

```
#####Importing the Dataset#####
```

```
emp_churn <- read.csv("C:/Users/Amisha Sancheti/Desktop/MITA sem2/Multivariate Analysis/Project/WA_Fn-U
```

```
#####Exploring the Dataset#####
```

```
str(emp_churn)
```

```
## 'data.frame': 1470 obs. of 35 variables:
```

```
## $ i..Age : int 41 49 37 33 27 32 59 30 38 36 ...
```

```
## $ Attrition : Factor w/ 2 levels "No","Yes": 2 1 2 1 1 1 1 1 1 1 ...
```

```
## $ BusinessTravel : Factor w/ 3 levels "Non-Travel","Travel_Frequently",...: 3 2 3 2 3 2 3 3
```

```
## $ DailyRate : int 1102 279 1373 1392 591 1005 1324 1358 216 1299 ...
```

```
## $ Department : Factor w/ 3 levels "Human Resources",...: 3 2 2 2 2 2 2 2 2 2 ...
```

```
## $ DistanceFromHome : int 1 8 2 3 2 2 3 24 23 27 ...
```

```
## $ Education : int 2 1 2 4 1 2 3 1 3 3 ...
```

```
## $ EducationField : Factor w/ 6 levels "Human Resources",...: 2 2 5 2 4 2 4 2 2 4 ...
```

```
## $ EmployeeCount : int 1 1 1 1 1 1 1 1 1 1 ...
```

```
## $ EmployeeNumber : int 1 2 4 5 7 8 10 11 12 13 ...
```

```
## $ EnvironmentSatisfaction : int 2 3 4 4 1 4 3 4 4 3 ...
```

```
## $ Gender : Factor w/ 2 levels "Female","Male": 1 2 2 1 2 2 1 2 2 2 ...
```

```
## $ HourlyRate : int 94 61 92 56 40 79 81 67 44 94 ...
```

```
## $ JobInvolvement : int 3 2 2 3 3 3 4 3 2 3 ...
```

```
## $ JobLevel : int 2 2 1 1 1 1 1 1 3 2 ...
```

```
## $ JobRole : Factor w/ 9 levels "Healthcare Representative",...: 8 7 3 7 3 3 3 3 5 1
```

```
## $ JobSatisfaction : int 4 2 3 3 2 4 1 3 3 3 ...
```

```
## $ MaritalStatus : Factor w/ 3 levels "Divorced","Married",...: 3 2 3 2 2 3 2 1 3 2 ...
```

```
## $ MonthlyIncome : int 5993 5130 2090 2909 3468 3068 2670 2693 9526 5237 ...
```

```
## $ MonthlyRate : int 19479 24907 2396 23159 16632 11864 9964 13335 8787 16577 ...
```

```
## $ NumCompaniesWorked : int 8 1 6 1 9 0 4 1 0 6 ...
```

```
## $ Over18 : Factor w/ 1 level "Y": 1 1 1 1 1 1 1 1 1 1 ...
```

```
## $ OverTime : Factor w/ 2 levels "No","Yes": 2 1 2 2 1 1 2 1 1 1 ...
```

```
## $ PercentSalaryHike : int 11 23 15 11 12 13 20 22 21 13 ...
```

```
## $ PerformanceRating : int 3 4 3 3 3 3 4 4 4 3 ...
```

```
## $ RelationshipSatisfaction: int 1 4 2 3 4 3 1 2 2 2 ...
```

```
## $ StandardHours : int 80 80 80 80 80 80 80 80 80 80 ...
```

```
## $ StockOptionLevel : int 0 1 0 0 1 0 3 1 0 2 ...
```

```
## $ TotalWorkingYears : int 8 10 7 8 6 8 12 1 10 17 ...
```

```
## $ TrainingTimesLastYear : int 0 3 3 3 3 2 3 2 2 3 ...
```

```
## $ WorkLifeBalance : int 1 3 3 3 3 2 2 3 3 2 ...
```

```
## $ YearsAtCompany : int 6 10 0 8 2 7 1 1 9 7 ...
```

```
## $ YearsInCurrentRole : int 4 7 0 7 2 7 0 0 7 7 ...
```

```
## $ YearsSinceLastPromotion : int 0 1 0 3 2 3 0 0 1 7 ...
```

```
## $ YearsWithCurrManager : int 5 7 0 0 2 6 0 0 8 7 ...
```

```
library(data.table)
```

```
setDT(emp_churn)
```

```
class(emp_churn)
```

```
## [1] "data.table" "data.frame"
```

```
table(is.na(emp_churn)) ##The output is false, hence we don't have any null values in our data.
```

```
##
```

```
## FALSE
## 51450
```

```
##### Now we will look for erroneous data in our table, column wise.#####
```

```
unique(emp_churn$Attrition) #the output is yes and no. There is no other deformed value.
```

```
## [1] Yes No
## Levels: No Yes
```

```
unique(emp_churn$BusinessTravel) #the output is 'Non-Travel, Travel_Frequently, Travel_Rarely'. There is
```

```
## [1] Travel_Rarely      Travel_Frequently Non-Travel
## Levels: Non-Travel Travel_Frequently Travel_Rarely
```

```
#####Like wise, our data has only integer values and factors with defined labels in accordance with mil
```

```
##### For th EDA
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:data.table':
##
##      between, first, last
```

```
## The following objects are masked from 'package:stats':
##
##      filter, lag
```

```
## The following objects are masked from 'package:base':
##
##      intersect, setdiff, setequal, union
```

```
library(ggplot2)
library(ggpubr)
```

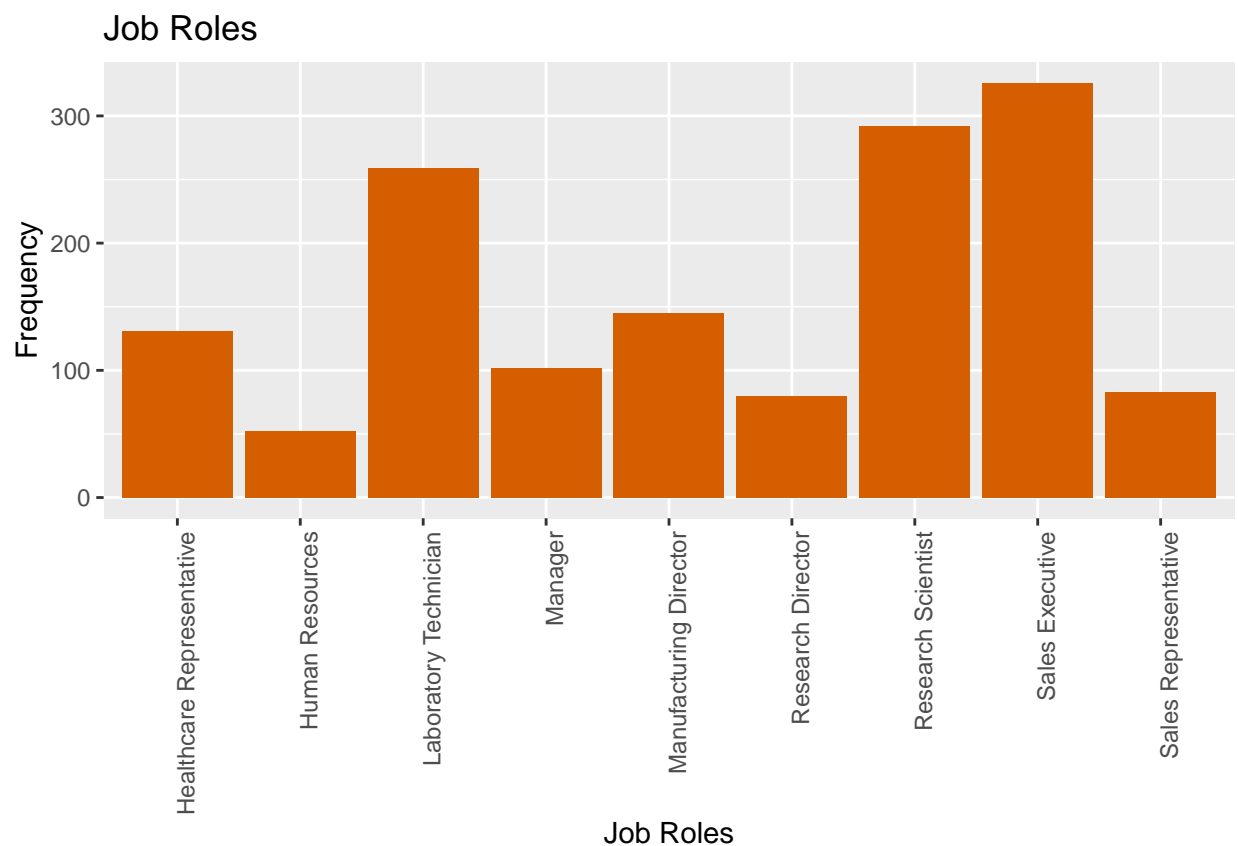
```
## Loading required package: magrittr
```

```
#Extracting JobRoles
x = table(emp_churn$JobRole)
```

```
#Converting to dataframe
x1 = as.data.frame(x)
x1
```

```
##           Var1 Freq
## 1 Healthcare Representative 131
## 2           Human Resources  52
## 3 Laboratory Technician 259
## 4           Manager 102
## 5 Manufacturing Director 145
## 6           Research Director  80
## 7           Research Scientist 292
## 8           Sales Executive 326
## 9           Sales Representative  83
```

```
#plotting the barplot
ggplot(x1, aes(x=Var1, y=Freq)) + geom_bar(stat="identity",fill="#D55E00") +
  labs(x="Job Roles", y="Frequency", title="Job Roles")+theme(axis.text.x = element_text(angle = 90,hj
```

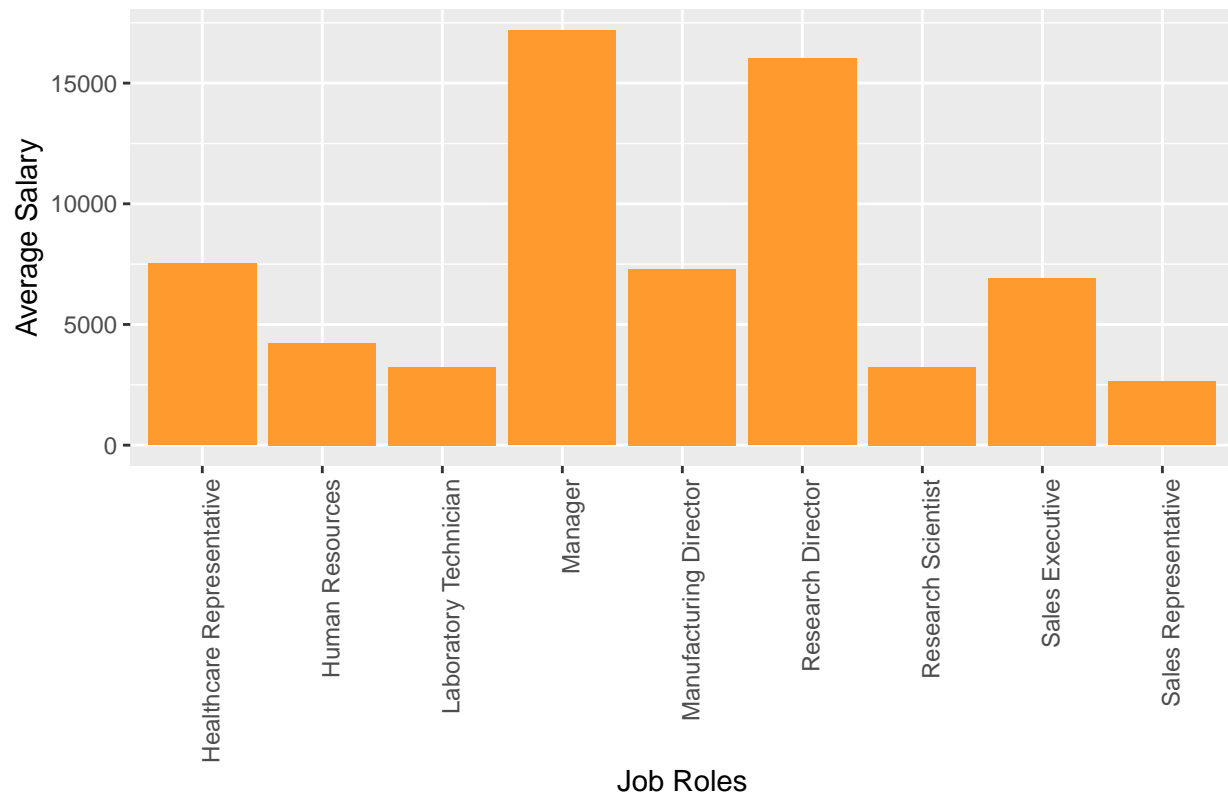


```
#Extracting the average salary by jobroles
job_sal = emp_churn %>% select(JobRole, MonthlyIncome) %>% group_by(JobRole) %>% summarize(avg=mean(Mon
```

```
#Converting to dataframe
x2 = as.data.frame(job_sal)
```

```
#Barplot
ggplot(x2, aes(x=JobRole, y=avg)) + geom_bar(stat="identity",fill="#FE9A2E") +
  labs(x="Job Roles", y="Average Salary", title="Salary by Job roles")+theme(axis.text.x = element_text
```

Salary by Job roles



#Managers and Research directors have a very higher salary

#Extracting the attrition by job roles

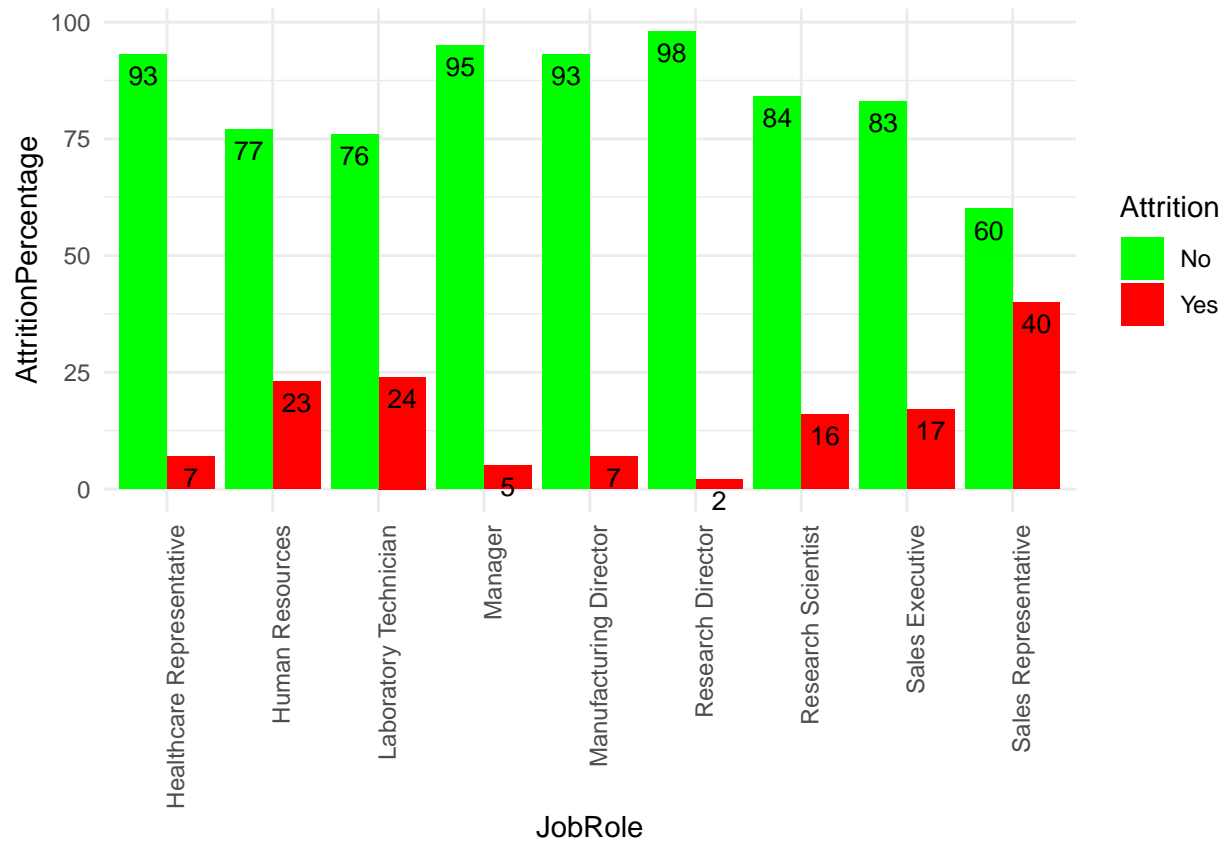
```
attr_job <- emp_churn %>% select(JobRole, Attrition) %>% group_by(JobRole, Attrition) %>% summarize(amount = sum(Salary)) %>%
  mutate(AttritionPercentage=round(prop.table(amount),2) * 100) %>% arrange(AttritionPercentage)
```

#Converting to dataframe

```
x3 = as.data.frame(attr_job)
```

#Barplot

```
ggplot(data=x3, aes(x=JobRole, y=AttritionPercentage, fill=Attrition)) +
  geom_bar(stat="identity", position=position_dodge()) +
  geom_text(aes(label=AttritionPercentage), vjust=1.6, color="black", position = position_dodge(0.9), size=10) +
  theme_minimal() + scale_fill_manual(values=c("green","red")) +
  theme(axis.text.x = element_text(angle = 90, hjust = 1))
```



#Sales representatives show a higher attrition rate

#Extracting attrition by job role and environment satisfaction

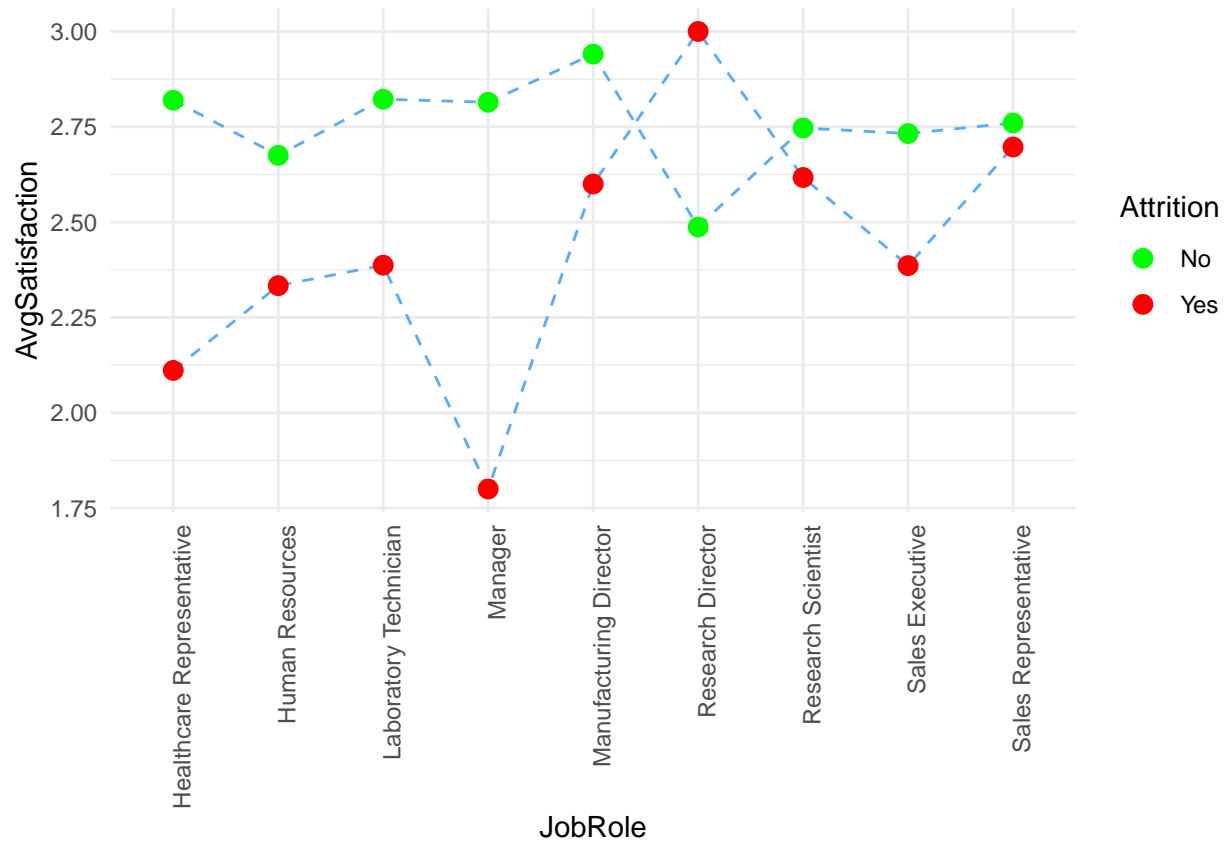
```
env_attr <- emp_churn %>% select(EnvironmentSatisfaction, JobRole, Attrition) %>% group_by(JobRole, Attrition)
  summarize(AvgSatisfaction=mean(EnvironmentSatisfaction))
```

#Converting to dataframe

```
x4 = as.data.frame(env_attr)
```

#Lineplot

```
ggplot(data=x4, aes(x=JobRole, y=AvgSatisfaction, fill=Attrition)) +
  geom_line(aes(group=Attrition), color="#58ACFA", linetype="dashed") +
  geom_point(aes(color=Attrition), size=3) +
  theme_minimal() + scale_color_manual(values=c("green","red")) +
  theme(axis.text.x = element_text(angle = 90, hjust = 1))
```



#It is quite evident that employees with less job satisfaction have high attrition rate

#Filtering employees who left

```
attritions <- emp_churn %>% filter(Attrition == "Yes")
```

