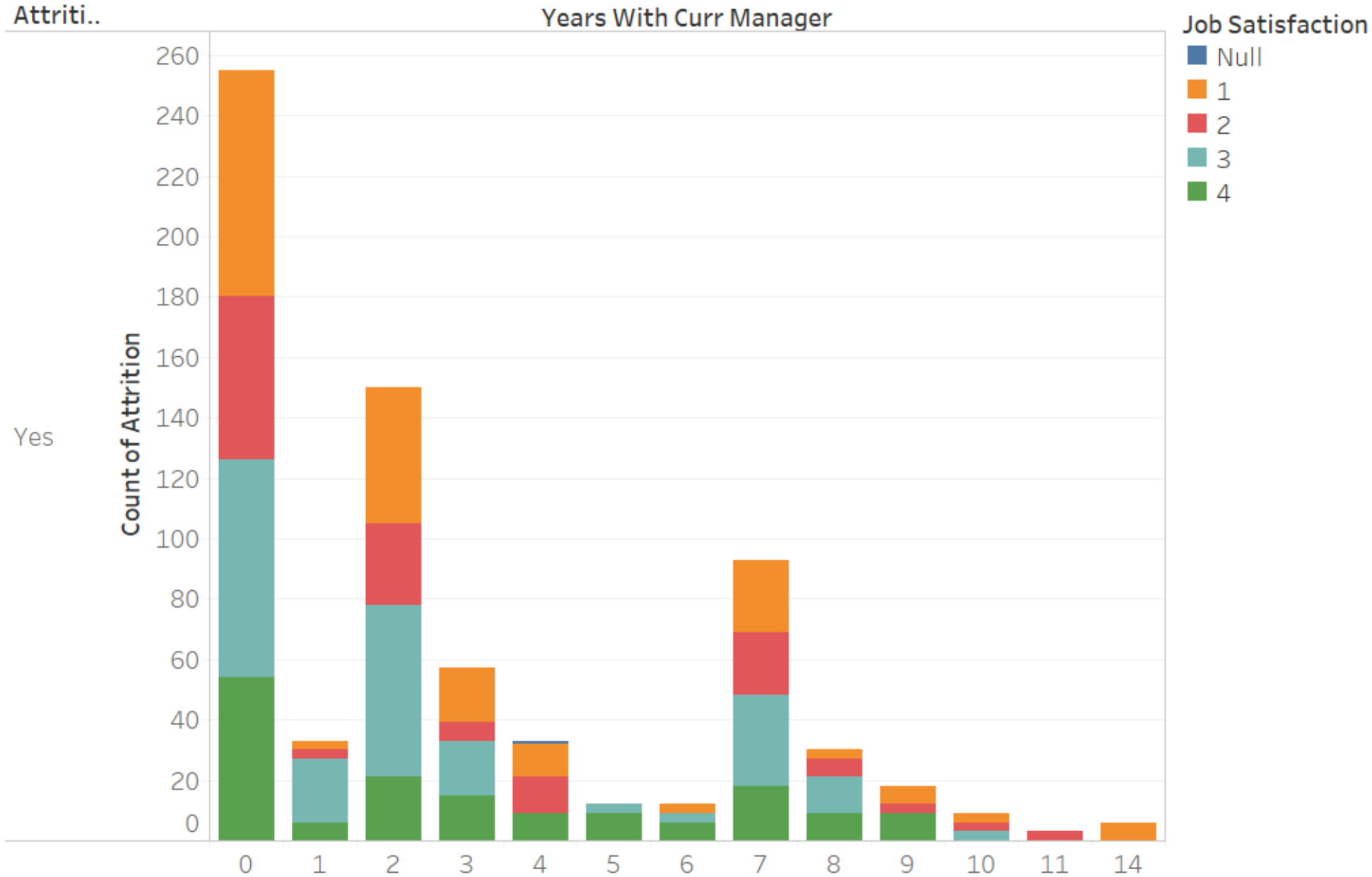


PLOT 3 ANALYSIS

- In this plot we have combined the education field and the department a person is working in and we see how both of these combined affect the attrition.
- From the plot we see that, if a person is placed in a department which is irrelevant to his education field, they are more likely to leave the company. For instance, a person with technical or medical degree are more likely to leave a sales job because it is not relevant to their education background.
- People working as manager or HR department are less likely to leave a company.