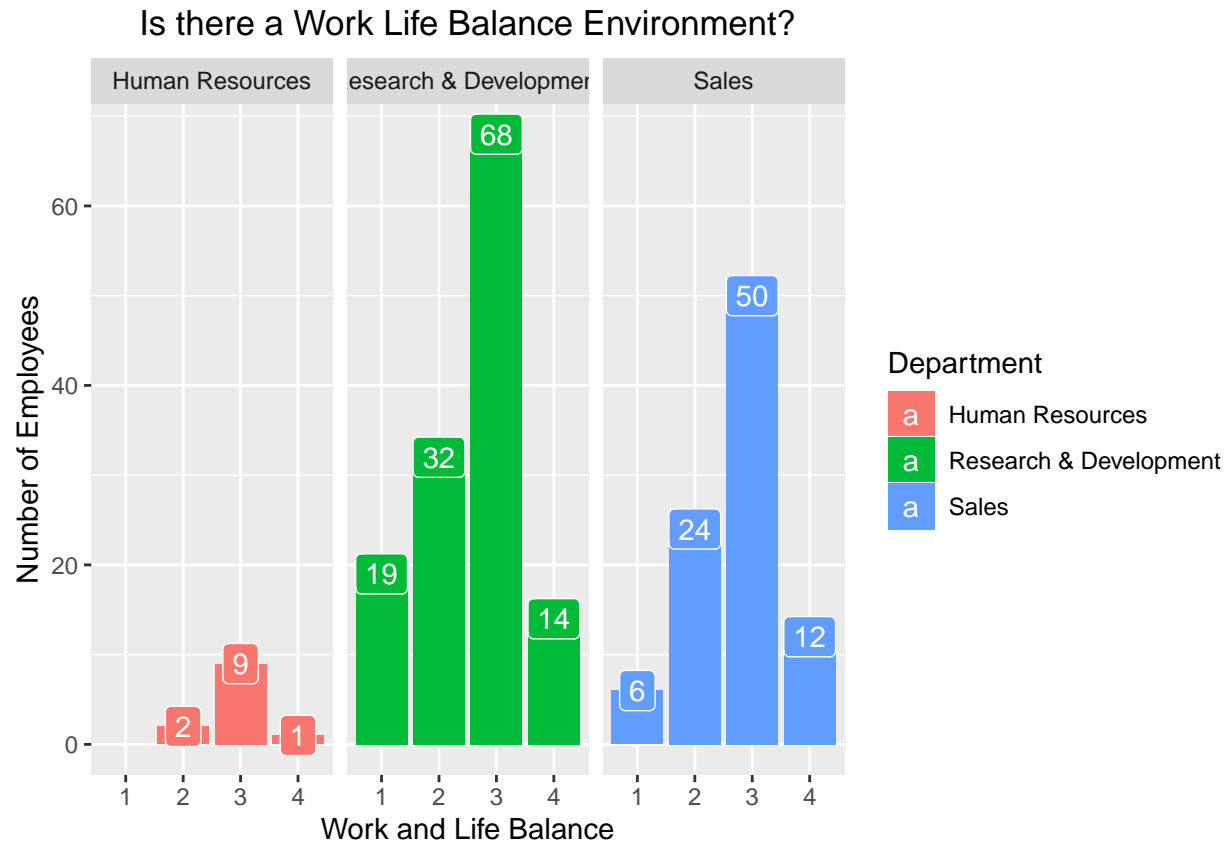
#Extracting the employees who left along with worklife balance

```
attritions$WorkLifeBalance <- as.factor(attritions$WorkLifeBalance)
```

#Barplot

```
attr_wlb_dpt <- attritions %>% select(Department, WorkLifeBalance) %>% group_by(Department, WorkLifeBalance) %>%
  summarize(count=n()) %>%
  ggplot(aes(x=WorkLifeBalance, y=count, fill=Department)) + geom_bar(stat='identity') + facet_wrap(~Department) +
  theme(plot.title=element_text(hjust=0.5)) +
  scale_color_manual(values=c("Pink", "Orange", "Blue")) +
  geom_label(aes(label=count, fill = Department), colour = "white") +
  labs(title="Is there a Work Life Balance Environment?", x="Work and Life Balance", y="Number of Employees")
```

```
attr_wlb_dpt
```



#Worklife balance is not a major reason for employee attrition

#Extracting employees who left by gender and marital status

```
attr_mrg_gdr <- attritions %>% select(Gender, MaritalStatus) %>% group_by(Gender, MaritalStatus) %>%
  summarize(countn=n())%>%
  mutate(AttritionPercent=round(prop.table(countn),2) * 100) %>% arrange(AttritionPercent)
attr_mrg_gdr
```

```
## # A tibble: 6 x 4
## # Groups:   Gender [2]
##   Gender MaritalStatus countn AttritionPercent
##   <fct>   <fct>         <int>         <dbl>
## 1 Female Divorced         9          10
## 2 Male   Divorced        24          16
## 3 Male   Married        53          35
## 4 Female Married        31          36
## 5 Male   Single        73          49
## 6 Female Single        47          54
```

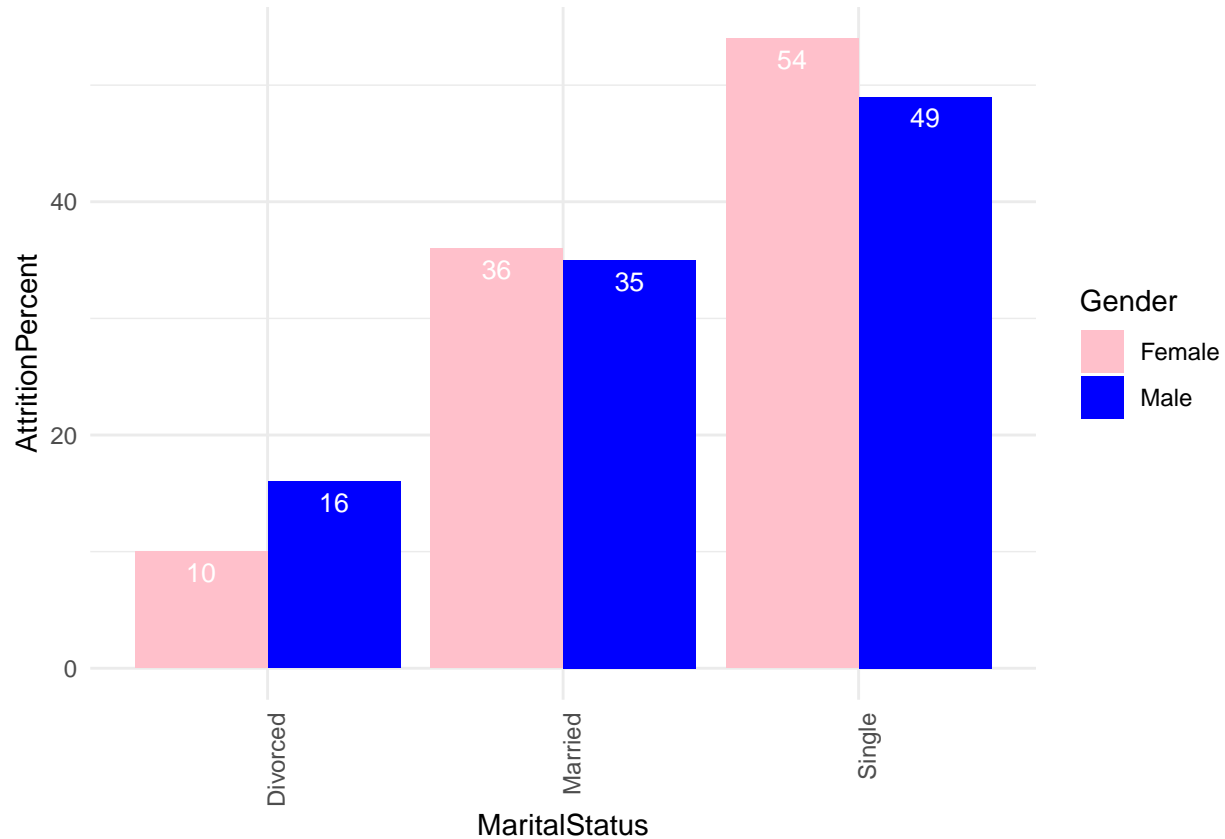
#Converting to dataframe

```
x5 = as.data.frame(attr_mrg_gdr)
```

#Barplot

```
ggplot(data=x5, aes(x=MaritalStatus, y=AttritionPercent, fill=Gender)) +
```

```
geom_bar(stat="identity", position=position_dodge()) +
geom_text(aes(label=AttritionPercent), vjust=1.6, color="white", position = position_dodge(0.9), size=
theme_minimal() + scale_fill_manual(values=c("pink","blue")) +
theme(axis.text.x = element_text(angle = 90, hjust = 1))
```



```
#Correlation plot
library(corrplot)
```

```
## corrplot 0.84 loaded
```

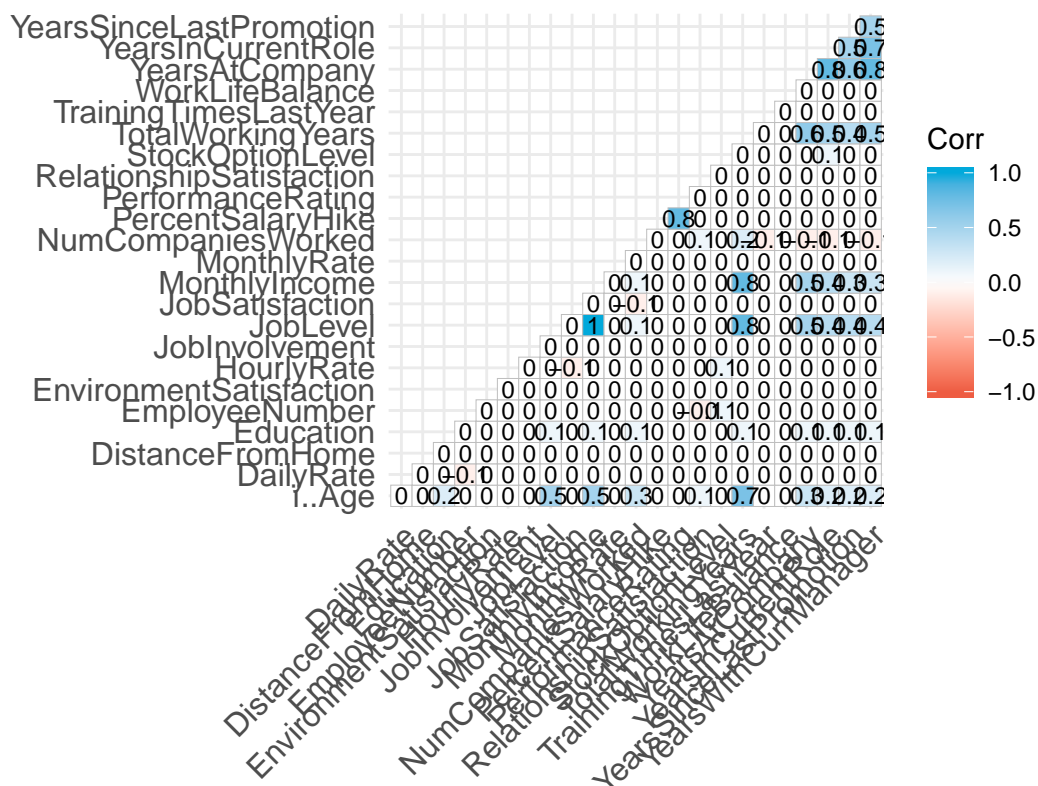
```
library(ggcorrplot)

nums <- select_if(emp_churn, is.numeric)
corr <- round(cor(nums), 1)
```

```
## Warning in cor(nums): the standard deviation is zero
```

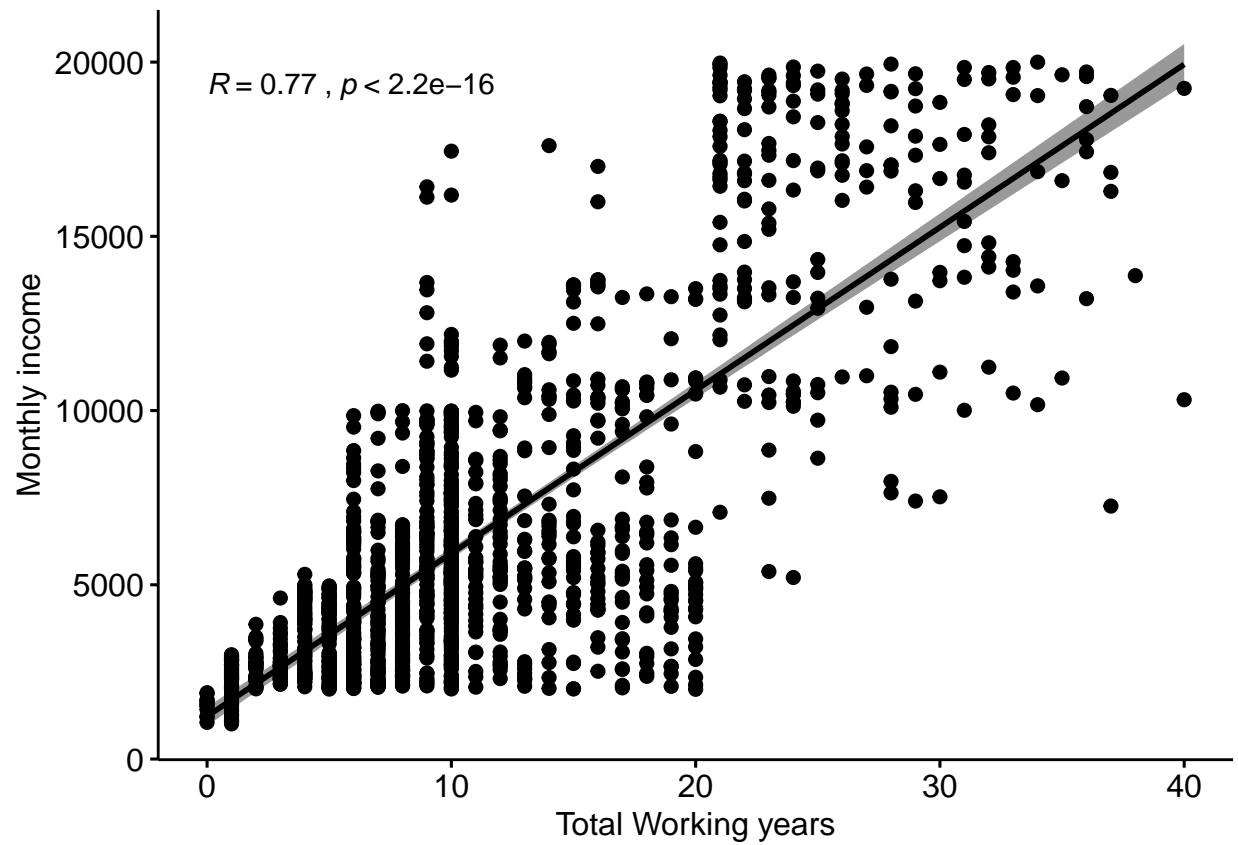
```
ggcorrplot(corr, type = "lower", lab = TRUE, lab_size = 3, colors = c("tomato2", "white", "#01A9DB"),
title="Correlogram Employee Attritions", ggtheme=theme_minimal())
```


Correlogram Employee Attritions

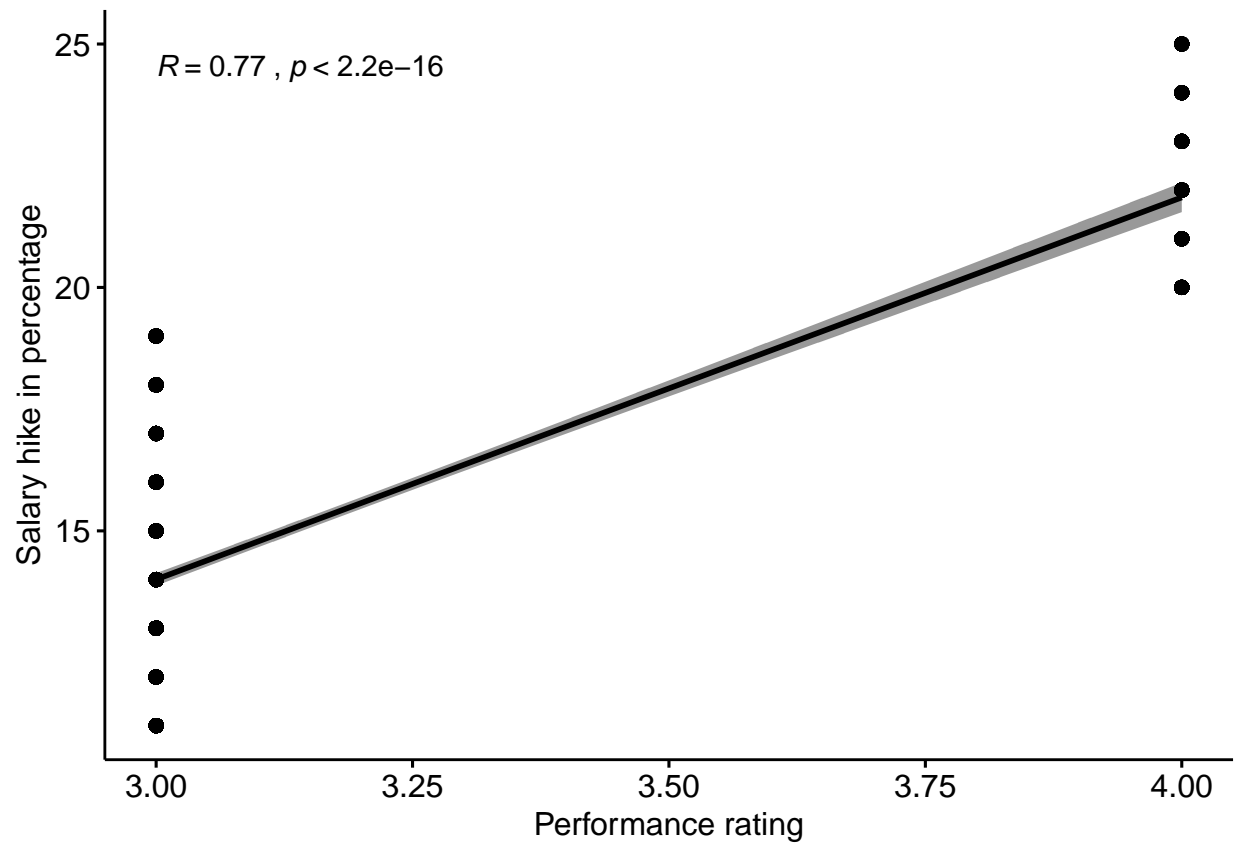


```
#Bivariate Analysis
library(ggpubr)

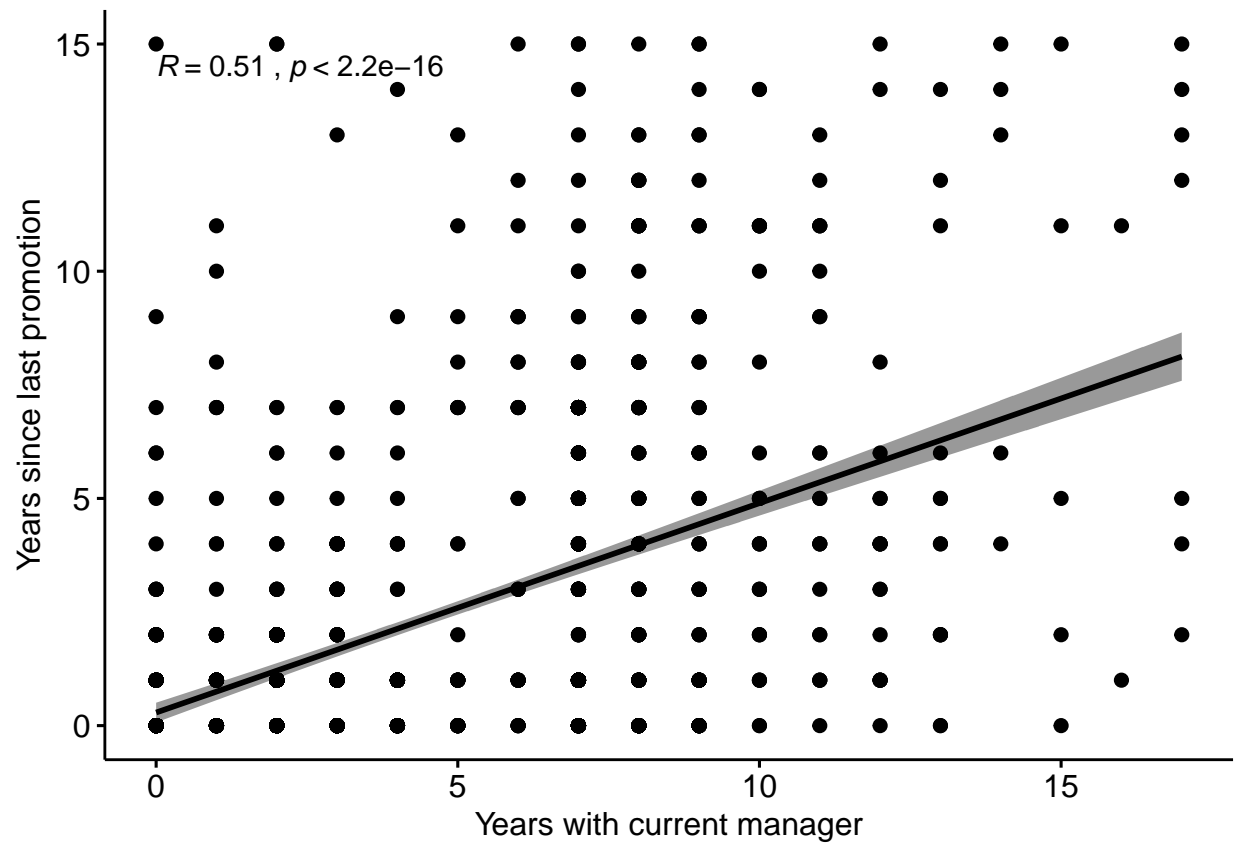
ggscatter(emp_churn, x = "TotalWorkingYears", y = "MonthlyIncome",
  add = "reg.line", conf.int = TRUE,
  cor.coef = TRUE, cor.method = "pearson",
  xlab = "Total Working years", ylab = "Monthly income")
```



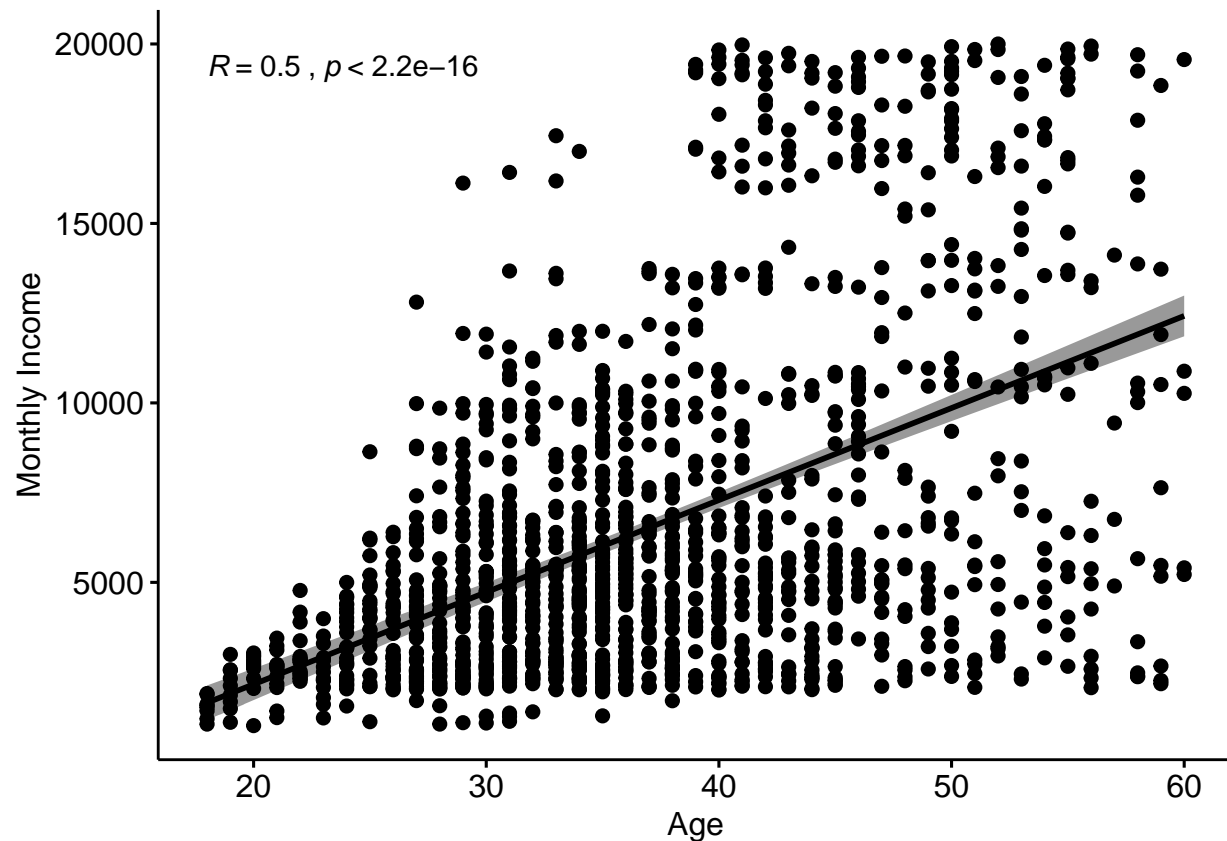
```
ggscatter(emp_churn, x = "PerformanceRating", y = "PercentSalaryHike",
  add = "reg.line", conf.int = TRUE,
  cor.coef = TRUE, cor.method = "pearson", xlab = "Performance rating", ylab = "Salary hike in p
```



```
ggscatter(emp_churn, x = "YearsWithCurrManager", y = "YearsSinceLastPromotion",  
  add = "reg.line", conf.int = TRUE,  
  cor.coef = TRUE, cor.method = "pearson",  
  xlab = "Years with current manager", ylab = "Years since last promotion")
```



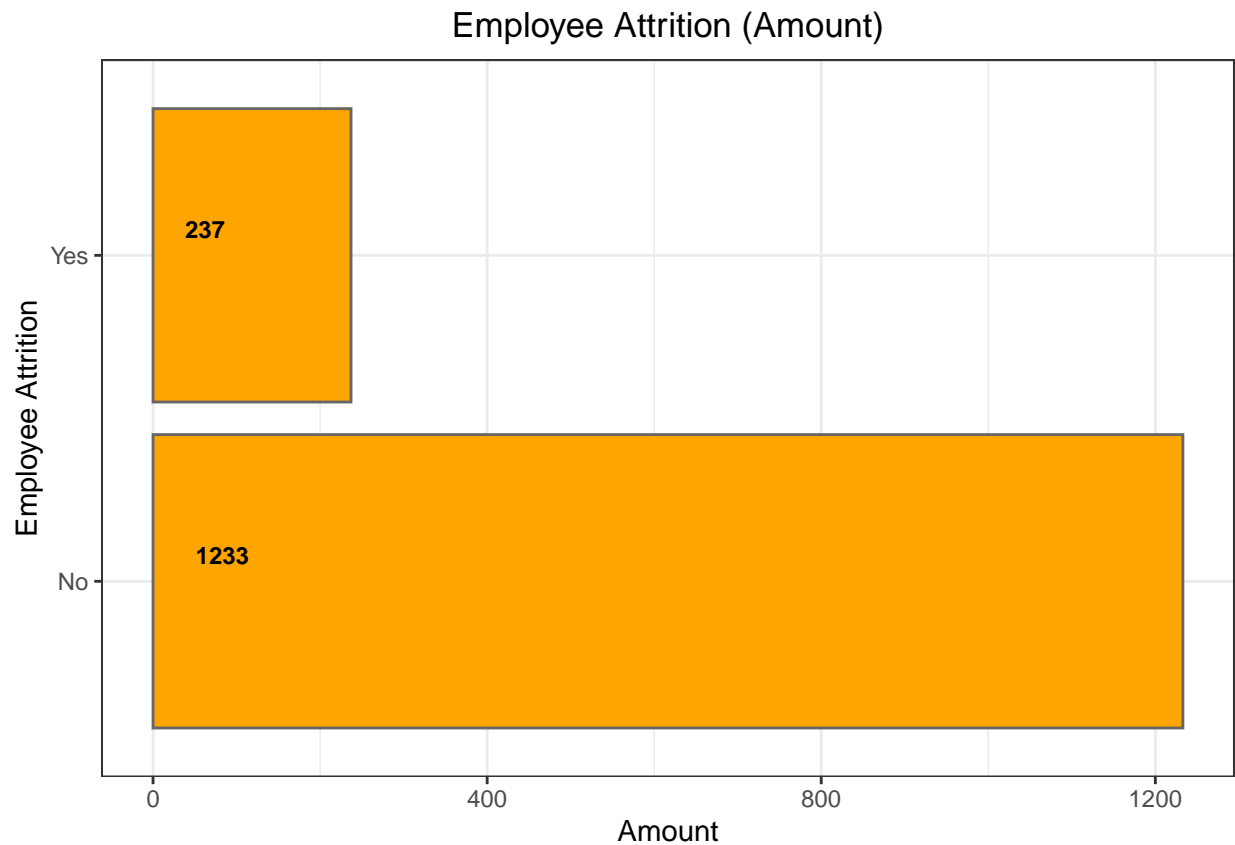
```
ggscatter(emp_churn, x = "i..Age", y = "MonthlyIncome",
  add = "reg.line", conf.int = TRUE,
  cor.coef = TRUE, cor.method = "pearson",
  xlab = "Age", ylab = "Monthly Income")
```



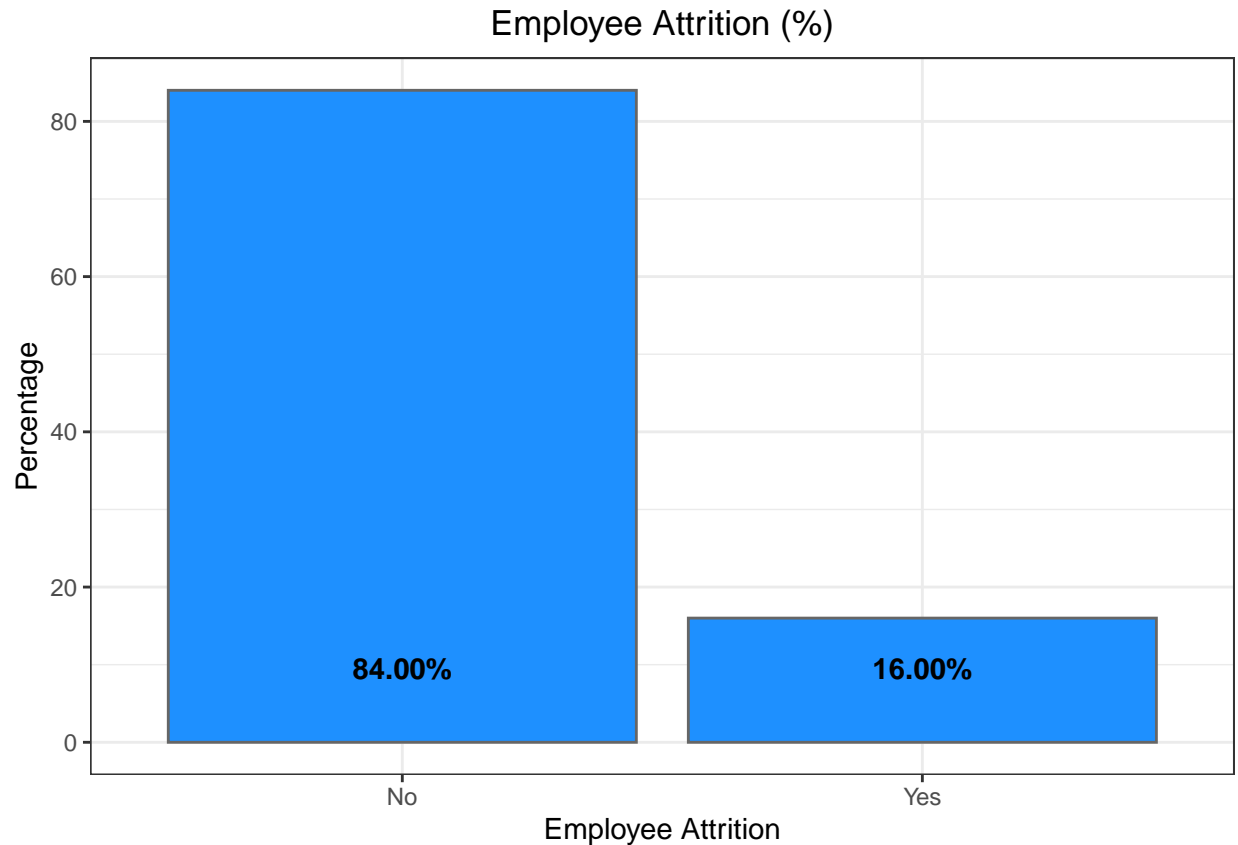
```
library(lattice)
library(ggplot2)
library(dplyr)
```

```
options(repr.plot.width=8, repr.plot.height=4)
```

```
attritions_number <- emp_churn %>% group_by(Attrition) %>% summarise(Count=n()) %>%
  ggplot(aes(x=Attrition, y=Count)) + geom_bar(stat="identity", fill="orange", color="grey40") + theme_l
  geom_text(aes(x=Attrition, y=0.01, label= Count),
    hjust=-0.8, vjust=-1, size=3,
    colour="black", fontface="bold",
    angle=360) + labs(title="Employee Attrition (Amount)", x="Employee Attrition",y="Amount") +
attritions_number
```



```
attrition_percentage <- emp_churn %>% group_by(Attrition) %>% summarise(Count=n()) %>%
  mutate(pct=round(prop.table(Count),2) * 100) %>%
  ggplot(aes(x=Attrition, y=pct)) + geom_bar(stat="identity", fill = "dodgerblue", color="grey40") +
  geom_text(aes(x=Attrition, y=0.01, label= sprintf("%.2f%%", pct)),
    hjust=0.5, vjust=-3, size=4,
    colour="black", fontface="bold") + theme_bw() + labs(x="Employee Attrition", y="Percentage")
attrition_percentage
```



```
library(cowplot)
```

```
##
## *****

## Note: As of version 1.0.0, cowplot does not change the

##   default ggplot2 theme anymore. To recover the previous

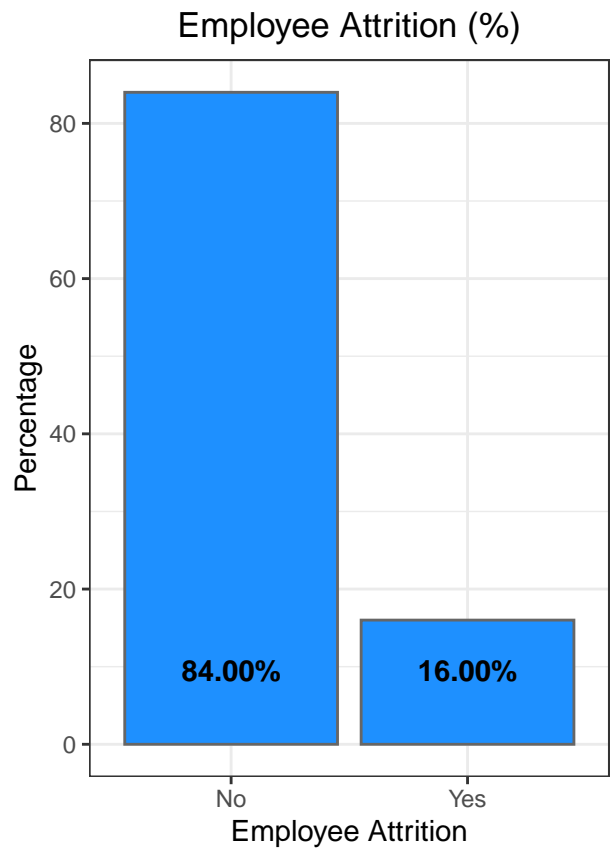
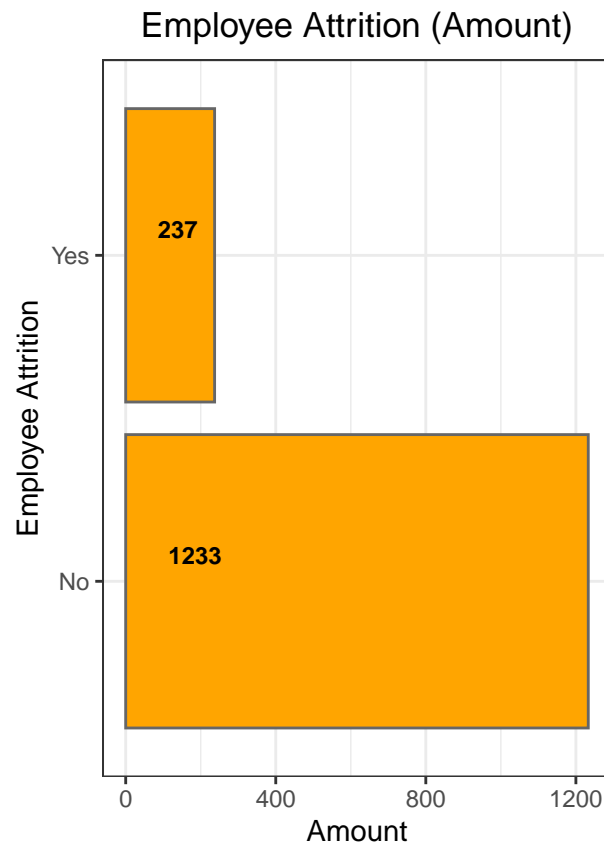
##   behavior, execute:
##   theme_set(theme_cowplot())

## *****

##
## Attaching package: 'cowplot'

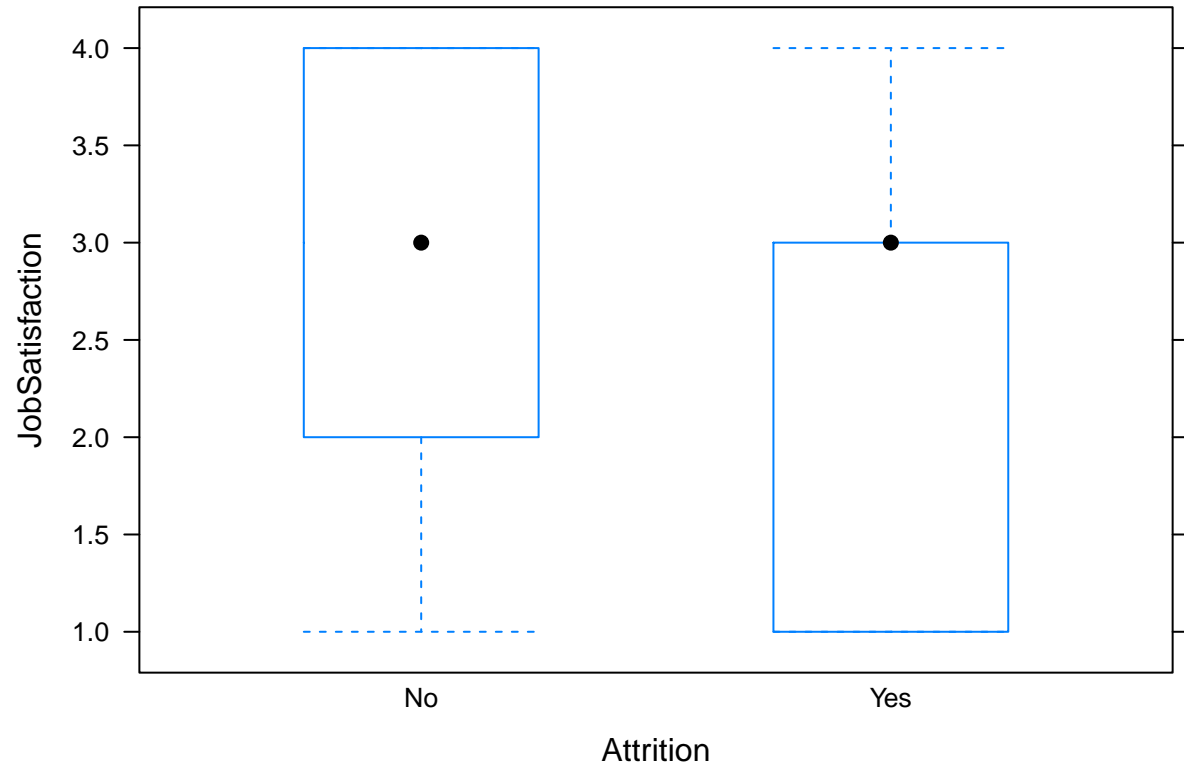
## The following object is masked from 'package:ggpubr':
##
##   get_legend
```

```
plot_grid(attritions_number, attrition_percentage, align="h", ncol=2)
```



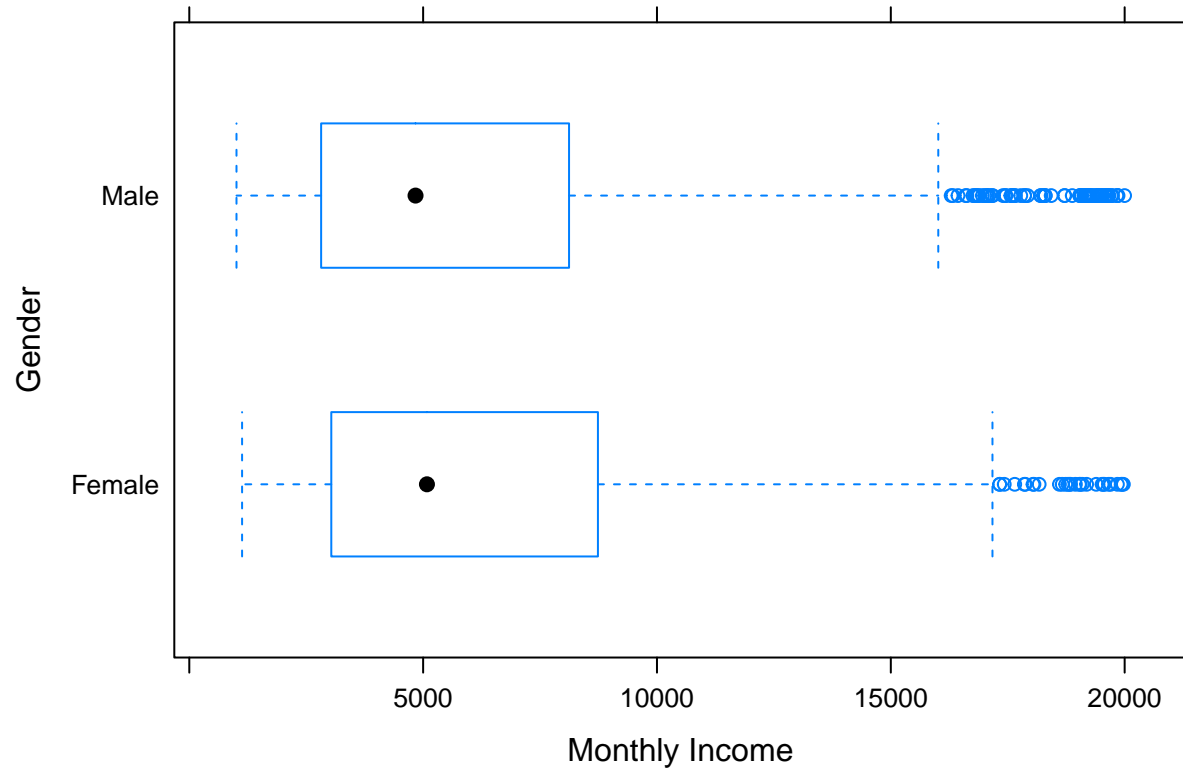
#4 Distribution of Job Satisfaction:

```
bwplot(emp_churn$JobSatisfaction ~ emp_churn$Attrition, data=emp_churn, ylab='JobSatisfaction', xlab='Attrition')
```

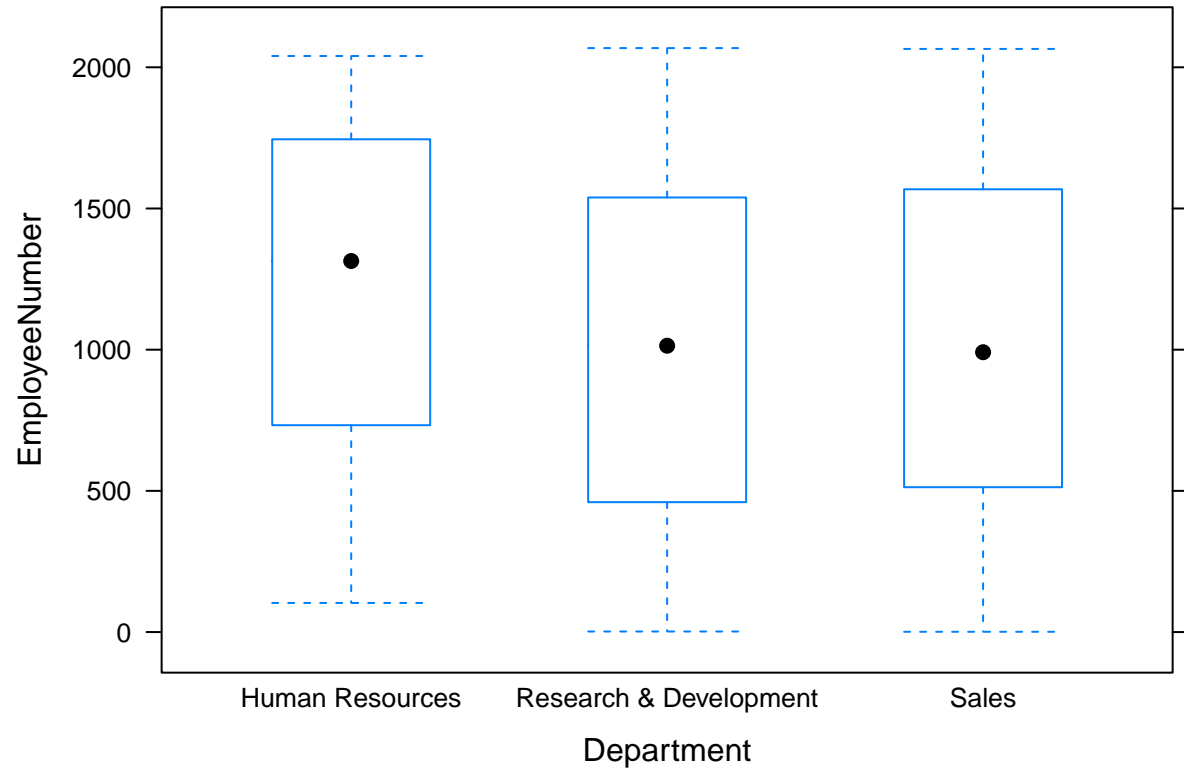
##5 Monthly Income by Gender

```
bwplot(emp_churn$Gender ~ emp_churn$MonthlyIncome, data=emp_churn, ylab='Gender', xlab='Monthly Income')
```