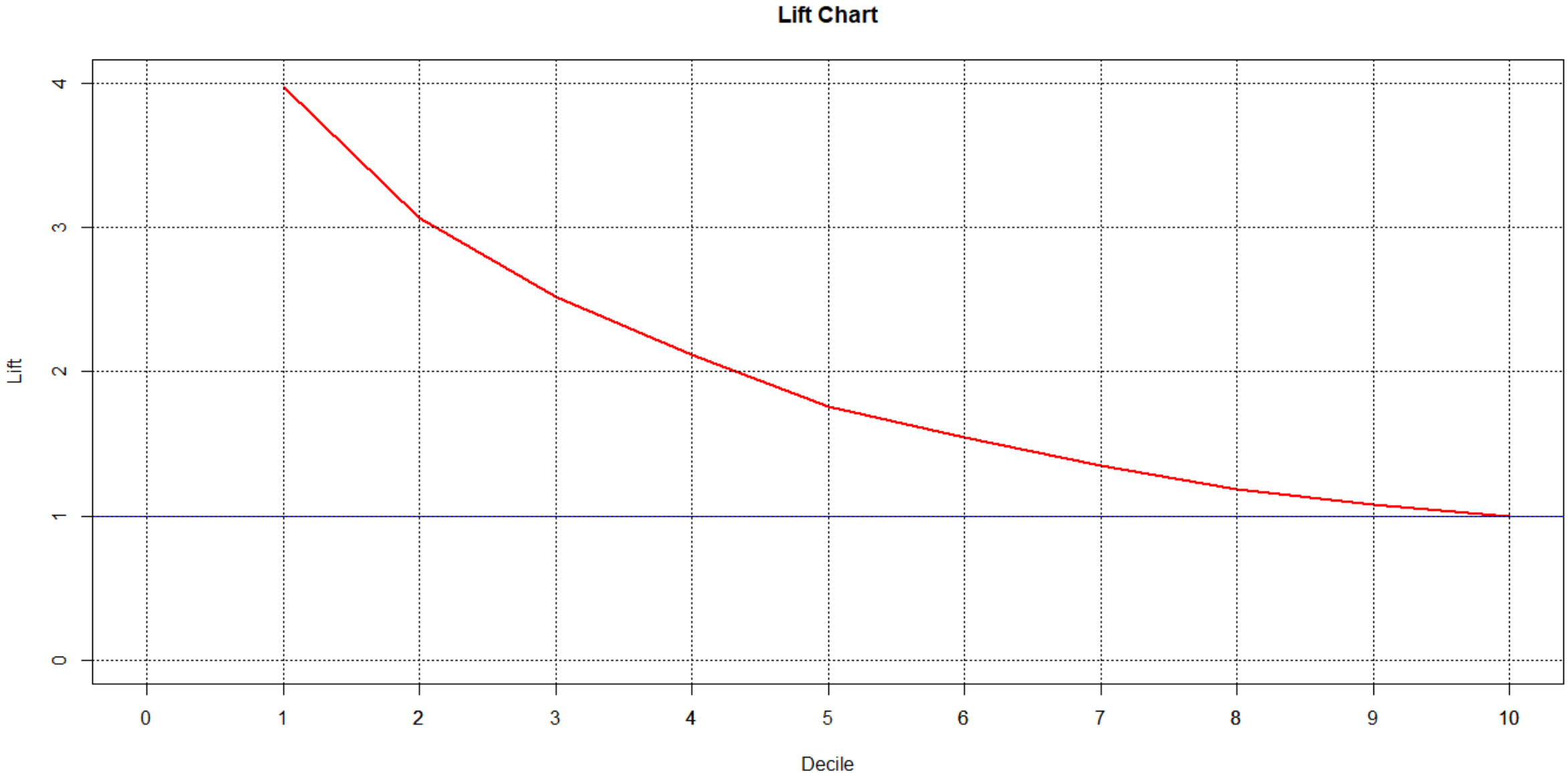

Value
1
0.75
0.5
0.25
0
Sensitivity
0
0.25
0.5
0.75
Cutoff

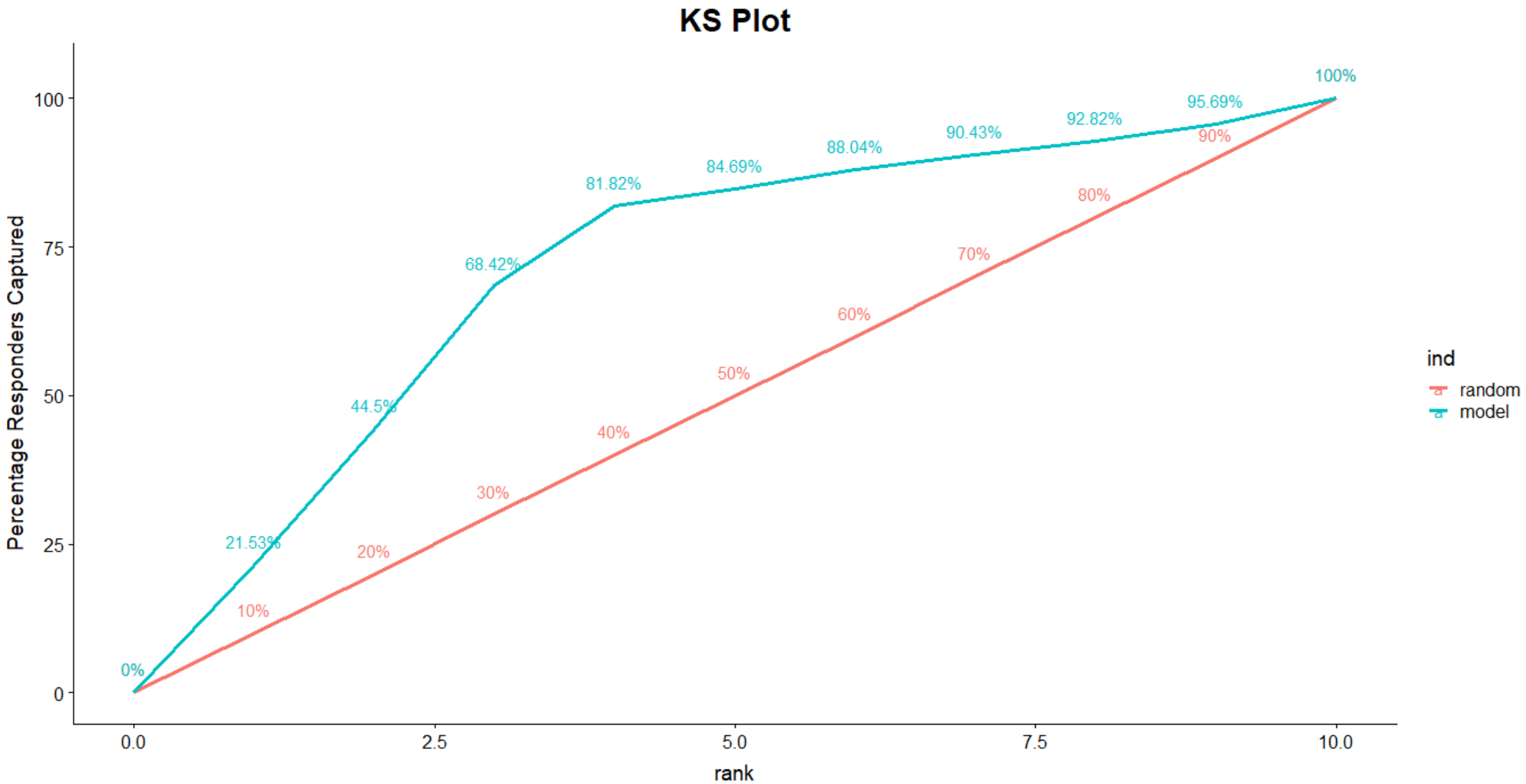
PLot 4: Attrition varying with years with current manager



PLOT 4 ANALYSIS

- In this plot we will see how the job satisfaction and number of years a person has worked under a manager affects attrition.
- If a person has worked under a manager for less than 2 years, they are more likely to leave a company regardless of the job statisfaction level. A reason behind this could be frequent change in manager affects the attrition
- As a person spends more time under a manager, they are less likely to leave a company as they tend to get comfortable with the environment and working style of their current manager. The job satisfaction level also tends to improve.


Lift Chart
Lift
0
1
2
3
4
0
1
2
3
4
5
6
7
8
9
10
Decile


KS Plot
Percentage Responders Captured
100
75
50
25
0
0.0
2.5
5.0
7.5
10.0
rank
ind
random
model
0%
21.53%
44.5%
68.42%
81.82%
84.69%
88.04%
90.43%
92.82%
95.69%
100%
10%
20%
30%
40%
50%
60%
70%
80%
90%

CONCLUSION

- More experienced people are less likely to leave a company compared to fresher
- If a person is working in a department which is not relevant to their education field, they are more likely to leave that job
- The Number of companies worked by a person is more they tend to quit more
- If an employee works with the same manager for a longer period of time the lesser are the chances that employee will leave the company.
- As the age increases the people are less tend to quit, which shows that they are more comfortable with environment
- Environment Satisfaction, Job Satisfaction are some of the main features that need to be taken for retaining the employees
- The more an employee works extended work hours on an average the more are the chances that he/she will leave the company.

WAYS TO REDUCE ATTRITION

- Make sure there are no frequent change to the managers
- Offer good hikes to fresher after they have completed 1 year so that they do not leave the company
- Create a comfortable environment for young people so that they are comfortable working for more number of years
- Hire people according to their educational background to reduce attrition
- Less extended working hours to reduce the stress on people.
- Check before hiring if a person changes a company or job too frequently