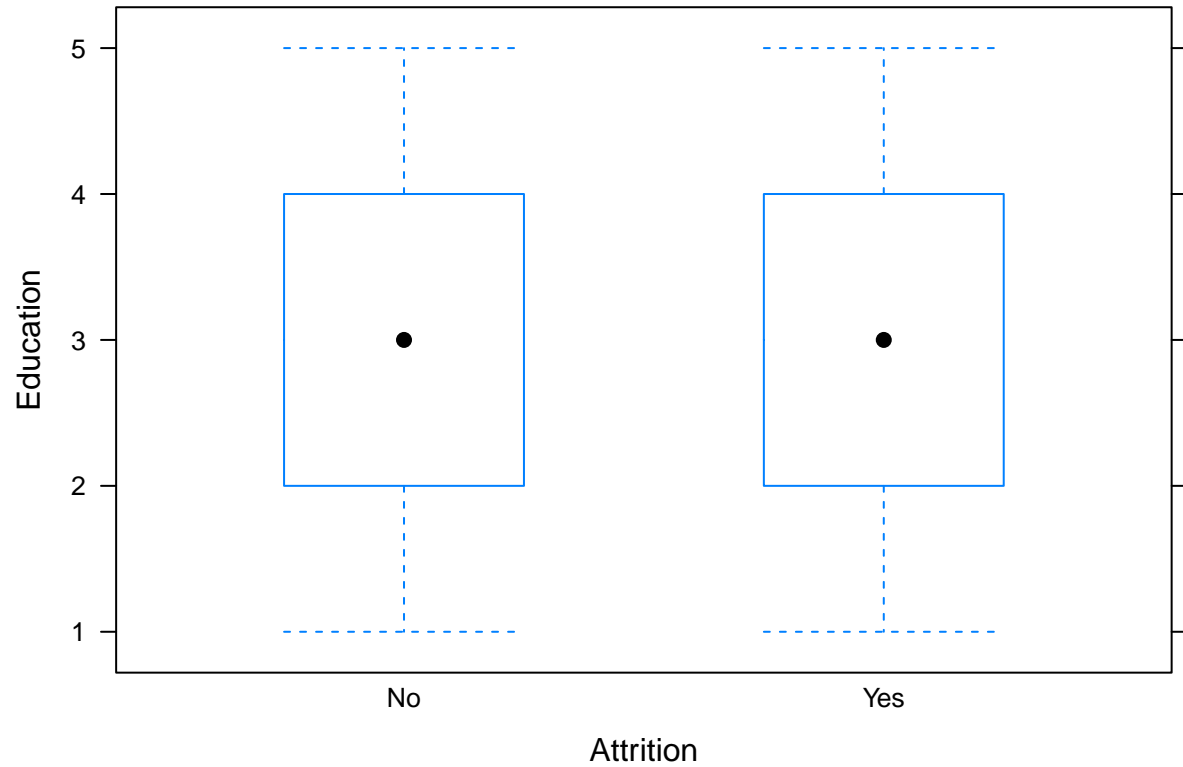


##6 Number of employee

```
bwplot(emp_churn$EmployeeNumber ~ emp_churn$Department, data=emp_churn, ylab='EmployeeNumber', xlab='Dep
```

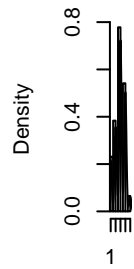


```
bwplot(emp_churn$Education ~ emp_churn$Attrition, data=emp_churn, ylab='Education',xlab='Attrition')
```



```
##7 education-attrition
par(mfrow=c(2,7))
par(mfrow = c(2,7))
hist(emp_churn$Education,xlab='',main = 'Attrition by Education level',freq = FALSE)
lines(density(emp_churn$Education,na.rm = T))
```

tion by Educat

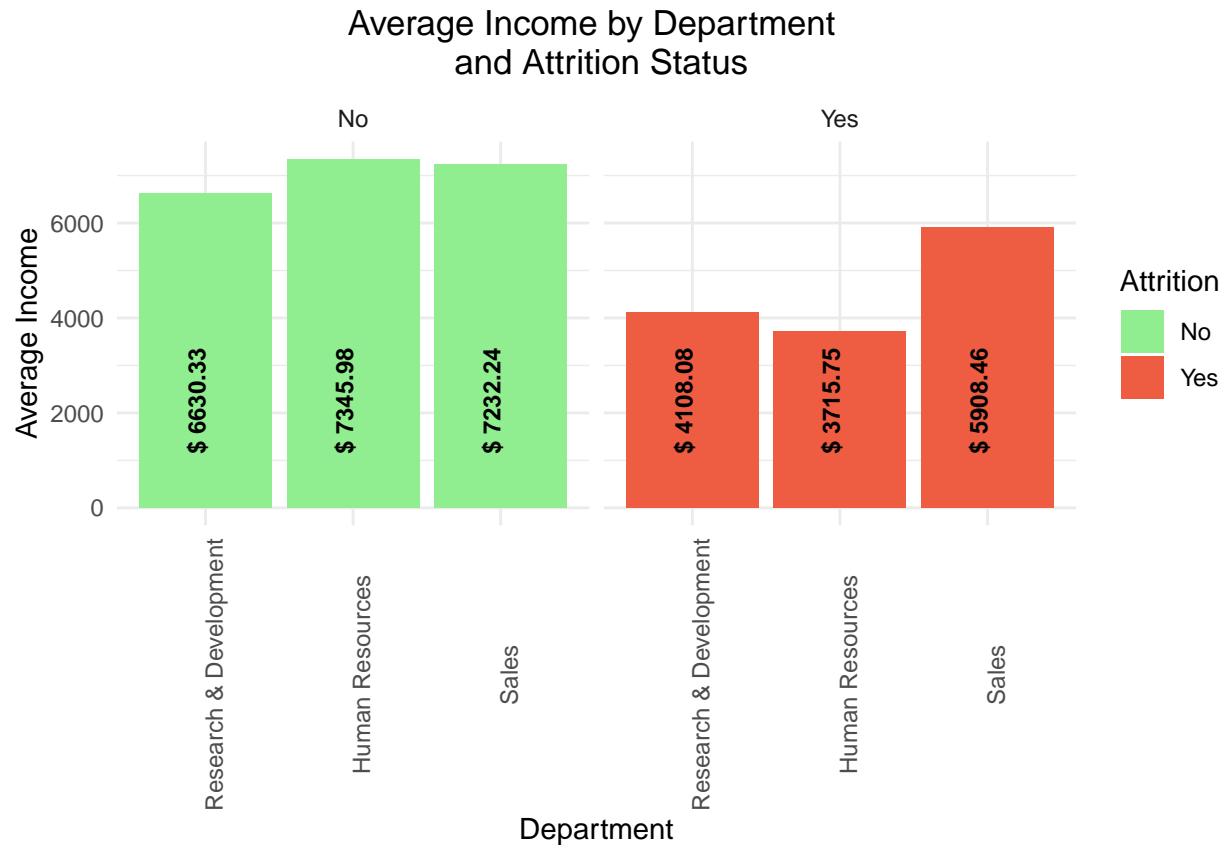


##9

```
options(repr.plot.width=8, repr.plot.height=5)
emp_churn$JobSatisfaction <- as.factor(emp_churn$JobSatisfaction)
```

```
options(repr.plot.width=8, repr.plot.height=5)
```

```
avg.income <- emp_churn %>% select(Department, MonthlyIncome, Attrition) %>% group_by(Attrition, Department)
  summarize(avg.inc=mean(MonthlyIncome)) %>%
  ggplot(aes(x=reorder(Department, avg.inc), y=avg.inc, fill=Attrition)) + geom_bar(stat="identity", position="dodge") +
  theme_minimal() + theme(axis.text.x = element_text(angle = 90), plot.title=element_text(hjust=0.5)) +
  scale_fill_manual(values=c("lightgreen", "tomato2")) +
  labs(y="Average Income", x="Department", title="Average Income by Department \n and Attrition Status")
  geom_text(aes(x=Department, y=0.01, label= paste0("$ ", round(avg.inc,2))),
    hjust=-0.5, vjust=0, size=3,
    colour="black", fontface="bold",
    angle=90)
avg.income
```



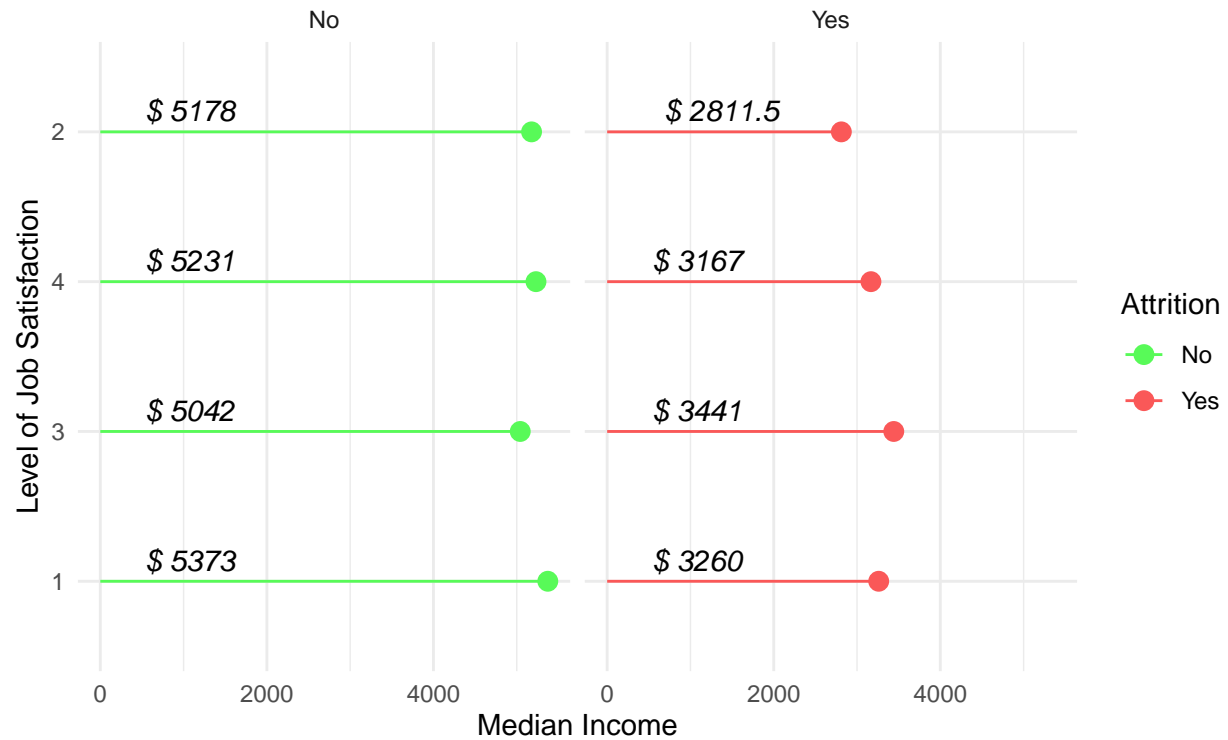
```
#### 10
options(repr.plot.width=8, repr.plot.height=5)

emp_churn$JobSatisfaction <- as.factor(emp_churn$JobSatisfaction)

high.inc <- emp_churn %>% select(JobSatisfaction, MonthlyIncome, Attrition) %>% group_by(JobSatisfaction)
  summarize(med=median(MonthlyIncome)) %>%
  ggplot(aes(x=reorder(JobSatisfaction, -med), y=med, color=Attrition)) +
  geom_point(size=3) +
  geom_segment(aes(x=JobSatisfaction,
                  xend=JobSatisfaction,
                  y=0,
                  yend=med)) + facet_wrap(~Attrition)+
  labs(title="Is Income a Reason for Employees to Leave?",
        subtitle="by Attrition Status",
        y="Median Income",
        x="Level of Job Satisfaction") +
  theme(axis.text.x = element_text(angle=65, vjust=0.6), plot.title=element_text(hjust=0.5), strip.background=
    element_blank()) +
  coord_flip() + theme_minimal() + scale_color_manual(values=c("#58FA58", "#FA5858")) +
  geom_text(aes(x=JobSatisfaction, y=0.01, label= paste0("$ ", round(med,2))),
            hjust=-0.5, vjust=-0.5, size=4,
            colour="black", fontface="italic",
            angle=360)
```

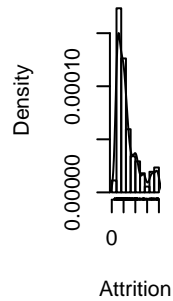
Is Income a Reason for Employees to Leave?

by Attrition Status



```
##11
par(mfrow=c(2,6))
par(mfrow = c(2,6))
hist(emp_churn$MonthlyIncome,xlab='Attrition',main = 'MonthlyIncome',freq = FALSE)
lines(density(emp_churn$MonthlyIncome,na.rm = T))
rug(jitter(emp_churn$MonthlyIncome))
```

MonthlyIncom



#12

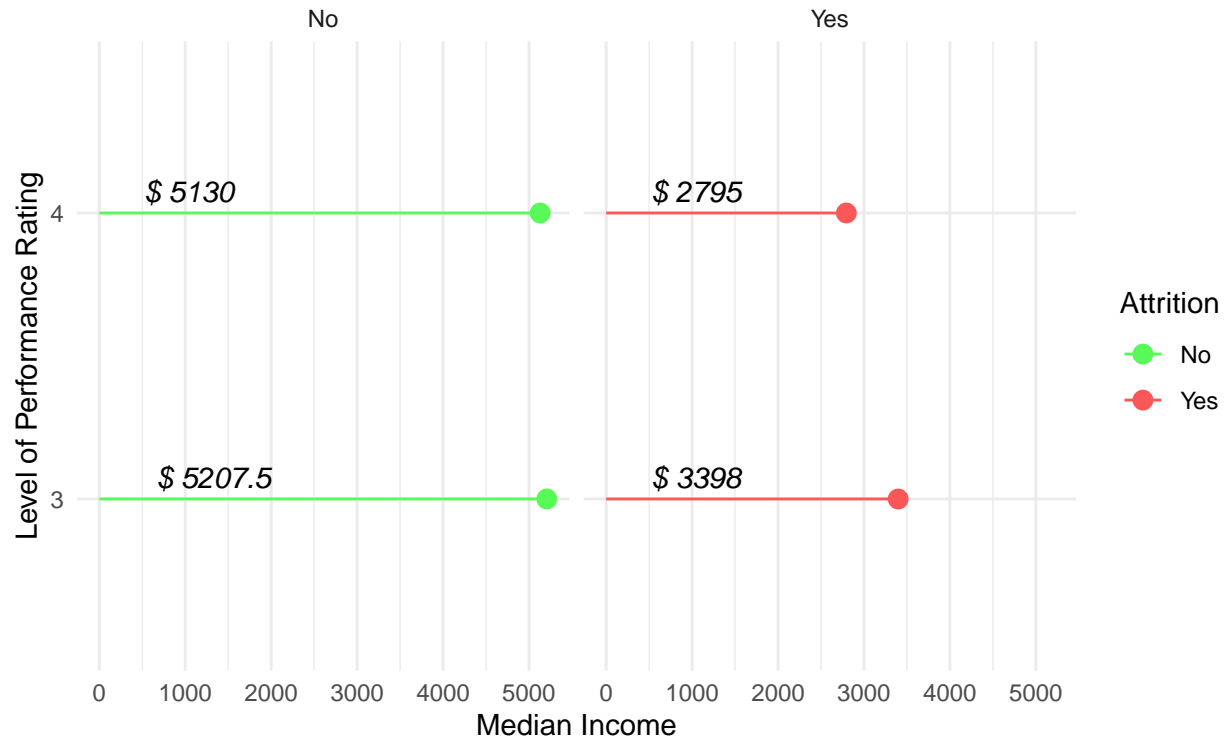
```
options(repr.plot.width=8, repr.plot.height=5)

emp_churn$PerformanceRating <- as.factor(emp_churn$PerformanceRating)

high1.inc <- emp_churn%>% select(PerformanceRating, MonthlyIncome, Attrition) %>% group_by(PerformanceRating)
  summarize(med=median(MonthlyIncome)) %>%
  ggplot(aes(x=reorder(PerformanceRating, -med), y=med, color=Attrition)) +
  geom_point(size=3) +
  geom_segment(aes(x=PerformanceRating,
                  xend=PerformanceRating,
                  y=0,
                  yend=med)) + facet_wrap(~Attrition)+
  labs(title="Is Income a Reason for Employees to Leave?",
        subtitle="by Attrition Status",
        y="Median Income",
        x="Level of Performance Rating") +
  theme(axis.text.x = element_text(angle=65, vjust=0.6), plot.title=element_text(hjust=0.5), strip.background=
    element_blank()) +
  coord_flip() + theme_minimal() + scale_color_manual(values=c("#58FA58", "#FA5858")) +
  geom_text(aes(x=PerformanceRating, y=0.01, label= paste0("$ ", round(med,2))),
            hjust=-0.5, vjust=-0.5, size=4,
            colour="black", fontface="italic",
            angle=360)
```


Is Income a Reason for Employees to Leave?

by Attrition Status



```
emp_churn$Attrition <- as.numeric(emp_churn$Attrition) - 1
str(emp_churn)
```

```
## Classes 'data.table' and 'data.frame':  1470 obs. of  35 variables:
## $ i..Age      : int  41 49 37 33 27 32 59 30 38 36 ...
## $ Attrition   : num  1 0 1 0 0 0 0 0 0 0 ...
## $ BusinessTravel : Factor w/ 3 levels "Non-Travel","Travel_Frequently",...: 3 2 3 2 3 2 3 3 ...
## $ DailyRate   : int  1102 279 1373 1392 591 1005 1324 1358 216 1299 ...
## $ Department  : Factor w/ 3 levels "Human Resources",...: 3 2 2 2 2 2 2 2 2 ...
## $ DistanceFromHome : int  1 8 2 3 2 2 3 24 23 27 ...
## $ Education    : int  2 1 2 4 1 2 3 1 3 3 ...
## $ EducationField : Factor w/ 6 levels "Human Resources",...: 2 2 5 2 4 2 4 2 2 4 ...
## $ EmployeeCount : int  1 1 1 1 1 1 1 1 1 1 ...
## $ EmployeeNumber : int  1 2 4 5 7 8 10 11 12 13 ...
## $ EnvironmentSatisfaction : int  2 3 4 4 1 4 3 4 4 3 ...
## $ Gender       : Factor w/ 2 levels "Female","Male": 1 2 2 1 2 2 1 2 2 2 ...
## $ HourlyRate    : int  94 61 92 56 40 79 81 67 44 94 ...
## $ JobInvolvement : int  3 2 2 3 3 3 4 3 2 3 ...
## $ JobLevel      : int  2 2 1 1 1 1 1 1 3 2 ...
## $ JobRole       : Factor w/ 9 levels "Healthcare Representative",...: 8 7 3 7 3 3 3 3 5 1 ...
## $ JobSatisfaction : Factor w/ 4 levels "1","2","3","4": 4 2 3 3 2 4 1 3 3 3 ...
## $ MaritalStatus  : Factor w/ 3 levels "Divorced","Married",...: 3 2 3 2 2 3 2 1 3 2 ...
## $ MonthlyIncome  : int  5993 5130 2090 2909 3468 3068 2670 2693 9526 5237 ...
```

```
## $ MonthlyRate          : int  19479 24907 2396 23159 16632 11864 9964 13335 8787 16577 ...
## $ NumCompaniesWorked   : int   8 1 6 1 9 0 4 1 0 6 ...
## $ Over18               : Factor w/ 1 level "Y": 1 1 1 1 1 1 1 1 1 1 ...
## $ OverTime             : Factor w/ 2 levels "No","Yes": 2 1 2 2 1 1 2 1 1 1 ...
## $ PercentSalaryHike     : int   11 23 15 11 12 13 20 22 21 13 ...
## $ PerformanceRating     : Factor w/ 2 levels "3","4": 1 2 1 1 1 1 2 2 2 1 ...
## $ RelationshipSatisfaction: int   1 4 2 3 4 3 1 2 2 2 ...
## $ StandardHours        : int   80 80 80 80 80 80 80 80 80 80 ...
## $ StockOptionLevel      : int   0 1 0 0 1 0 3 1 0 2 ...
## $ TotalWorkingYears     : int   8 10 7 8 6 8 12 1 10 17 ...
## $ TrainingTimesLastYear : int   0 3 3 3 3 2 3 2 2 3 ...
## $ WorkLifeBalance       : int   1 3 3 3 3 2 2 3 3 2 ...
## $ YearsAtCompany        : int   6 10 0 8 2 7 1 1 9 7 ...
## $ YearsInCurrentRole    : int   4 7 0 7 2 7 0 0 7 7 ...
## $ YearsSinceLastPromotion : int   0 1 0 3 2 3 0 0 1 7 ...
## $ YearsWithCurrManager  : int   5 7 0 0 2 6 0 0 8 7 ...
## - attr(*, ".internal.selfref")=<externalptr>
```

```
ndata <- emp_churn %>% filter(Attrition != 0)
ndata
```

##	i..Age	Attrition	BusinessTravel	DailyRate	Department
## 1	41	1	Travel_Rarely	1102	Sales
## 2	37	1	Travel_Rarely	1373	Research & Development
## 3	28	1	Travel_Rarely	103	Research & Development
## 4	36	1	Travel_Rarely	1218	Sales
## 5	34	1	Travel_Rarely	699	Research & Development
## 6	32	1	Travel_Frequently	1125	Research & Development
## 7	39	1	Travel_Rarely	895	Sales
## 8	24	1	Travel_Rarely	813	Research & Development
## 9	50	1	Travel_Rarely	869	Sales
## 10	26	1	Travel_Rarely	1357	Research & Development
## 11	41	1	Travel_Rarely	1360	Research & Development
## 12	48	1	Travel_Rarely	626	Research & Development
## 13	28	1	Travel_Rarely	1434	Research & Development
## 14	36	1	Travel_Rarely	318	Research & Development
## 15	46	1	Travel_Rarely	669	Sales
## 16	37	1	Travel_Rarely	807	Human Resources
## 17	20	1	Travel_Frequently	871	Research & Development
## 18	25	1	Travel_Rarely	240	Sales
## 19	34	1	Travel_Frequently	658	Research & Development
## 20	56	1	Travel_Rarely	441	Research & Development
## 21	31	1	Travel_Rarely	249	Sales
## 22	58	1	Travel_Rarely	147	Research & Development
## 23	19	1	Travel_Rarely	528	Sales
## 24	31	1	Travel_Rarely	542	Sales
## 25	51	1	Travel_Frequently	1150	Research & Development
## 26	32	1	Travel_Rarely	1033	Research & Development
## 27	19	1	Travel_Frequently	602	Sales
## 28	19	1	Travel_Rarely	303	Research & Development
## 29	41	1	Travel_Rarely	1356	Sales
## 30	35	1	Travel_Rarely	556	Research & Development
## 31	38	1	Travel_Rarely	1180	Research & Development
## 32	29	1	Travel_Rarely	121	Sales

## 33	32	1	Travel_Rarely	1045	Sales
## 34	30	1	Travel_Rarely	1005	Research & Development
## 35	30	1	Travel_Frequently	334	Sales
## 36	29	1	Travel_Rarely	992	Research & Development
## 37	29	1	Travel_Rarely	896	Research & Development
## 38	33	1	Travel_Rarely	813	Research & Development
## 39	33	1	Travel_Rarely	465	Research & Development
## 40	32	1	Travel_Rarely	515	Research & Development
## 41	37	1	Travel_Frequently	504	Research & Development
## 42	31	1	Travel_Frequently	307	Research & Development
## 43	28	1	Travel_Rarely	529	Research & Development
## 44	47	1	Non-Travel	666	Research & Development
## 45	44	1	Travel_Frequently	920	Research & Development
## 46	26	1	Travel_Rarely	1449	Research & Development
## 47	26	1	Travel_Rarely	950	Sales
## 48	18	1	Travel_Rarely	230	Research & Development
## 49	52	1	Travel_Rarely	723	Research & Development
## 50	28	1	Travel_Rarely	1157	Research & Development
## 51	39	1	Travel_Rarely	1162	Sales
## 52	29	1	Travel_Rarely	318	Research & Development
## 53	21	1	Travel_Frequently	756	Sales
## 54	33	1	Travel_Rarely	350	Sales
## 55	41	1	Travel_Frequently	143	Sales
## 56	40	1	Travel_Rarely	575	Sales
## 57	21	1	Travel_Rarely	156	Sales
## 58	34	1	Non-Travel	1362	Sales
## 59	26	1	Travel_Frequently	575	Research & Development
## 60	30	1	Travel_Frequently	464	Research & Development
## 61	25	1	Travel_Rarely	688	Research & Development
## 62	24	1	Travel_Rarely	1448	Sales
## 63	34	1	Travel_Frequently	296	Sales
## 64	29	1	Travel_Rarely	408	Research & Development
## 65	19	1	Travel_Rarely	489	Human Resources
## 66	33	1	Travel_Rarely	1277	Research & Development
## 67	33	1	Travel_Rarely	587	Research & Development
## 68	31	1	Travel_Frequently	534	Research & Development
## 69	34	1	Travel_Frequently	988	Human Resources
## 70	22	1	Travel_Frequently	1368	Research & Development
## 71	26	1	Travel_Frequently	426	Human Resources
## 72	18	1	Travel_Frequently	1306	Sales
## 73	26	1	Travel_Rarely	471	Research & Development
## 74	32	1	Non-Travel	1474	Sales
## 75	24	1	Travel_Frequently	1287	Research & Development
## 76	30	1	Travel_Frequently	448	Sales
## 77	31	1	Travel_Rarely	1365	Sales
## 78	27	1	Travel_Rarely	1420	Sales
## 79	45	1	Travel_Frequently	306	Sales
## 80	20	1	Travel_Rarely	1362	Research & Development
## 81	33	1	Travel_Frequently	1076	Research & Development
## 82	24	1	Travel_Rarely	693	Sales
## 83	50	1	Travel_Frequently	562	Sales
## 84	28	1	Travel_Rarely	654	Research & Development
## 85	42	1	Travel_Frequently	933	Research & Development
## 86	33	1	Travel_Rarely	527	Research & Development

## 87	47	1	Travel_Frequently	719	Sales
## 88	55	1	Travel_Rarely	725	Research & Development
## 89	26	1	Travel_Rarely	1146	Sales
## 90	23	1	Travel_Rarely	1243	Research & Development
## 91	29	1	Travel_Rarely	805	Research & Development
## 92	33	1	Travel_Rarely	118	Sales
## 93	58	1	Travel_Rarely	286	Research & Development
## 94	28	1	Travel_Rarely	890	Research & Development
## 95	49	1	Travel_Rarely	1184	Sales
## 96	55	1	Travel_Rarely	436	Sales
## 97	26	1	Travel_Frequently	887	Research & Development
## 98	35	1	Travel_Frequently	130	Research & Development
## 99	29	1	Travel_Rarely	341	Sales
## 100	32	1	Travel_Rarely	374	Research & Development
## 101	58	1	Travel_Frequently	781	Research & Development
## 102	20	1	Travel_Rarely	500	Sales
## 103	21	1	Travel_Rarely	1427	Research & Development
## 104	22	1	Travel_Rarely	617	Research & Development
## 105	41	1	Travel_Rarely	1085	Research & Development
## 106	39	1	Travel_Rarely	1122	Research & Development
## 107	25	1	Travel_Rarely	867	Sales
## 108	19	1	Travel_Rarely	419	Sales
## 109	20	1	Travel_Rarely	129	Research & Development
## 110	36	1	Travel_Rarely	530	Sales
## 111	37	1	Travel_Rarely	625	Sales
## 112	58	1	Travel_Rarely	289	Research & Development
## 113	40	1	Non-Travel	1479	Sales
## 114	31	1	Non-Travel	335	Research & Development
## 115	29	1	Travel_Rarely	906	Research & Development
## 116	30	1	Travel_Rarely	138	Research & Development
## 117	35	1	Travel_Rarely	622	Research & Development
## 118	20	1	Travel_Rarely	1097	Research & Development
## 119	30	1	Travel_Frequently	109	Research & Development
## 120	37	1	Travel_Rarely	1141	Research & Development
## 121	26	1	Non-Travel	265	Sales
## 122	52	1	Travel_Rarely	266	Sales
## 123	36	1	Travel_Rarely	885	Research & Development
## 124	36	1	Travel_Rarely	660	Research & Development
## 125	26	1	Travel_Frequently	342	Research & Development
## 126	20	1	Travel_Frequently	769	Sales
## 127	21	1	Travel_Rarely	1334	Research & Development
## 128	51	1	Travel_Rarely	1323	Research & Development
## 129	28	1	Non-Travel	1366	Research & Development
## 130	44	1	Travel_Rarely	1376	Human Resources
## 131	35	1	Travel_Rarely	1204	Sales
## 132	33	1	Travel_Frequently	827	Research & Development
## 133	25	1	Travel_Rarely	1219	Research & Development
## 134	26	1	Travel_Rarely	1330	Research & Development
## 135	33	1	Travel_Rarely	1017	Research & Development
## 136	28	1	Travel_Frequently	1009	Research & Development
## 137	50	1	Travel_Frequently	959	Sales
## 138	39	1	Travel_Frequently	203	Research & Development
## 139	18	1	Non-Travel	247	Research & Development
## 140	33	1	Travel_Rarely	603	Sales

## 141	31	1 Travel_Frequently	874 Research & Development
## 142	29	1 Travel_Rarely	408 Sales
## 143	42	1 Travel_Frequently	481 Sales
## 144	28	1 Travel_Rarely	1485 Research & Development
## 145	43	1 Travel_Rarely	1372 Sales
## 146	44	1 Travel_Rarely	1097 Research & Development
## 147	22	1 Travel_Frequently	1256 Research & Development
## 148	41	1 Non-Travel	906 Research & Development
## 149	24	1 Travel_Rarely	984 Research & Development
## 150	19	1 Non-Travel	504 Research & Development
## 151	25	1 Travel_Frequently	599 Sales
## 152	45	1 Travel_Rarely	1449 Sales
## 153	21	1 Travel_Frequently	251 Research & Development
## 154	44	1 Travel_Rarely	621 Research & Development
## 155	29	1 Travel_Rarely	806 Research & Development
## 156	32	1 Travel_Rarely	1089 Research & Development
## 157	39	1 Travel_Rarely	360 Research & Development
## 158	40	1 Travel_Rarely	299 Sales
## 159	52	1 Travel_Rarely	1030 Sales
## 160	31	1 Travel_Frequently	1060 Sales
## 161	44	1 Travel_Rarely	935 Research & Development
## 162	58	1 Travel_Rarely	601 Research & Development
## 163	55	1 Travel_Rarely	267 Sales
## 164	31	1 Travel_Frequently	703 Sales
## 165	35	1 Travel_Frequently	662 Sales
## 166	31	1 Travel_Rarely	330 Research & Development
## 167	27	1 Travel_Rarely	135 Research & Development
## 168	49	1 Travel_Frequently	1475 Research & Development
## 169	29	1 Travel_Frequently	337 Research & Development
## 170	31	1 Travel_Frequently	667 Sales
## 171	31	1 Travel_Rarely	202 Research & Development
## 172	25	1 Travel_Rarely	383 Sales
## 173	46	1 Travel_Rarely	377 Sales
## 174	39	1 Non-Travel	592 Research & Development
## 175	31	1 Travel_Frequently	1445 Research & Development
## 176	31	1 Travel_Frequently	523 Research & Development
## 177	34	1 Travel_Rarely	1107 Human Resources
## 178	28	1 Travel_Frequently	1496 Sales
## 179	29	1 Travel_Frequently	115 Sales
## 180	34	1 Travel_Rarely	790 Sales
## 181	24	1 Travel_Frequently	381 Research & Development
## 182	28	1 Travel_Frequently	289 Research & Development
## 183	29	1 Travel_Rarely	224 Research & Development
## 184	40	1 Travel_Rarely	676 Research & Development
## 185	31	1 Travel_Frequently	561 Research & Development
## 186	30	1 Travel_Rarely	740 Sales
## 187	35	1 Travel_Rarely	104 Research & Development
## 188	53	1 Travel_Rarely	607 Research & Development
## 189	38	1 Travel_Rarely	903 Research & Development
## 190	28	1 Travel_Rarely	329 Research & Development
## 191	18	1 Travel_Frequently	544 Sales
## 192	35	1 Travel_Rarely	737 Sales
## 193	35	1 Travel_Rarely	763 Sales
## 194	40	1 Travel_Rarely	1329 Research & Development

## 195	35	1	Travel_Frequently	880	Sales
## 196	23	1	Travel_Rarely	1320	Research & Development
## 197	48	1	Travel_Frequently	708	Sales
## 198	32	1	Travel_Rarely	1259	Research & Development
## 199	23	1	Travel_Rarely	427	Sales
## 200	24	1	Travel_Rarely	240	Human Resources
## 201	47	1	Travel_Frequently	1093	Sales
## 202	36	1	Travel_Rarely	1456	Sales
## 203	32	1	Travel_Rarely	964	Sales
## 204	30	1	Travel_Frequently	600	Human Resources
## 205	29	1	Travel_Rarely	428	Sales
## 206	33	1	Travel_Rarely	211	Sales
## 207	31	1	Travel_Rarely	1079	Sales
## 208	43	1	Travel_Frequently	807	Research & Development
## 209	21	1	Travel_Rarely	337	Sales
## 210	22	1	Travel_Rarely	1294	Research & Development
## 211	44	1	Travel_Frequently	429	Research & Development
## 212	35	1	Travel_Rarely	303	Sales
## 213	34	1	Travel_Frequently	234	Research & Development
## 214	37	1	Travel_Rarely	370	Research & Development
## 215	26	1	Travel_Rarely	920	Human Resources
## 216	46	1	Travel_Rarely	261	Research & Development
## 217	31	1	Travel_Rarely	359	Human Resources
## 218	29	1	Travel_Rarely	350	Human Resources
## 219	32	1	Travel_Rarely	414	Sales
## 220	29	1	Travel_Frequently	459	Research & Development
## 221	46	1	Travel_Rarely	1254	Sales
## 222	30	1	Travel_Rarely	945	Sales
## 223	22	1	Travel_Rarely	391	Research & Development
## 224	34	1	Non-Travel	967	Research & Development
## 225	56	1	Travel_Rarely	1162	Research & Development
## 226	29	1	Travel_Frequently	746	Sales
## 227	28	1	Travel_Rarely	1475	Sales
## 228	32	1	Travel_Frequently	238	Research & Development
## 229	27	1	Travel_Frequently	1337	Human Resources
## 230	28	1	Travel_Rarely	1404	Research & Development
## 231	31	1	Travel_Frequently	754	Sales
## 232	53	1	Travel_Rarely	1168	Sales
## 233	23	1	Travel_Frequently	638	Sales
## 234	29	1	Travel_Rarely	1092	Research & Development
## 235	56	1	Travel_Rarely	310	Research & Development
## 236	50	1	Travel_Frequently	878	Sales
## 237	50	1	Travel_Rarely	410	Sales
##	DistanceFromHome	Education	EducationField	EmployeeCount	EmployeeNumber
## 1		1	2 Life Sciences	1	1
## 2		2	2 Other	1	4
## 3		24	3 Life Sciences	1	19
## 4		9	4 Life Sciences	1	27
## 5		6	1 Medical	1	31
## 6		16	1 Life Sciences	1	33
## 7		5	3 Technical Degree	1	42
## 8		1	3 Medical	1	45
## 9		3	2 Marketing	1	47
## 10		25	3 Life Sciences	1	55

## 11	12	3 Technical Degree	1	58
## 12	1	2 Life Sciences	1	64
## 13	5	4 Technical Degree	1	65
## 14	9	3 Medical	1	90
## 15	9	2 Medical	1	118
## 16	6	4 Human Resources	1	133
## 17	6	3 Life Sciences	1	137
## 18	5	3 Marketing	1	142
## 19	7	3 Life Sciences	1	147
## 20	14	4 Life Sciences	1	161
## 21	6	4 Life Sciences	1	163
## 22	23	4 Medical	1	165
## 23	22	1 Marketing	1	167
## 24	20	3 Life Sciences	1	175
## 25	8	4 Life Sciences	1	179
## 26	9	3 Medical	1	190
## 27	1	1 Technical Degree	1	235
## 28	2	3 Life Sciences	1	243
## 29	20	2 Marketing	1	248
## 30	23	2 Life Sciences	1	261
## 31	29	1 Medical	1	282
## 32	27	3 Marketing	1	283
## 33	4	4 Medical	1	291
## 34	3	3 Technical Degree	1	297
## 35	26	4 Marketing	1	299
## 36	1	3 Technical Degree	1	300
## 37	18	1 Medical	1	315
## 38	14	3 Medical	1	325
## 39	2	2 Life Sciences	1	328
## 40	1	3 Life Sciences	1	331
## 41	10	3 Medical	1	342
## 42	29	2 Medical	1	355
## 43	2	4 Life Sciences	1	364
## 44	29	4 Life Sciences	1	376
## 45	24	3 Life Sciences	1	392
## 46	16	4 Medical	1	394
## 47	4	4 Marketing	1	401
## 48	3	3 Life Sciences	1	405
## 49	8	4 Medical	1	433
## 50	2	4 Medical	1	440
## 51	3	2 Medical	1	445
## 52	8	4 Other	1	454
## 53	1	1 Technical Degree	1	478
## 54	5	3 Marketing	1	485
## 55	4	3 Marketing	1	488
## 56	22	2 Marketing	1	492
## 57	12	3 Life Sciences	1	494
## 58	19	3 Marketing	1	502
## 59	3	1 Technical Degree	1	510
## 60	4	3 Technical Degree	1	514
## 61	3	3 Medical	1	538
## 62	1	1 Technical Degree	1	554
## 63	6	2 Marketing	1	555
## 64	25	5 Technical Degree	1	565

## 65	2	2 Technical Degree	1	566
## 66	15	1 Medical	1	582
## 67	10	1 Medical	1	584
## 68	20	3 Life Sciences	1	587
## 69	23	3 Human Resources	1	590
## 70	4	1 Technical Degree	1	593
## 71	17	4 Life Sciences	1	608
## 72	5	3 Marketing	1	614
## 73	24	3 Technical Degree	1	622
## 74	11	4 Other	1	631
## 75	7	3 Life Sciences	1	647
## 76	12	4 Life Sciences	1	648
## 77	13	4 Medical	1	650
## 78	2	1 Marketing	1	667
## 79	26	4 Life Sciences	1	684
## 80	10	1 Medical	1	701
## 81	3	3 Life Sciences	1	702
## 82	3	2 Life Sciences	1	720
## 83	8	2 Technical Degree	1	723
## 84	1	2 Life Sciences	1	741
## 85	19	3 Medical	1	752
## 86	1	4 Other	1	780
## 87	27	2 Life Sciences	1	785
## 88	2	3 Medical	1	787
## 89	8	3 Technical Degree	1	796
## 90	6	3 Life Sciences	1	811
## 91	1	2 Life Sciences	1	816
## 92	16	3 Marketing	1	819
## 93	2	4 Life Sciences	1	825
## 94	2	4 Medical	1	828
## 95	11	3 Marketing	1	840
## 96	2	1 Medical	1	842
## 97	5	2 Medical	1	848
## 98	25	4 Life Sciences	1	881
## 99	1	3 Medical	1	896
## 100	25	4 Life Sciences	1	911
## 101	2	1 Life Sciences	1	918
## 102	2	3 Medical	1	922
## 103	18	1 Other	1	923
## 104	3	1 Life Sciences	1	926
## 105	2	4 Life Sciences	1	927
## 106	6	3 Medical	1	932
## 107	19	2 Marketing	1	952
## 108	21	3 Other	1	959
## 109	4	3 Technical Degree	1	960
## 110	3	1 Life Sciences	1	967
## 111	1	4 Life Sciences	1	970
## 112	2	3 Technical Degree	1	977
## 113	24	3 Life Sciences	1	986
## 114	9	2 Medical	1	991
## 115	10	3 Life Sciences	1	994
## 116	22	3 Life Sciences	1	1004
## 117	14	4 Other	1	1010
## 118	11	3 Medical	1	1016

## 119	5	3	Medical	1	1017
## 120	11	2	Medical	1	1033
## 121	29	2	Medical	1	1037
## 122	2	1	Marketing	1	1038
## 123	16	4	Life Sciences	1	1042
## 124	15	3	Other	1	1052
## 125	2	3	Life Sciences	1	1053
## 126	9	3	Marketing	1	1077
## 127	10	3	Life Sciences	1	1079
## 128	4	4	Life Sciences	1	1081
## 129	24	2	Technical Degree	1	1082
## 130	1	2	Medical	1	1098
## 131	4	3	Technical Degree	1	1100
## 132	29	4	Medical	1	1101
## 133	4	1	Technical Degree	1	1106
## 134	21	3	Medical	1	1107
## 135	25	3	Medical	1	1108
## 136	1	3	Medical	1	1111
## 137	1	4	Other	1	1113
## 138	2	3	Life Sciences	1	1127
## 139	8	1	Medical	1	1156
## 140	9	4	Marketing	1	1157
## 141	15	3	Medical	1	1160
## 142	23	1	Life Sciences	1	1165
## 143	12	3	Life Sciences	1	1167
## 144	12	1	Life Sciences	1	1175
## 145	9	3	Marketing	1	1188
## 146	10	4	Life Sciences	1	1200
## 147	3	4	Life Sciences	1	1203
## 148	5	2	Life Sciences	1	1210
## 149	17	2	Life Sciences	1	1219
## 150	10	3	Medical	1	1248
## 151	24	1	Life Sciences	1	1273
## 152	2	3	Marketing	1	1277
## 153	10	2	Life Sciences	1	1279
## 154	15	3	Medical	1	1295
## 155	7	3	Technical Degree	1	1299
## 156	7	2	Life Sciences	1	1309
## 157	23	3	Medical	1	1310
## 158	25	4	Marketing	1	1318
## 159	5	3	Life Sciences	1	1319
## 160	1	3	Life Sciences	1	1331
## 161	3	3	Life Sciences	1	1333
## 162	7	4	Medical	1	1360
## 163	13	4	Marketing	1	1372
## 164	2	3	Life Sciences	1	1379
## 165	18	4	Marketing	1	1380
## 166	22	4	Medical	1	1389
## 167	17	4	Life Sciences	1	1405
## 168	28	2	Life Sciences	1	1420
## 169	14	1	Other	1	1421
## 170	1	4	Life Sciences	1	1427
## 171	8	3	Life Sciences	1	1433
## 172	9	2	Life Sciences	1	1439

## 173	9	3	Marketing	1	1457
## 174	2	3	Life Sciences	1	1458
## 175	1	5	Life Sciences	1	1459
## 176	2	3	Life Sciences	1	1464
## 177	9	4	Technical Degree	1	1467
## 178	1	3	Technical Degree	1	1486
## 179	13	3	Technical Degree	1	1487
## 180	24	4	Medical	1	1489
## 181	9	3	Medical	1	1494
## 182	2	2	Medical	1	1504
## 183	1	4	Technical Degree	1	1522
## 184	9	4	Life Sciences	1	1534
## 185	3	3	Life Sciences	1	1537
## 186	1	3	Life Sciences	1	1562
## 187	2	3	Life Sciences	1	1569
## 188	2	5	Technical Degree	1	1572
## 189	2	3	Medical	1	1573
## 190	24	3	Medical	1	1604
## 191	3	2	Medical	1	1624
## 192	10	3	Medical	1	1639
## 193	15	2	Medical	1	1645
## 194	7	3	Life Sciences	1	1649
## 195	12	4	Other	1	1667
## 196	8	1	Medical	1	1684
## 197	7	2	Medical	1	1691
## 198	2	4	Life Sciences	1	1692
## 199	7	3	Life Sciences	1	1702
## 200	22	1	Human Resources	1	1714
## 201	9	3	Life Sciences	1	1716
## 202	13	5	Marketing	1	1733
## 203	1	2	Life Sciences	1	1734
## 204	8	3	Human Resources	1	1747
## 205	9	3	Marketing	1	1752
## 206	16	3	Life Sciences	1	1758
## 207	16	4	Marketing	1	1761
## 208	17	3	Technical Degree	1	1767
## 209	7	1	Marketing	1	1780
## 210	8	1	Medical	1	1783
## 211	1	2	Medical	1	1792
## 212	27	3	Life Sciences	1	1797
## 213	9	4	Life Sciences	1	1807
## 214	10	4	Medical	1	1809
## 215	20	2	Medical	1	1818
## 216	21	2	Medical	1	1821
## 217	18	5	Human Resources	1	1842
## 218	13	3	Human Resources	1	1844
## 219	2	4	Marketing	1	1862
## 220	24	2	Life Sciences	1	1868
## 221	10	3	Life Sciences	1	1869
## 222	9	3	Medical	1	1876
## 223	7	1	Life Sciences	1	1878
## 224	16	4	Technical Degree	1	1905
## 225	24	2	Life Sciences	1	1907
## 226	24	3	Technical Degree	1	1928

## 227	13	2	Marketing	1	1933
## 228	5	2	Life Sciences	1	1939
## 229	22	3	Human Resources	1	1944
## 230	17	3	Technical Degree	1	1960
## 231	26	4	Marketing	1	1967
## 232	24	4	Life Sciences	1	1968
## 233	9	3	Marketing	1	2023
## 234	1	4	Medical	1	2027
## 235	7	2	Technical Degree	1	2032
## 236	1	4	Life Sciences	1	2044
## 237	28	3	Marketing	1	2055

##	EnvironmentSatisfaction	Gender	HourlyRate	JobInvolvement	JobLevel
## 1		2 Female	94	3	2
## 2		4 Male	92	2	1
## 3		3 Male	50	2	1
## 4		3 Male	82	2	1
## 5		2 Male	83	3	1
## 6		2 Female	72	1	1
## 7		4 Male	56	3	2
## 8		2 Male	61	3	1
## 9		1 Male	86	2	1
## 10		1 Male	48	1	1
## 11		2 Female	49	3	5
## 12		1 Male	98	2	3
## 13		3 Male	50	3	1
## 14		4 Male	79	2	1
## 15		3 Male	64	2	3
## 16		3 Male	63	3	1
## 17		4 Female	66	2	1
## 18		3 Male	46	2	2
## 19		1 Male	66	1	2
## 20		2 Female	72	3	1
## 21		2 Male	76	1	2
## 22		4 Female	94	3	3
## 23		4 Male	50	3	1
## 24		2 Female	71	1	2
## 25		1 Male	53	1	3
## 26		1 Female	41	3	1
## 27		3 Female	100	1	1
## 28		2 Male	47	2	1
## 29		2 Female	70	3	1
## 30		2 Male	50	2	2
## 31		2 Male	70	3	2
## 32		2 Female	35	3	3
## 33		4 Male	32	1	3
## 34		4 Female	88	3	1
## 35		3 Female	52	2	2
## 36		3 Male	85	3	1
## 37		3 Male	86	2	1
## 38		3 Male	58	3	1
## 39		1 Female	39	3	1
## 40		4 Male	62	2	1
## 41		1 Male	61	3	3
## 42		3 Male	71	2	1

## 43	1	Male	79	3	1
## 44	1	Male	88	3	3
## 45	4	Male	43	3	1
## 46	1	Male	45	3	1
## 47	4	Male	48	2	2
## 48	3	Male	54	3	1
## 49	3	Male	85	2	2
## 50	1	Male	84	1	1
## 51	4	Female	41	3	2
## 52	2	Male	77	1	1
## 53	1	Female	99	2	1
## 54	4	Female	34	3	1
## 55	1	Male	56	3	2
## 56	3	Male	68	2	2
## 57	3	Female	90	4	1
## 58	1	Male	67	4	2
## 59	3	Male	73	3	1
## 60	3	Male	40	3	1
## 61	1	Male	91	3	1
## 62	1	Female	62	3	1
## 63	4	Female	33	1	1
## 64	3	Female	71	2	1
## 65	1	Male	52	2	1
## 66	2	Male	56	3	3
## 67	1	Male	38	1	1
## 68	1	Male	66	3	3
## 69	2	Female	43	3	3
## 70	3	Male	99	2	1
## 71	2	Female	58	3	1
## 72	2	Male	69	3	1
## 73	3	Male	66	1	1
## 74	4	Male	60	4	2
## 75	1	Female	55	3	1
## 76	2	Male	74	2	1
## 77	2	Male	46	3	2
## 78	3	Male	85	3	1
## 79	1	Female	100	3	2
## 80	4	Male	32	3	1
## 81	1	Male	70	3	1
## 82	1	Female	65	3	2
## 83	2	Male	50	3	2
## 84	1	Female	67	1	1
## 85	3	Male	57	4	1
## 86	4	Male	63	3	1
## 87	2	Female	77	4	2
## 88	4	Male	78	3	5
## 89	4	Male	38	2	2
## 90	3	Male	63	4	1
## 91	2	Female	36	2	1
## 92	1	Female	69	3	2
## 93	4	Male	31	3	5
## 94	3	Male	46	3	1
## 95	3	Female	43	3	3
## 96	3	Male	37	3	2

## 97	3 Female	88	2	1
## 98	4 Female	96	3	1
## 99	2 Female	48	2	1
## 100	1 Male	87	3	1
## 101	4 Male	57	2	1
## 102	3 Female	49	2	1
## 103	4 Female	65	3	1
## 104	2 Female	34	3	2
## 105	2 Female	57	1	1
## 106	4 Male	70	3	1
## 107	3 Male	36	2	1
## 108	4 Male	37	2	1
## 109	1 Male	84	3	1
## 110	3 Male	51	2	3
## 111	1 Male	46	2	3
## 112	4 Male	51	3	1
## 113	2 Female	100	4	4
## 114	3 Male	46	2	1
## 115	4 Female	92	2	1
## 116	1 Female	48	3	1
## 117	3 Male	39	2	1
## 118	4 Female	98	2	1
## 119	2 Female	60	3	1
## 120	1 Female	61	1	2
## 121	2 Male	79	1	2
## 122	1 Female	57	1	5
## 123	3 Female	43	4	1
## 124	1 Male	81	3	2
## 125	1 Male	57	3	1
## 126	4 Female	54	3	1
## 127	3 Female	36	2	1
## 128	1 Male	34	3	1
## 129	2 Male	72	2	3
## 130	2 Male	91	2	3
## 131	4 Male	86	3	3
## 132	1 Female	54	2	2
## 133	4 Male	32	3	1
## 134	1 Male	37	3	1
## 135	1 Male	55	2	1
## 136	1 Male	45	2	1
## 137	4 Male	81	3	2
## 138	1 Male	84	3	4
## 139	3 Male	80	3	1
## 140	1 Female	77	3	2
## 141	3 Male	72	3	1
## 142	4 Female	45	2	3
## 143	3 Male	44	3	4
## 144	3 Female	79	3	1
## 145	1 Female	85	1	2
## 146	3 Male	96	3	1
## 147	3 Male	48	2	1
## 148	1 Male	95	2	1
## 149	4 Female	97	3	1
## 150	1 Female	96	2	1

## 151	3 Male	73	1	1
## 152	1 Female	94	1	5
## 153	1 Female	45	2	1
## 154	1 Female	73	3	3
## 155	2 Female	39	3	1
## 156	4 Male	79	3	2
## 157	3 Male	93	3	1
## 158	4 Male	57	2	3
## 159	2 Male	64	3	3
## 160	4 Female	54	3	1
## 161	1 Male	89	3	1
## 162	3 Female	53	2	3
## 163	1 Male	85	4	4
## 164	3 Female	90	2	1
## 165	4 Female	67	3	2
## 166	4 Male	98	3	2
## 167	4 Female	51	3	1
## 168	1 Male	97	2	2
## 169	3 Female	84	3	3
## 170	2 Female	50	1	1
## 171	1 Female	34	2	1
## 172	1 Male	68	2	1
## 173	1 Male	52	3	3
## 174	1 Female	54	2	1
## 175	3 Female	100	4	3
## 176	2 Male	94	3	1
## 177	1 Female	52	3	1
## 178	1 Male	92	3	1
## 179	1 Female	51	3	2
## 180	1 Female	40	2	2
## 181	2 Male	89	3	1
## 182	3 Male	38	2	1
## 183	1 Male	100	2	1
## 184	4 Male	86	3	1
## 185	4 Female	33	3	1
## 186	2 Male	64	2	2
## 187	1 Female	69	3	1
## 188	3 Female	78	2	3
## 189	3 Male	81	3	2
## 190	3 Male	51	3	1
## 191	2 Female	70	3	1
## 192	4 Male	55	2	3
## 193	1 Male	59	1	2
## 194	1 Male	73	3	1
## 195	4 Male	36	3	2
## 196	4 Male	93	2	1
## 197	4 Female	95	3	1
## 198	4 Male	95	3	1
## 199	3 Male	99	3	1
## 200	4 Male	58	1	1
## 201	3 Male	82	1	4
## 202	2 Male	96	2	2
## 203	1 Male	34	1	2
## 204	3 Female	66	2	1

## 205	2 Female	52	1	1
## 206	1 Female	74	3	3
## 207	1 Male	70	3	3
## 208	3 Male	38	2	1
## 209	2 Male	31	3	1
## 210	3 Female	79	3	1
## 211	3 Male	99	3	1
## 212	3 Male	84	3	2
## 213	4 Male	93	3	2
## 214	4 Male	58	3	2
## 215	4 Female	69	3	1
## 216	4 Female	66	3	2
## 217	4 Male	89	4	1
## 218	1 Male	56	2	1
## 219	3 Male	82	2	2
## 220	4 Male	73	2	1
## 221	3 Female	64	3	3
## 222	2 Male	89	3	1
## 223	4 Male	75	3	1
## 224	4 Male	85	1	1
## 225	1 Male	97	3	1
## 226	3 Male	45	4	1
## 227	4 Female	84	3	2
## 228	1 Female	47	4	1
## 229	1 Female	58	2	1
## 230	3 Male	32	2	1
## 231	1 Male	63	3	2
## 232	1 Male	66	3	3
## 233	4 Male	33	3	1
## 234	1 Male	36	3	1
## 235	4 Male	72	3	1
## 236	2 Male	94	3	2
## 237	4 Male	39	2	3
##	JobRole	JobSatisfaction	MaritalStatus	MonthlyIncome
## 1	Sales Executive	4	Single	5993
## 2	Laboratory Technician	3	Single	2090
## 3	Laboratory Technician	3	Single	2028
## 4	Sales Representative	1	Single	3407
## 5	Research Scientist	1	Single	2960
## 6	Research Scientist	1	Single	3919
## 7	Sales Representative	4	Married	2086
## 8	Research Scientist	4	Married	2293
## 9	Sales Representative	3	Married	2683
## 10	Laboratory Technician	3	Single	2293
## 11	Research Director	3	Married	19545
## 12	Laboratory Technician	3	Single	5381
## 13	Laboratory Technician	3	Single	3441
## 14	Research Scientist	3	Married	3388
## 15	Sales Executive	4	Single	9619
## 16	Human Resources	1	Divorced	2073
## 17	Laboratory Technician	4	Single	2926
## 18	Sales Executive	3	Single	5744
## 19	Laboratory Technician	3	Single	6074
## 20	Research Scientist	2	Married	4963

## 21	Sales Executive	3	Married	6172
## 22	Healthcare Representative	4	Married	10312
## 23	Sales Representative	3	Single	1675
## 24	Sales Executive	3	Married	4559
## 25	Manufacturing Director	4	Single	10650
## 26	Laboratory Technician	1	Single	4200
## 27	Sales Representative	1	Single	2325
## 28	Laboratory Technician	4	Single	1102
## 29	Sales Representative	2	Single	3140
## 30	Manufacturing Director	3	Married	5916
## 31	Healthcare Representative	1	Married	6673
## 32	Sales Executive	4	Married	7639
## 33	Sales Executive	4	Married	10400
## 34	Research Scientist	1	Single	2657
## 35	Sales Executive	1	Single	6696
## 36	Research Scientist	3	Single	2058
## 37	Research Scientist	4	Single	2389
## 38	Laboratory Technician	4	Married	2436
## 39	Laboratory Technician	1	Married	2707
## 40	Laboratory Technician	3	Single	3730
## 41	Manufacturing Director	3	Divorced	10048
## 42	Laboratory Technician	2	Single	3479
## 43	Laboratory Technician	3	Single	3485
## 44	Manager	2	Married	11849
## 45	Laboratory Technician	3	Divorced	3161
## 46	Laboratory Technician	2	Divorced	2373
## 47	Sales Executive	4	Single	5828
## 48	Laboratory Technician	3	Single	1420
## 49	Research Scientist	2	Married	4941
## 50	Research Scientist	4	Married	3464
## 51	Sales Executive	3	Married	5238
## 52	Laboratory Technician	1	Married	2119
## 53	Sales Representative	2	Single	2174
## 54	Sales Representative	3	Single	2851
## 55	Sales Executive	2	Single	9355
## 56	Sales Executive	3	Married	6380
## 57	Sales Representative	2	Single	2716
## 58	Sales Executive	4	Single	5304
## 59	Research Scientist	1	Single	3102
## 60	Research Scientist	4	Single	2285
## 61	Laboratory Technician	1	Married	4031
## 62	Sales Representative	2	Single	3202
## 63	Sales Representative	3	Divorced	2351
## 64	Research Scientist	2	Married	2546
## 65	Human Resources	4	Single	2564
## 66	Manager	3	Married	13610
## 67	Laboratory Technician	4	Divorced	3408
## 68	Healthcare Representative	3	Married	9824
## 69	Human Resources	1	Divorced	9950
## 70	Laboratory Technician	3	Single	3894
## 71	Human Resources	3	Divorced	2741
## 72	Sales Representative	2	Single	1878
## 73	Laboratory Technician	4	Single	2340
## 74	Sales Executive	3	Married	4707

## 75	Laboratory Technician	3	Married	2886
## 76	Sales Representative	1	Married	2033
## 77	Sales Executive	1	Divorced	4233
## 78	Sales Representative	1	Divorced	3041
## 79	Sales Executive	1	Married	4286
## 80	Research Scientist	3	Single	1009
## 81	Research Scientist	1	Single	3348
## 82	Sales Executive	3	Single	4577
## 83	Sales Executive	3	Married	6796
## 84	Research Scientist	2	Single	2216
## 85	Research Scientist	3	Divorced	2759
## 86	Research Scientist	4	Single	2686
## 87	Sales Executive	3	Single	6397
## 88	Manager	1	Married	19859
## 89	Sales Executive	1	Single	5326
## 90	Laboratory Technician	1	Married	1601
## 91	Laboratory Technician	1	Married	2319
## 92	Sales Executive	1	Single	5324
## 93	Research Director	2	Single	19246
## 94	Research Scientist	3	Single	4382
## 95	Sales Executive	4	Married	7654
## 96	Sales Executive	4	Single	5160
## 97	Research Scientist	3	Married	2366
## 98	Research Scientist	2	Divorced	2022
## 99	Sales Representative	3	Divorced	2800
## 100	Laboratory Technician	4	Single	2795
## 101	Laboratory Technician	4	Divorced	2380
## 102	Sales Representative	3	Single	2044
## 103	Research Scientist	4	Single	2693
## 104	Manufacturing Director	3	Married	4171
## 105	Laboratory Technician	4	Divorced	2778
## 106	Laboratory Technician	1	Married	2404
## 107	Sales Representative	2	Married	2413
## 108	Sales Representative	2	Single	2121
## 109	Laboratory Technician	1	Single	2973
## 110	Sales Executive	4	Married	10325
## 111	Sales Executive	3	Married	10609
## 112	Research Scientist	3	Single	2479
## 113	Sales Executive	2	Single	13194
## 114	Research Scientist	1	Single	2321
## 115	Research Scientist	1	Single	2404
## 116	Research Scientist	3	Married	2132
## 117	Laboratory Technician	2	Divorced	3743
## 118	Research Scientist	1	Single	2600
## 119	Laboratory Technician	2	Single	2422
## 120	Healthcare Representative	2	Married	4777
## 121	Sales Executive	1	Single	4969
## 122	Manager	4	Married	19845
## 123	Laboratory Technician	1	Single	2743
## 124	Laboratory Technician	3	Divorced	4834
## 125	Research Scientist	1	Married	2042
## 126	Sales Representative	4	Single	2323
## 127	Laboratory Technician	1	Single	1416
## 128	Research Scientist	3	Married	2461

## 129	Healthcare Representative	1	Single	8722
## 130	Human Resources	1	Married	10482
## 131	Sales Executive	1	Single	9582
## 132	Research Scientist	3	Single	4508
## 133	Laboratory Technician	4	Married	3691
## 134	Laboratory Technician	3	Divorced	2377
## 135	Research Scientist	2	Single	2313
## 136	Laboratory Technician	2	Divorced	2596
## 137	Sales Executive	3	Single	4728
## 138	Healthcare Representative	4	Divorced	12169
## 139	Laboratory Technician	3	Single	1904
## 140	Sales Executive	1	Single	8224
## 141	Laboratory Technician	3	Married	2610
## 142	Sales Executive	1	Married	7336
## 143	Sales Executive	1	Single	13758
## 144	Laboratory Technician	4	Married	2515
## 145	Sales Executive	3	Single	5346
## 146	Research Scientist	3	Single	2936
## 147	Research Scientist	4	Married	2853
## 148	Research Scientist	1	Divorced	2107
## 149	Laboratory Technician	2	Married	2210
## 150	Research Scientist	2	Single	1859
## 151	Sales Representative	4	Single	1118
## 152	Manager	2	Single	18824
## 153	Laboratory Technician	3	Single	2625
## 154	Healthcare Representative	4	Married	7978
## 155	Laboratory Technician	3	Divorced	3339
## 156	Laboratory Technician	3	Married	4883
## 157	Research Scientist	1	Single	3904
## 158	Sales Executive	2	Single	9094
## 159	Sales Executive	2	Single	8446
## 160	Sales Representative	2	Single	2302
## 161	Laboratory Technician	1	Married	2362
## 162	Manufacturing Director	1	Married	10008
## 163	Sales Executive	3	Single	13695
## 164	Sales Representative	4	Single	2785
## 165	Sales Executive	3	Married	4614
## 166	Manufacturing Director	3	Married	6179
## 167	Research Scientist	3	Single	2394
## 168	Laboratory Technician	1	Single	4284
## 169	Healthcare Representative	4	Single	7553
## 170	Sales Representative	3	Single	1359
## 171	Research Scientist	2	Single	1261
## 172	Sales Representative	1	Married	4400
## 173	Sales Executive	4	Divorced	10096
## 174	Laboratory Technician	1	Single	3646
## 175	Manufacturing Director	2	Single	7446
## 176	Laboratory Technician	4	Married	3722
## 177	Human Resources	3	Married	2742
## 178	Sales Representative	3	Married	2909
## 179	Sales Executive	2	Single	5765
## 180	Sales Executive	2	Single	4599
## 181	Laboratory Technician	1	Single	3172
## 182	Laboratory Technician	1	Single	2561

## 183	Research Scientist	1	Single	2362
## 184	Laboratory Technician	1	Single	2018
## 185	Research Scientist	3	Single	4084
## 186	Sales Executive	1	Married	9714
## 187	Laboratory Technician	1	Divorced	2074
## 188	Manufacturing Director	4	Married	10169
## 189	Manufacturing Director	2	Married	4855
## 190	Laboratory Technician	2	Married	2408
## 191	Sales Representative	4	Single	1569
## 192	Sales Executive	1	Married	10306
## 193	Sales Executive	4	Divorced	5440
## 194	Laboratory Technician	1	Single	2166
## 195	Sales Executive	4	Single	4581
## 196	Laboratory Technician	3	Single	3989
## 197	Sales Representative	3	Married	2655
## 198	Laboratory Technician	2	Single	1393
## 199	Sales Representative	4	Divorced	2275
## 200	Human Resources	3	Married	1555
## 201	Sales Executive	3	Married	12936
## 202	Sales Executive	1	Divorced	6134
## 203	Sales Executive	2	Single	6735
## 204	Human Resources	4	Divorced	2180
## 205	Sales Representative	2	Single	2760
## 206	Sales Executive	1	Single	8564
## 207	Sales Executive	3	Married	8161
## 208	Research Scientist	3	Married	2437
## 209	Sales Representative	2	Single	2679
## 210	Laboratory Technician	1	Married	2398
## 211	Research Scientist	2	Divorced	2342
## 212	Sales Executive	4	Single	5813
## 213	Laboratory Technician	1	Married	5346
## 214	Manufacturing Director	1	Single	4213
## 215	Human Resources	2	Married	2148
## 216	Healthcare Representative	2	Married	8926
## 217	Human Resources	1	Married	2956
## 218	Human Resources	1	Divorced	2335
## 219	Sales Executive	2	Single	9907
## 220	Research Scientist	4	Single	2439
## 221	Sales Executive	2	Married	7314
## 222	Sales Representative	4	Single	1081
## 223	Research Scientist	2	Single	2472
## 224	Research Scientist	1	Married	2307
## 225	Laboratory Technician	4	Single	2587
## 226	Sales Representative	1	Single	1091
## 227	Sales Executive	3	Single	9854
## 228	Research Scientist	3	Single	2432
## 229	Human Resources	2	Married	2863
## 230	Laboratory Technician	4	Divorced	2367
## 231	Sales Executive	4	Married	5617
## 232	Sales Executive	1	Single	10448
## 233	Sales Representative	1	Married	1790
## 234	Research Scientist	4	Married	4787
## 235	Laboratory Technician	3	Married	2339
## 236	Sales Executive	3	Divorced	6728

## 237	Sales Executive	1	Divorced	10854	
##	MonthlyRate	NumCompaniesWorked	Over18	OverTime	PercentSalaryHike
## 1	19479	8	Y	Yes	11
## 2	2396	6	Y	Yes	15
## 3	12947	5	Y	Yes	14
## 4	6986	7	Y	No	23
## 5	17102	2	Y	No	11
## 6	4681	1	Y	Yes	22
## 7	3335	3	Y	No	14
## 8	3020	2	Y	Yes	16
## 9	3810	1	Y	Yes	14
## 10	10558	1	Y	No	12
## 11	16280	1	Y	No	12
## 12	19294	9	Y	Yes	13
## 13	11179	1	Y	Yes	13
## 14	21777	0	Y	Yes	17
## 15	13596	1	Y	No	16
## 16	23648	4	Y	Yes	22
## 17	19783	1	Y	Yes	18
## 18	26959	1	Y	Yes	11
## 19	22887	1	Y	Yes	24
## 20	4510	9	Y	Yes	18
## 21	20739	4	Y	Yes	18
## 22	3465	1	Y	No	12
## 23	26820	1	Y	Yes	19
## 24	24788	3	Y	Yes	11
## 25	25150	2	Y	No	15
## 26	10224	7	Y	No	22
## 27	20989	0	Y	No	21
## 28	9241	1	Y	No	22
## 29	21728	1	Y	Yes	22
## 30	15497	3	Y	Yes	13
## 31	11354	7	Y	Yes	19
## 32	24525	1	Y	No	22
## 33	25812	1	Y	No	11
## 34	8556	5	Y	Yes	11
## 35	22967	5	Y	No	15
## 36	19757	0	Y	No	14
## 37	14961	1	Y	Yes	13
## 38	22149	5	Y	Yes	13
## 39	21509	7	Y	No	20
## 40	9571	0	Y	Yes	14
## 41	22573	6	Y	No	11
## 42	11652	0	Y	No	11
## 43	14935	2	Y	No	11
## 44	10268	1	Y	Yes	12
## 45	19920	3	Y	Yes	22
## 46	14180	2	Y	Yes	13
## 47	8450	1	Y	Yes	12
## 48	25233	1	Y	No	13
## 49	17747	2	Y	No	15
## 50	24737	5	Y	Yes	13
## 51	17778	4	Y	Yes	18
## 52	4759	1	Y	Yes	11

## 53	9150	1	Y	Yes	11
## 54	9150	1	Y	Yes	13
## 55	9558	1	Y	No	18
## 56	6110	2	Y	Yes	12
## 57	25422	1	Y	No	15
## 58	4652	8	Y	Yes	13
## 59	6582	0	Y	No	22
## 60	3427	9	Y	Yes	23
## 61	9396	5	Y	No	13
## 62	21972	1	Y	Yes	16
## 63	12253	0	Y	No	16
## 64	18300	5	Y	No	16
## 65	18437	1	Y	No	12
## 66	24619	7	Y	Yes	12
## 67	6705	7	Y	No	13
## 68	22908	3	Y	No	12
## 69	11533	9	Y	Yes	15
## 70	9129	5	Y	No	16
## 71	22808	0	Y	Yes	11
## 72	8059	1	Y	Yes	14
## 73	23213	1	Y	Yes	18
## 74	23914	8	Y	No	12
## 75	14168	1	Y	Yes	16
## 76	14470	1	Y	No	18
## 77	11512	2	Y	No	17
## 78	16346	0	Y	No	11
## 79	5630	2	Y	No	14
## 80	26999	1	Y	Yes	11
## 81	3164	1	Y	Yes	11
## 82	24785	9	Y	No	14
## 83	23452	3	Y	Yes	14
## 84	3872	7	Y	Yes	13
## 85	20366	6	Y	Yes	12
## 86	5207	1	Y	Yes	13
## 87	10339	4	Y	Yes	12
## 88	21199	5	Y	Yes	13
## 89	3064	6	Y	No	17
## 90	3445	1	Y	Yes	21
## 91	6689	1	Y	Yes	11
## 92	26507	5	Y	No	15
## 93	25761	7	Y	Yes	12
## 94	16374	6	Y	No	17
## 95	5860	1	Y	No	18
## 96	21519	4	Y	No	16
## 97	20898	1	Y	Yes	14
## 98	16612	1	Y	Yes	19
## 99	23522	6	Y	Yes	19
## 100	18016	1	Y	Yes	24
## 101	13384	9	Y	Yes	14
## 102	22052	1	Y	No	13
## 103	8870	1	Y	No	19
## 104	10022	0	Y	Yes	19
## 105	17725	4	Y	Yes	13
## 106	4303	7	Y	Yes	21

## 107	18798	1	Y	Yes	18
## 108	9947	1	Y	Yes	13
## 109	13008	1	Y	No	19
## 110	5518	1	Y	Yes	11
## 111	14922	5	Y	No	11
## 112	26227	4	Y	No	24
## 113	17071	4	Y	Yes	16
## 114	10322	0	Y	Yes	22
## 115	11479	6	Y	Yes	20
## 116	11539	4	Y	Yes	11
## 117	10074	1	Y	Yes	24
## 118	18275	1	Y	Yes	15
## 119	25725	0	Y	No	17
## 120	14382	5	Y	No	15
## 121	21813	8	Y	No	18
## 122	25846	1	Y	No	15
## 123	8269	1	Y	No	16
## 124	7858	7	Y	No	14
## 125	15346	6	Y	Yes	14
## 126	17205	1	Y	Yes	14
## 127	17258	1	Y	No	13
## 128	10332	9	Y	Yes	12
## 129	12355	1	Y	No	12
## 130	2326	9	Y	No	14
## 131	10333	0	Y	Yes	22
## 132	3129	1	Y	No	22
## 133	4605	1	Y	Yes	15
## 134	19373	1	Y	No	20
## 135	2993	4	Y	Yes	20
## 136	7160	1	Y	No	15
## 137	17251	3	Y	Yes	14
## 138	13547	7	Y	No	11
## 139	13556	1	Y	No	12
## 140	18385	0	Y	Yes	17
## 141	6233	1	Y	No	12
## 142	11162	1	Y	No	13
## 143	2447	0	Y	Yes	12
## 144	22955	1	Y	Yes	11
## 145	9489	8	Y	No	13
## 146	10826	1	Y	Yes	11
## 147	4223	0	Y	Yes	11
## 148	20293	6	Y	No	17
## 149	3372	1	Y	No	13
## 150	6148	1	Y	Yes	25
## 151	8040	1	Y	Yes	14
## 152	2493	2	Y	Yes	16
## 153	25308	1	Y	No	20
## 154	14075	1	Y	No	11
## 155	17285	3	Y	Yes	13
## 156	22845	1	Y	No	18
## 157	22154	0	Y	No	13
## 158	17235	2	Y	Yes	12
## 159	21534	9	Y	Yes	19
## 160	8319	1	Y	Yes	11

## 161	14669	4	Y	No	12
## 162	12023	7	Y	Yes	14
## 163	9277	6	Y	Yes	17
## 164	11882	7	Y	No	14
## 165	23288	0	Y	Yes	18
## 166	21057	1	Y	Yes	15
## 167	25681	1	Y	Yes	13
## 168	22710	3	Y	No	20
## 169	22930	0	Y	Yes	12
## 170	16154	1	Y	No	12
## 171	22262	1	Y	No	12
## 172	15182	3	Y	No	12
## 173	15986	4	Y	No	11
## 174	17181	2	Y	Yes	23
## 175	8931	1	Y	No	11
## 176	21081	6	Y	Yes	13
## 177	3072	1	Y	No	15
## 178	15747	3	Y	No	15
## 179	17485	5	Y	No	11
## 180	7815	0	Y	Yes	23
## 181	16998	2	Y	Yes	11
## 182	5355	7	Y	No	11
## 183	7568	6	Y	No	13
## 184	21831	3	Y	No	14
## 185	4156	1	Y	No	12
## 186	5323	1	Y	No	11
## 187	26619	1	Y	Yes	12
## 188	14618	0	Y	No	16
## 189	7653	4	Y	No	11
## 190	7324	1	Y	Yes	17
## 191	18420	1	Y	Yes	12
## 192	21530	9	Y	No	17
## 193	22098	6	Y	Yes	14
## 194	3339	3	Y	Yes	14
## 195	10414	3	Y	Yes	24
## 196	20586	1	Y	Yes	11
## 197	11740	2	Y	Yes	11
## 198	24852	1	Y	No	12
## 199	25103	1	Y	Yes	21
## 200	11585	1	Y	No	11
## 201	24164	7	Y	No	11
## 202	8658	5	Y	Yes	13
## 203	12147	6	Y	No	15
## 204	9732	6	Y	No	11
## 205	14630	1	Y	No	13
## 206	10092	2	Y	Yes	20
## 207	19002	2	Y	No	13
## 208	15587	9	Y	Yes	16
## 209	4567	1	Y	No	13
## 210	15999	1	Y	Yes	17
## 211	11092	1	Y	Yes	12
## 212	13492	1	Y	Yes	18
## 213	6208	4	Y	No	17
## 214	4992	1	Y	No	15

## 215	6889	0	Y	Yes	11
## 216	10842	4	Y	No	22
## 217	21495	0	Y	No	17
## 218	3157	4	Y	Yes	15
## 219	26186	7	Y	Yes	12
## 220	14753	1	Y	Yes	24
## 221	14011	5	Y	No	21
## 222	16019	1	Y	No	13
## 223	26092	1	Y	Yes	23
## 224	14460	1	Y	Yes	23
## 225	10261	1	Y	No	16
## 226	10642	1	Y	No	17
## 227	23352	3	Y	Yes	11
## 228	15318	3	Y	Yes	14
## 229	19555	1	Y	No	12
## 230	18779	5	Y	No	12
## 231	21075	1	Y	Yes	11
## 232	5843	6	Y	Yes	13
## 233	26956	1	Y	No	19
## 234	26124	9	Y	Yes	14
## 235	3666	8	Y	No	11
## 236	14255	7	Y	No	12
## 237	16586	4	Y	Yes	13
##	PerformanceRating	RelationshipSatisfaction	StandardHours	StockOptionLevel	
## 1	3	1	80	0	
## 2	3	2	80	0	
## 3	3	2	80	0	
## 4	4	2	80	0	
## 5	3	3	80	0	
## 6	4	2	80	0	
## 7	3	3	80	1	
## 8	3	1	80	1	
## 9	3	3	80	0	
## 10	3	3	80	0	
## 11	3	4	80	0	
## 12	3	4	80	0	
## 13	3	3	80	0	
## 14	3	1	80	1	
## 15	3	4	80	0	
## 16	4	4	80	0	
## 17	3	2	80	0	
## 18	3	4	80	0	
## 19	4	4	80	0	
## 20	3	1	80	3	
## 21	3	2	80	0	
## 22	3	4	80	1	
## 23	3	4	80	0	
## 24	3	3	80	1	
## 25	3	4	80	0	
## 26	4	1	80	0	
## 27	4	1	80	0	
## 28	4	3	80	0	
## 29	4	4	80	0	
## 30	3	1	80	0	

## 31	3	2	80	0
## 32	4	4	80	3
## 33	3	3	80	0
## 34	3	3	80	0
## 35	3	3	80	0
## 36	3	4	80	0
## 37	3	3	80	0
## 38	3	3	80	1
## 39	4	1	80	0
## 40	3	4	80	0
## 41	3	2	80	2
## 42	3	2	80	0
## 43	3	3	80	0
## 44	3	4	80	1
## 45	4	4	80	1
## 46	3	4	80	1
## 47	3	2	80	0
## 48	3	3	80	0
## 49	3	1	80	0
## 50	3	4	80	0
## 51	3	1	80	0
## 52	3	4	80	0
## 53	3	3	80	0
## 54	3	2	80	0
## 55	3	3	80	0
## 56	3	1	80	2
## 57	3	4	80	0
## 58	3	2	80	0
## 59	4	3	80	0
## 60	4	3	80	0
## 61	3	3	80	1
## 62	3	2	80	0
## 63	3	4	80	1
## 64	3	2	80	0
## 65	3	3	80	0
## 66	3	4	80	0
## 67	3	1	80	3
## 68	3	1	80	0
## 69	3	3	80	3
## 70	3	3	80	0
## 71	3	2	80	1
## 72	3	4	80	0
## 73	3	2	80	0
## 74	3	4	80	0
## 75	3	4	80	1
## 76	3	3	80	1
## 77	3	3	80	0
## 78	3	2	80	1
## 79	3	4	80	2
## 80	3	4	80	0
## 81	3	1	80	0
## 82	3	1	80	0
## 83	3	1	80	1
## 84	3	4	80	0

## 85	3	4	80	0
## 86	3	3	80	0
## 87	3	4	80	0
## 88	3	4	80	1
## 89	3	3	80	0
## 90	4	3	80	2
## 91	3	4	80	1
## 92	3	3	80	0
## 93	3	4	80	0
## 94	3	4	80	0
## 95	3	1	80	2
## 96	3	3	80	0
## 97	3	1	80	1
## 98	3	1	80	1
## 99	3	3	80	3
## 100	4	3	80	0
## 101	3	4	80	1
## 102	3	4	80	0
## 103	3	1	80	0
## 104	3	1	80	1
## 105	3	3	80	1
## 106	4	4	80	0
## 107	3	3	80	3
## 108	3	2	80	0
## 109	3	2	80	0
## 110	3	1	80	1
## 111	3	3	80	0
## 112	4	1	80	0
## 113	3	4	80	0
## 114	4	1	80	0
## 115	4	3	80	0
## 116	3	2	80	0
## 117	4	4	80	1
## 118	3	1	80	0
## 119	3	1	80	0
## 120	3	1	80	0
## 121	3	4	80	0
## 122	3	4	80	1
## 123	3	3	80	0
## 124	3	2	80	1
## 125	3	2	80	1
## 126	3	2	80	0
## 127	3	1	80	0
## 128	3	3	80	3
## 129	3	1	80	0
## 130	3	4	80	1
## 131	4	1	80	0
## 132	4	2	80	0
## 133	3	2	80	1
## 134	4	3	80	1
## 135	4	2	80	0
## 136	3	1	80	2
## 137	3	4	80	0
## 138	3	4	80	3

## 139	3	4	80	0
## 140	3	1	80	0
## 141	3	3	80	1
## 142	3	1	80	1
## 143	3	2	80	0
## 144	3	4	80	0
## 145	3	2	80	0
## 146	3	3	80	0
## 147	3	2	80	1
## 148	3	1	80	1
## 149	3	1	80	1
## 150	4	2	80	0
## 151	3	4	80	0
## 152	3	1	80	0
## 153	4	3	80	0
## 154	3	4	80	1
## 155	3	1	80	2
## 156	3	1	80	1
## 157	3	1	80	0
## 158	3	3	80	0
## 159	3	3	80	0
## 160	3	1	80	0
## 161	3	3	80	0
## 162	3	4	80	0
## 163	3	3	80	0
## 164	3	3	80	0
## 165	3	3	80	1
## 166	3	4	80	2
## 167	3	4	80	0
## 168	4	1	80	0
## 169	3	1	80	0
## 170	3	2	80	0
## 171	3	3	80	0
## 172	3	1	80	0
## 173	3	1	80	1
## 174	4	2	80	0
## 175	3	1	80	0
## 176	3	3	80	1
## 177	3	4	80	0
## 178	3	4	80	1
## 179	3	1	80	0
## 180	4	3	80	0
## 181	3	3	80	0
## 182	3	3	80	0
## 183	3	3	80	0
## 184	3	2	80	0
## 185	3	1	80	0
## 186	3	4	80	1
## 187	3	4	80	1
## 188	3	2	80	1
## 189	3	1	80	2
## 190	3	3	80	3
## 191	3	3	80	0
## 192	3	3	80	0

## 193	3	4	80	2
## 194	3	2	80	0
## 195	4	1	80	0
## 196	3	1	80	0
## 197	3	3	80	2
## 198	3	1	80	0
## 199	4	2	80	1
## 200	3	3	80	1
## 201	3	3	80	0
## 202	3	2	80	3
## 203	3	2	80	0
## 204	3	3	80	1
## 205	3	3	80	0
## 206	4	3	80	0
## 207	3	1	80	3
## 208	3	4	80	1
## 209	3	2	80	0
## 210	3	3	80	0
## 211	3	3	80	3
## 212	3	4	80	0
## 213	3	3	80	1
## 214	3	2	80	0
## 215	3	3	80	0
## 216	4	4	80	1
## 217	3	3	80	0
## 218	3	4	80	3
## 219	3	3	80	0
## 220	4	2	80	0
## 221	4	3	80	3
## 222	3	3	80	0
## 223	4	1	80	0
## 224	4	2	80	1
## 225	3	4	80	0
## 226	3	4	80	0
## 227	3	4	80	0
## 228	3	1	80	0
## 229	3	1	80	0
## 230	3	1	80	1
## 231	3	3	80	0
## 232	3	2	80	0
## 233	3	1	80	1
## 234	3	2	80	3
## 235	3	4	80	1
## 236	3	4	80	2
## 237	3	2	80	1
##	TotalWorkingYears	TrainingTimesLastYear	WorkLifeBalance	YearsAtCompany
## 1	8	0	1	6
## 2	7	3	3	0
## 3	6	4	3	4
## 4	10	4	3	5
## 5	8	2	3	4
## 6	10	5	3	10
## 7	19	6	4	1
## 8	6	2	2	2

## 9	3	2	3	3
## 10	1	2	2	1
## 11	23	0	3	22
## 12	23	2	3	1
## 13	2	3	2	2
## 14	2	0	2	1
## 15	9	3	3	9
## 16	7	3	3	3
## 17	1	5	3	1
## 18	6	1	3	6
## 19	9	3	3	9
## 20	7	2	3	5
## 21	12	3	2	7
## 22	40	3	2	40
## 23	0	2	2	0
## 24	4	2	3	2
## 25	18	2	3	4
## 26	10	2	4	5
## 27	1	5	4	0
## 28	1	3	2	1
## 29	4	5	2	4
## 30	8	1	3	1
## 31	17	2	3	1
## 32	10	3	2	10
## 33	14	2	2	14
## 34	8	5	3	5
## 35	9	5	2	6
## 36	7	1	2	6
## 37	4	3	2	4
## 38	8	2	1	5
## 39	13	3	4	9
## 40	4	2	1	3
## 41	17	5	3	1
## 42	6	2	4	5
## 43	5	5	1	0
## 44	10	2	2	10
## 45	19	0	1	1
## 46	5	2	3	3
## 47	8	0	3	8
## 48	0	2	3	0
## 49	11	3	2	8
## 50	5	4	2	3
## 51	12	3	2	1
## 52	7	4	2	7
## 53	3	3	3	3
## 54	1	2	3	1
## 55	8	5	3	8
## 56	8	6	3	6
## 57	1	0	3	1
## 58	9	3	2	5
## 59	7	2	3	6
## 60	3	4	3	1
## 61	6	5	3	2
## 62	6	4	3	5

## 63	3	3	2	2
## 64	6	2	4	2
## 65	1	3	4	1
## 66	15	2	4	7
## 67	8	2	3	4
## 68	12	2	3	1
## 69	11	2	3	3
## 70	4	3	3	2
## 71	8	2	2	7
## 72	0	3	3	0
## 73	1	3	1	1
## 74	6	2	3	4
## 75	6	4	3	6
## 76	1	2	4	1
## 77	9	2	1	3
## 78	5	3	3	4
## 79	5	4	3	1
## 80	1	5	3	1
## 81	10	3	3	10
## 82	4	3	3	2
## 83	18	4	3	4
## 84	10	4	3	7
## 85	7	2	3	2
## 86	10	2	2	10
## 87	8	2	3	5
## 88	24	2	3	5
## 89	6	2	2	4
## 90	1	2	3	0
## 91	1	1	3	1
## 92	6	3	3	3
## 93	40	2	3	31
## 94	5	3	2	2
## 95	9	3	4	9
## 96	12	3	2	9
## 97	8	2	3	8
## 98	10	3	2	10
## 99	5	3	3	3
## 100	1	2	1	1
## 101	3	3	2	1
## 102	2	3	2	2
## 103	1	3	2	1
## 104	4	3	4	3
## 105	10	1	2	7
## 106	8	2	1	2
## 107	1	2	3	1
## 108	1	3	4	1
## 109	1	2	3	1
## 110	16	6	3	16
## 111	17	2	1	14
## 112	7	4	3	1
## 113	22	2	2	1
## 114	4	0	3	3
## 115	3	5	3	0
## 116	7	2	3	5

## 117	5	2	1	4
## 118	1	2	3	1
## 119	4	3	3	3
## 120	15	2	1	1
## 121	7	6	3	2
## 122	33	3	3	32
## 123	18	1	3	17
## 124	9	3	2	1
## 125	6	2	3	3
## 126	2	3	3	2
## 127	1	6	2	1
## 128	18	2	4	10
## 129	10	2	2	10
## 130	24	1	3	20
## 131	9	2	3	8
## 132	14	4	3	13
## 133	7	3	4	7
## 134	1	0	2	1
## 135	5	0	3	2
## 136	1	2	3	1
## 137	5	4	3	0
## 138	21	4	3	18
## 139	0	0	3	0
## 140	6	3	3	5
## 141	2	5	2	2
## 142	11	3	1	11
## 143	22	2	2	21
## 144	1	4	2	1
## 145	7	2	2	4
## 146	6	4	3	6
## 147	1	5	3	0
## 148	5	2	1	1
## 149	1	3	1	1
## 150	1	2	4	1
## 151	1	4	3	1
## 152	26	2	3	24
## 153	2	2	1	2
## 154	10	2	3	10
## 155	10	2	3	7
## 156	10	3	3	10
## 157	6	2	3	5
## 158	9	2	3	5
## 159	10	2	2	8
## 160	3	2	4	3
## 161	10	4	4	3
## 162	31	0	2	10
## 163	24	2	2	19
## 164	3	3	4	1
## 165	5	0	2	4
## 166	10	3	2	10
## 167	8	2	3	8
## 168	20	2	3	4
## 169	9	1	3	8
## 170	1	3	3	1

## 171	1	3	4	1
## 172	6	2	3	3
## 173	28	1	4	7
## 174	11	2	4	1
## 175	10	2	3	10
## 176	7	2	1	2
## 177	2	0	3	2
## 178	5	3	4	3
## 179	7	4	1	5
## 180	16	2	4	15
## 181	4	2	2	0
## 182	8	2	2	0
## 183	11	2	1	9
## 184	15	3	1	5
## 185	7	2	1	7
## 186	10	4	3	10
## 187	1	2	3	1
## 188	34	4	3	33
## 189	7	2	3	5
## 190	1	3	3	1
## 191	0	2	4	0
## 192	15	3	3	13
## 193	7	2	2	2
## 194	10	3	1	4
## 195	13	2	4	11
## 196	5	2	3	5
## 197	19	3	3	9
## 198	1	2	3	1
## 199	3	2	3	3
## 200	1	2	3	1
## 201	25	3	1	23
## 202	16	3	3	2
## 203	10	2	3	0
## 204	6	0	2	4
## 205	2	3	3	2
## 206	11	2	2	0
## 207	10	2	3	1
## 208	6	4	3	1
## 209	1	3	3	1
## 210	1	6	3	1
## 211	6	2	2	5
## 212	10	2	3	10
## 213	11	3	2	7
## 214	10	4	1	10
## 215	6	3	3	5
## 216	13	2	4	9
## 217	2	4	3	1
## 218	4	3	3	2
## 219	7	3	2	2
## 220	1	3	2	1
## 221	14	2	3	8
## 222	1	3	2	1
## 223	1	2	3	1
## 224	5	2	3	5

## 225	5	3	3	4
## 226	1	3	3	1
## 227	6	0	3	2
## 228	8	2	3	4
## 229	1	2	3	1
## 230	6	2	2	4
## 231	10	4	3	10
## 232	15	2	2	2
## 233	1	3	2	1
## 234	4	3	4	2
## 235	14	4	1	10
## 236	12	3	3	6
## 237	20	3	3	3

##	YearsInCurrentRole	YearsSinceLastPromotion	YearsWithCurrManager
## 1	4	0	5
## 2	0	0	0
## 3	2	0	3
## 4	3	0	3
## 5	2	1	3
## 6	2	6	7
## 7	0	0	0
## 8	0	2	0
## 9	2	0	2
## 10	0	0	1
## 11	15	15	8
## 12	0	0	0
## 13	2	2	2
## 14	0	0	0
## 15	8	4	7
## 16	2	0	2
## 17	0	1	0
## 18	4	0	3
## 19	7	0	6
## 20	4	4	3
## 21	7	7	7
## 22	10	15	6
## 23	0	0	0
## 24	2	2	2
## 25	2	0	3
## 26	4	0	4
## 27	0	0	0
## 28	0	1	0
## 29	3	0	2
## 30	0	0	1
## 31	0	0	0
## 32	4	1	9
## 33	8	9	8
## 34	2	0	4
## 35	3	0	1
## 36	2	1	5
## 37	3	0	1
## 38	4	0	4
## 39	7	1	7
## 40	2	1	2

## 41	0	0	0
## 42	4	1	4
## 43	0	0	0
## 44	7	9	9
## 45	0	0	0
## 46	2	0	2
## 47	7	7	4
## 48	0	0	0
## 49	2	7	7
## 50	2	2	2
## 51	0	0	0
## 52	7	0	7
## 53	2	1	2
## 54	0	0	0
## 55	7	7	7
## 56	4	1	0
## 57	0	0	0
## 58	2	0	4
## 59	4	0	4
## 60	0	0	0
## 61	2	0	2
## 62	3	1	4
## 63	2	1	0
## 64	2	1	1
## 65	0	0	0
## 66	6	7	7
## 67	3	1	3
## 68	0	0	0
## 69	2	0	2
## 70	2	1	2
## 71	7	1	0
## 72	0	0	0
## 73	0	0	0
## 74	2	1	2
## 75	3	1	2
## 76	0	0	0
## 77	1	1	2
## 78	3	0	2
## 79	1	0	0
## 80	0	1	1
## 81	8	9	7
## 82	2	2	0
## 83	3	1	3
## 84	7	3	7
## 85	2	2	2
## 86	9	7	8
## 87	4	1	3
## 88	2	1	4
## 89	3	1	2
## 90	0	0	0
## 91	0	0	0
## 92	2	0	2
## 93	15	13	8
## 94	2	2	1

## 95	8	7	7
## 96	7	7	3
## 97	7	1	7
## 98	2	7	8
## 99	2	0	2
## 100	0	0	1
## 101	0	0	0
## 102	2	0	2
## 103	0	0	0
## 104	2	0	2
## 105	7	1	0
## 106	2	2	2
## 107	0	0	0
## 108	0	0	0
## 109	0	0	0
## 110	7	3	7
## 111	1	11	7
## 112	0	0	0
## 113	0	0	0
## 114	2	1	2
## 115	0	0	0
## 116	2	0	1
## 117	2	0	2
## 118	0	0	0
## 119	2	1	2
## 120	0	0	0
## 121	2	2	2
## 122	14	6	9
## 123	13	15	14
## 124	0	0	0
## 125	2	1	2
## 126	2	0	2
## 127	0	1	0
## 128	0	2	7
## 129	7	1	9
## 130	6	3	6
## 131	7	4	7
## 132	7	3	8
## 133	7	5	6
## 134	1	0	0
## 135	2	2	2
## 136	0	0	0
## 137	0	0	0
## 138	7	11	5
## 139	0	0	0
## 140	2	0	3
## 141	2	2	2
## 142	8	3	10
## 143	9	13	14
## 144	1	0	0
## 145	3	1	3
## 146	4	0	2
## 147	0	0	0
## 148	0	0	0

## 149	0	0	0
## 150	1	0	0
## 151	0	1	0
## 152	10	1	11
## 153	2	2	2
## 154	7	0	5
## 155	7	7	7
## 156	4	1	1
## 157	2	0	3
## 158	4	1	0
## 159	7	7	7
## 160	2	2	2
## 161	2	1	2
## 162	9	5	9
## 163	7	3	8
## 164	0	0	0
## 165	2	3	2
## 166	2	6	7
## 167	2	7	7
## 168	3	1	3
## 169	7	7	7
## 170	0	0	0
## 171	0	0	0
## 172	2	2	2
## 173	7	4	3
## 174	0	0	0
## 175	8	4	7
## 176	2	2	2
## 177	2	2	2
## 178	2	1	2
## 179	3	0	0
## 180	9	10	10
## 181	0	0	0
## 182	0	0	0
## 183	7	0	7
## 184	4	1	0
## 185	2	7	7
## 186	8	6	7
## 187	0	0	0
## 188	7	1	9
## 189	2	1	4
## 190	1	0	0
## 191	0	0	0
## 192	12	6	0
## 193	2	2	2
## 194	2	0	3
## 195	9	6	7
## 196	4	1	2
## 197	7	7	7
## 198	0	0	0
## 199	2	0	2
## 200	0	0	0
## 201	5	14	10
## 202	2	2	2

## 203	0	0	0
## 204	2	1	2
## 205	2	2	2
## 206	0	0	0
## 207	0	0	0
## 208	0	0	0
## 209	0	1	0
## 210	0	0	0
## 211	3	2	3
## 212	7	7	7
## 213	1	0	7
## 214	3	0	8
## 215	1	1	4
## 216	7	3	7
## 217	0	0	0
## 218	2	2	0
## 219	2	2	2
## 220	0	1	0
## 221	7	0	7
## 222	0	0	0
## 223	0	0	0
## 224	2	3	0
## 225	2	1	0
## 226	0	0	0
## 227	0	2	2
## 228	1	0	3
## 229	0	0	0
## 230	1	0	3
## 231	7	0	8
## 232	2	2	2
## 233	0	1	0
## 234	2	2	2
## 235	9	9	8
## 236	3	0	1
## 237	2	2	0

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse
```

```
## v tibble 2.1.3    v purrr 0.3.3
## v tidyr  1.0.2    v stringr 1.4.0
## v readr  1.3.1    v forcats 0.4.0
```

```
## -- Conflicts ----- tidyverse
```

```
## x dplyr::between() masks data.table::between()
## x tidyr::extract() masks magrittr::extract()
## x dplyr::filter()  masks stats::filter()
## x dplyr::first()   masks data.table::first()
## x dplyr::lag()      masks stats::lag()
## x dplyr::last()     masks data.table::last()
## x purrr::set_names() masks magrittr::set_names()
## x purrr::transpose() masks data.table::transpose()
```

```
cdata=ndata %>% select(MonthlyIncome, i..Age)
cdata
```

##	MonthlyIncome	i..Age
## 1	5993	41
## 2	2090	37
## 3	2028	28
## 4	3407	36
## 5	2960	34
## 6	3919	32
## 7	2086	39
## 8	2293	24
## 9	2683	50
## 10	2293	26
## 11	19545	41
## 12	5381	48
## 13	3441	28
## 14	3388	36
## 15	9619	46
## 16	2073	37
## 17	2926	20
## 18	5744	25
## 19	6074	34
## 20	4963	56
## 21	6172	31
## 22	10312	58
## 23	1675	19
## 24	4559	31
## 25	10650	51
## 26	4200	32
## 27	2325	19
## 28	1102	19
## 29	3140	41
## 30	5916	35
## 31	6673	38
## 32	7639	29
## 33	10400	32
## 34	2657	30
## 35	6696	30
## 36	2058	29
## 37	2389	29
## 38	2436	33
## 39	2707	33
## 40	3730	32
## 41	10048	37
## 42	3479	31
## 43	3485	28
## 44	11849	47
## 45	3161	44
## 46	2373	26
## 47	5828	26
## 48	1420	18
## 49	4941	52

## 50	3464	28
## 51	5238	39
## 52	2119	29
## 53	2174	21
## 54	2851	33
## 55	9355	41
## 56	6380	40
## 57	2716	21
## 58	5304	34
## 59	3102	26
## 60	2285	30
## 61	4031	25
## 62	3202	24
## 63	2351	34
## 64	2546	29
## 65	2564	19
## 66	13610	33
## 67	3408	33
## 68	9824	31
## 69	9950	34
## 70	3894	22
## 71	2741	26
## 72	1878	18
## 73	2340	26
## 74	4707	32
## 75	2886	24
## 76	2033	30
## 77	4233	31
## 78	3041	27
## 79	4286	45
## 80	1009	20
## 81	3348	33
## 82	4577	24
## 83	6796	50
## 84	2216	28
## 85	2759	42
## 86	2686	33
## 87	6397	47
## 88	19859	55
## 89	5326	26
## 90	1601	23
## 91	2319	29
## 92	5324	33
## 93	19246	58
## 94	4382	28
## 95	7654	49
## 96	5160	55
## 97	2366	26
## 98	2022	35
## 99	2800	29
## 100	2795	32
## 101	2380	58
## 102	2044	20
## 103	2693	21

## 104	4171	22
## 105	2778	41
## 106	2404	39
## 107	2413	25
## 108	2121	19
## 109	2973	20
## 110	10325	36
## 111	10609	37
## 112	2479	58
## 113	13194	40
## 114	2321	31
## 115	2404	29
## 116	2132	30
## 117	3743	35
## 118	2600	20
## 119	2422	30
## 120	4777	37
## 121	4969	26
## 122	19845	52
## 123	2743	36
## 124	4834	36
## 125	2042	26
## 126	2323	20
## 127	1416	21
## 128	2461	51
## 129	8722	28
## 130	10482	44
## 131	9582	35
## 132	4508	33
## 133	3691	25
## 134	2377	26
## 135	2313	33
## 136	2596	28
## 137	4728	50
## 138	12169	39
## 139	1904	18
## 140	8224	33
## 141	2610	31
## 142	7336	29
## 143	13758	42
## 144	2515	28
## 145	5346	43
## 146	2936	44
## 147	2853	22
## 148	2107	41
## 149	2210	24
## 150	1859	19
## 151	1118	25
## 152	18824	45
## 153	2625	21
## 154	7978	44
## 155	3339	29
## 156	4883	32
## 157	3904	39

## 158	9094	40
## 159	8446	52
## 160	2302	31
## 161	2362	44
## 162	10008	58
## 163	13695	55
## 164	2785	31
## 165	4614	35
## 166	6179	31
## 167	2394	27
## 168	4284	49
## 169	7553	29
## 170	1359	31
## 171	1261	31
## 172	4400	25
## 173	10096	46
## 174	3646	39
## 175	7446	31
## 176	3722	31
## 177	2742	34
## 178	2909	28
## 179	5765	29
## 180	4599	34
## 181	3172	24
## 182	2561	28
## 183	2362	29
## 184	2018	40
## 185	4084	31
## 186	9714	30
## 187	2074	35
## 188	10169	53
## 189	4855	38
## 190	2408	28
## 191	1569	18
## 192	10306	35
## 193	5440	35
## 194	2166	40
## 195	4581	35
## 196	3989	23
## 197	2655	48
## 198	1393	32
## 199	2275	23
## 200	1555	24
## 201	12936	47
## 202	6134	36
## 203	6735	32
## 204	2180	30
## 205	2760	29
## 206	8564	33
## 207	8161	31
## 208	2437	43
## 209	2679	21
## 210	2398	22
## 211	2342	44

```
## 212      5813    35
## 213      5346    34
## 214      4213    37
## 215      2148    26
## 216      8926    46
## 217      2956    31
## 218      2335    29
## 219      9907    32
## 220      2439    29
## 221      7314    46
## 222      1081    30
## 223      2472    22
## 224      2307    34
## 225      2587    56
## 226      1091    29
## 227      9854    28
## 228      2432    32
## 229      2863    27
## 230      2367    28
## 231      5617    31
## 232     10448    53
## 233      1790    23
## 234      4787    29
## 235      2339    56
## 236      6728    50
## 237     10854    50
```

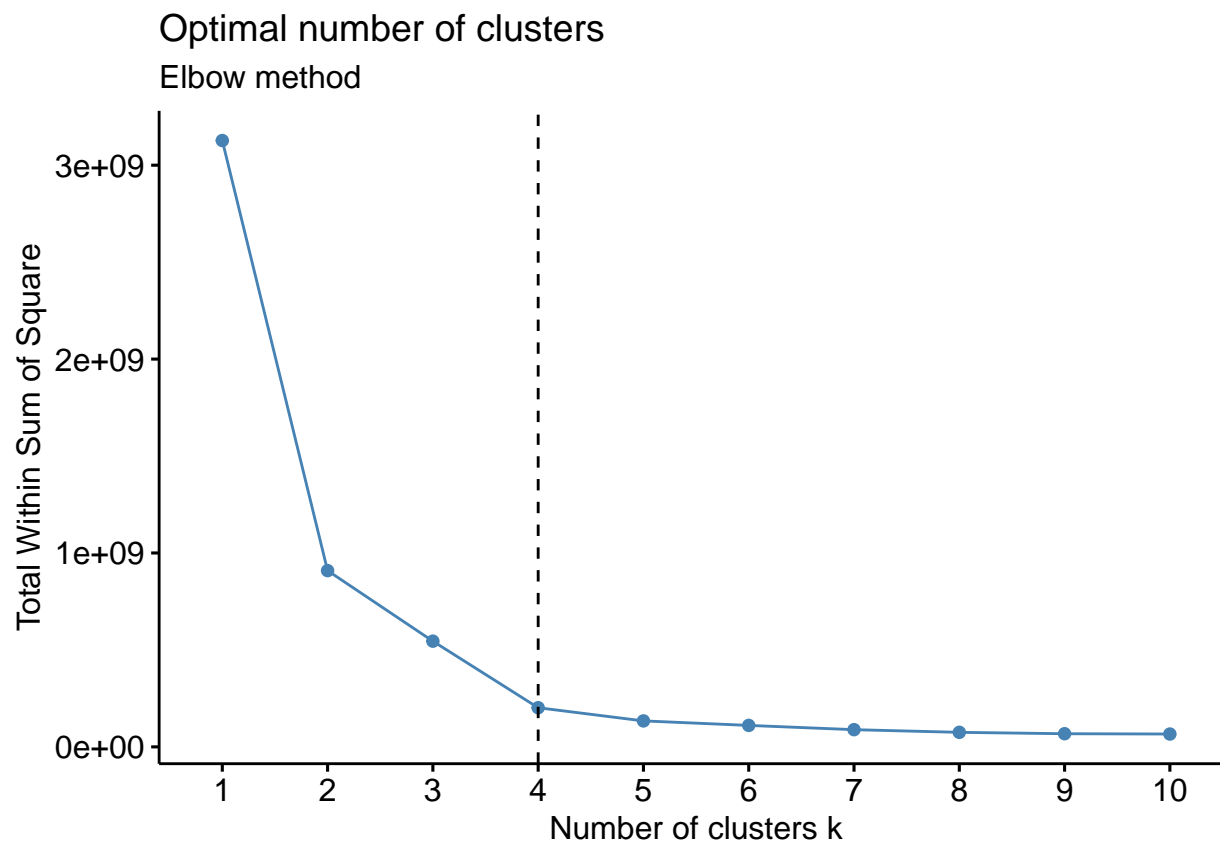
```
library(factoextra)
```

```
## Warning: package 'factoextra' was built under R version 3.6.3
```

```
## Welcome! Want to learn more? See two factoextra-related books at https://goo.gl/ve3WBa
```

```
library(NbClust)
```

```
fviz_nbclust(cdata, kmeans, method = "wss") +
  geom_vline(xintercept = 4, linetype = 2) +
  labs(subtitle = "Elbow method")
```



```
kCluster <- kmeans(cdata, 4, iter.max = 20, nstart = 20)
kCluster
```

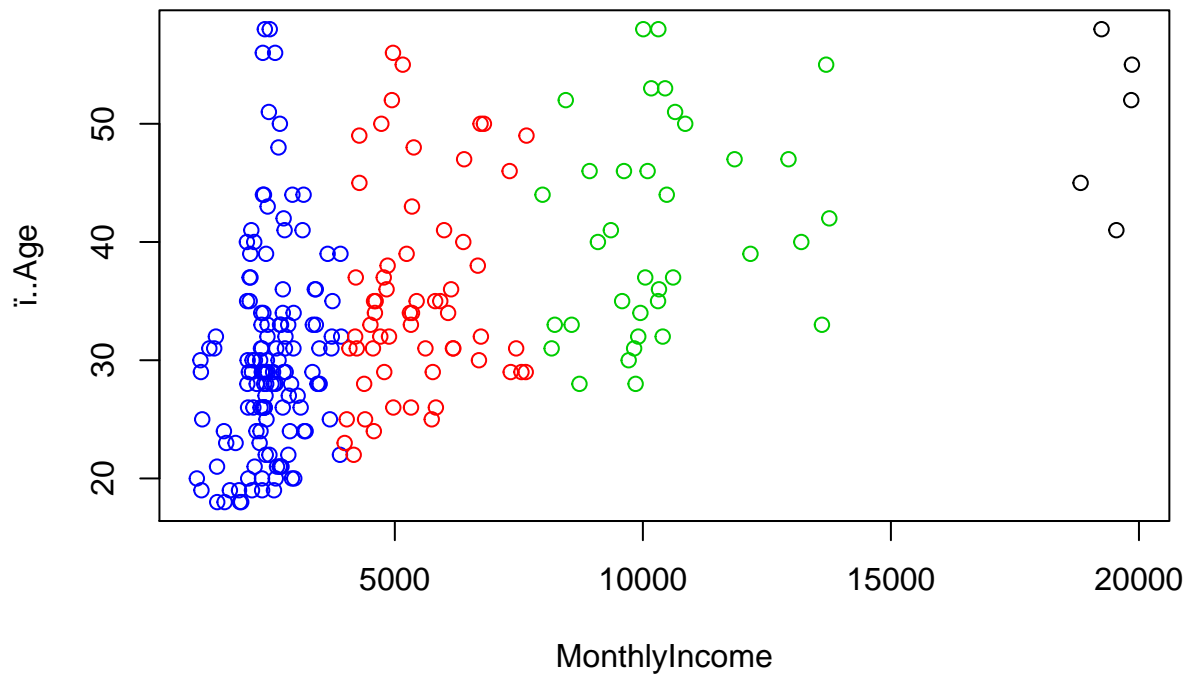
```
## K-means clustering with 4 clusters of sizes 5, 60, 36, 136
##
## Cluster means:
##   MonthlyIncome   i..Age
## 1    19463.800  50.20000
## 2     5443.367  35.48333
## 3    10328.833  41.02778
## 4     2491.044  30.20588
##
## Clustering vector:
##   [1] 2 4 4 4 4 4 4 4 4 4 1 2 4 4 3 4 4 2 2 2 2 3 4 2 3 2 4 4 4 2 2 2 3 4 2 4 4
##  [38] 4 4 4 3 4 4 3 4 4 2 4 2 4 2 4 4 4 3 2 4 2 4 4 2 4 4 4 3 4 3 3 4 4 4 4 2
##  [75] 4 4 2 4 2 4 4 2 2 4 4 4 2 1 2 4 4 2 1 2 2 2 4 4 4 4 4 4 4 2 4 4 4 4 4 3 3
## [112] 4 3 4 4 4 4 4 4 2 2 1 4 2 4 4 4 4 3 3 3 2 4 4 4 4 2 3 4 3 4 2 3 4 2 4 4 4
## [149] 4 4 4 1 4 3 4 2 4 3 3 4 4 3 3 4 2 2 4 2 2 4 4 2 3 4 2 4 4 4 2 2 4 4 4 2
## [186] 3 4 3 2 4 4 3 2 4 2 2 4 4 4 4 3 2 2 4 4 3 3 4 4 4 4 2 2 2 4 3 4 4 3 4 2 4
## [223] 4 4 4 4 3 4 4 4 2 3 4 2 4 2 3
##
## Within cluster sum of squares by cluster:
## [1] 765069.6 63664796.9 85905592.0 51516046.0
## (between_SS / total_SS = 93.5 %)
##
## Available components:
```

```
##
## [1] "cluster"      "centers"      "totss"        "withinss"     "tot.withinss"
## [6] "betweenss"    "size"         "iter"         "ifault"       "
```

```
table(kCluster$cluster, cdata$i..Age)
```

```
##
##      18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42
## 1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0
## 2  0  0  0  0  0  1  1  1  3  3  0  1  5  1  7  4  2  4  5  2  2  2  1  1  1  0
## 3  0  0  0  0  0  0  0  0  0  0  0  2  0  1  2  2  3  1  2  1  2  0  1  2  1  1
## 4  4  4  6  6  6  4  3  6  3  9  3  11 13  7  9  5  7  4  3  3  2  0  4  2  3  1
##
##      43 44 45 46 47 48 49 50 51 52 53 55 56 58
## 1  0  0  1  0  0  0  0  0  0  1  0  1  0  1
## 2  1  0  1  1  1  1  2  3  0  1  0  1  1  0
## 3  0  2  0  3  2  0  0  1  1  1  2  1  0  2
## 4  1  4  0  0  0  1  0  1  1  0  0  0  2  2
```

```
plot(cdata[c("MonthlyIncome", "i..Age")], col = kCluster$cluster)
```



As we can see from above graphs, that younger people have comparatively lower income than people with