



# Frito Lay Analysis

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# Overview

## Data

36 variables  
870 Observations  
No missing values

## Attrition Prediction

Used visual analysis  
and trial and error to  
determine influential  
variables  
Compared Naive  
Bayes and KNN  
classification Models

## Income Prediction

Used visual analysis,  
and t-test to  
determine top 3  
influential variables  
Compared 3 Linear  
Regression Models

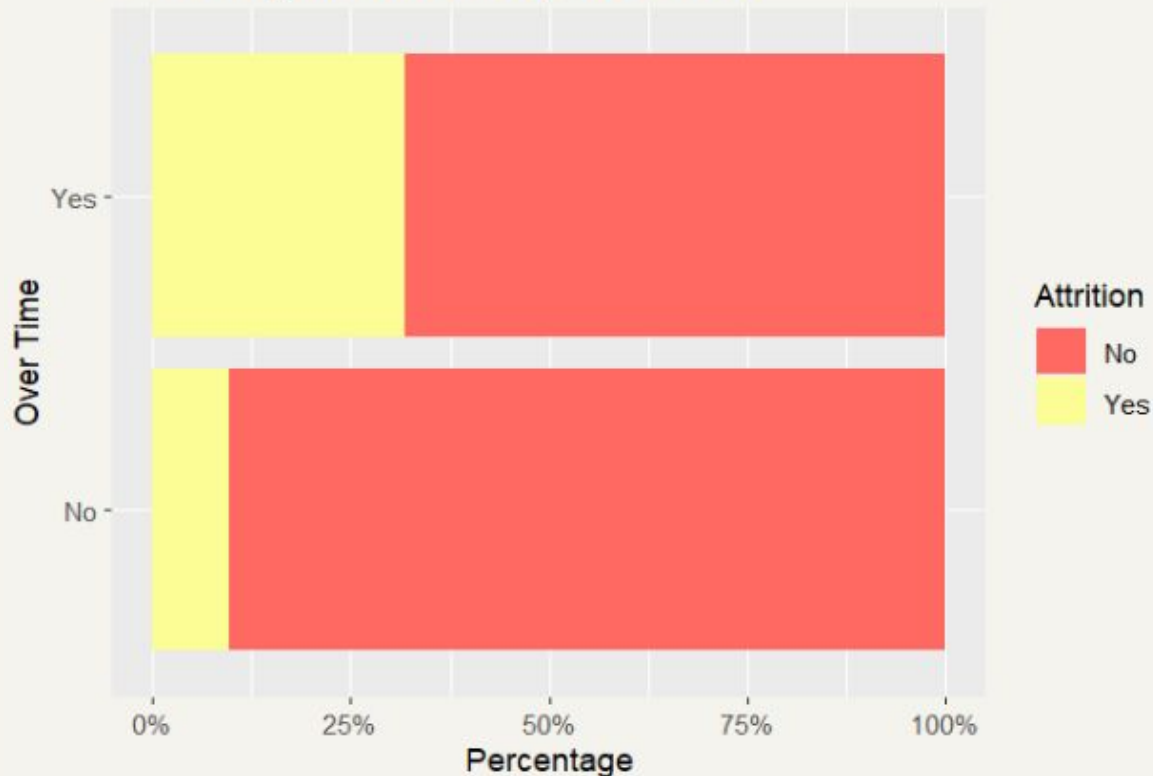


# Attrition Prediction

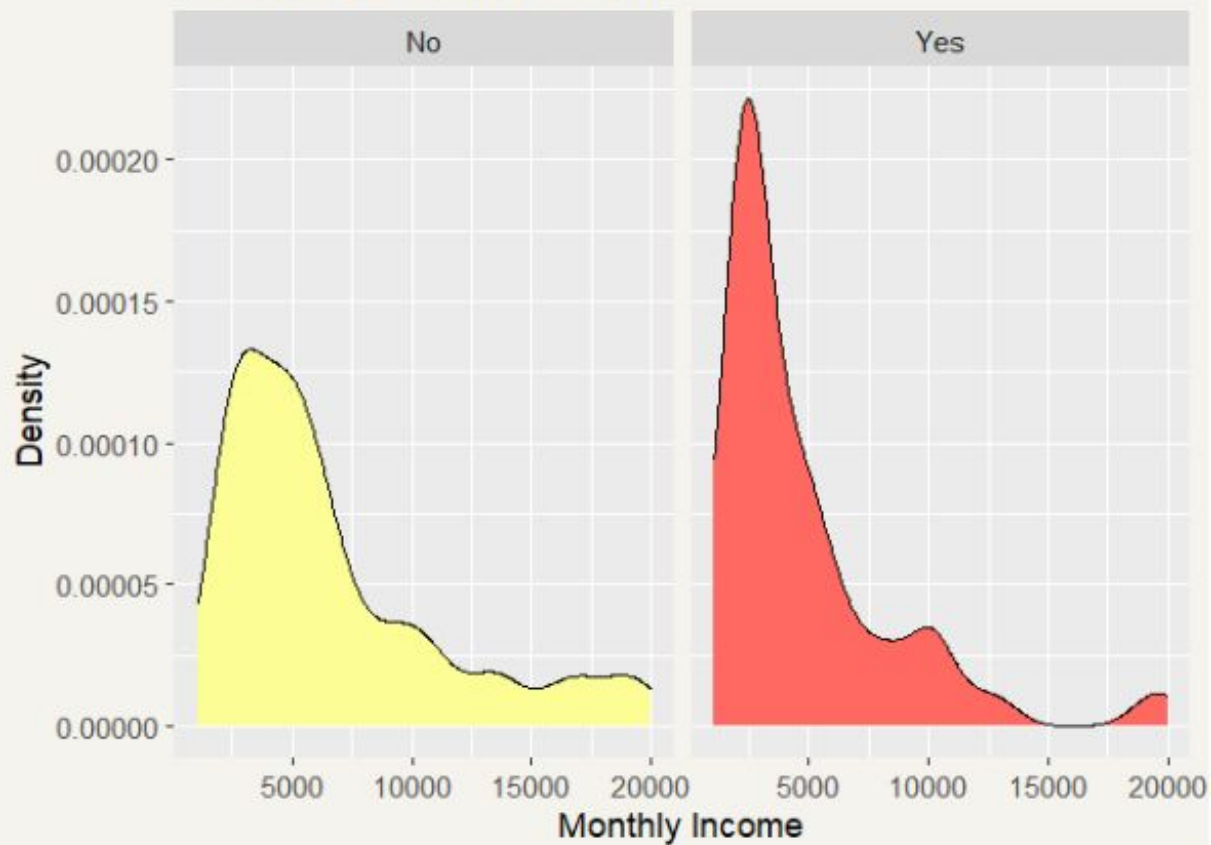


# Variable Selection

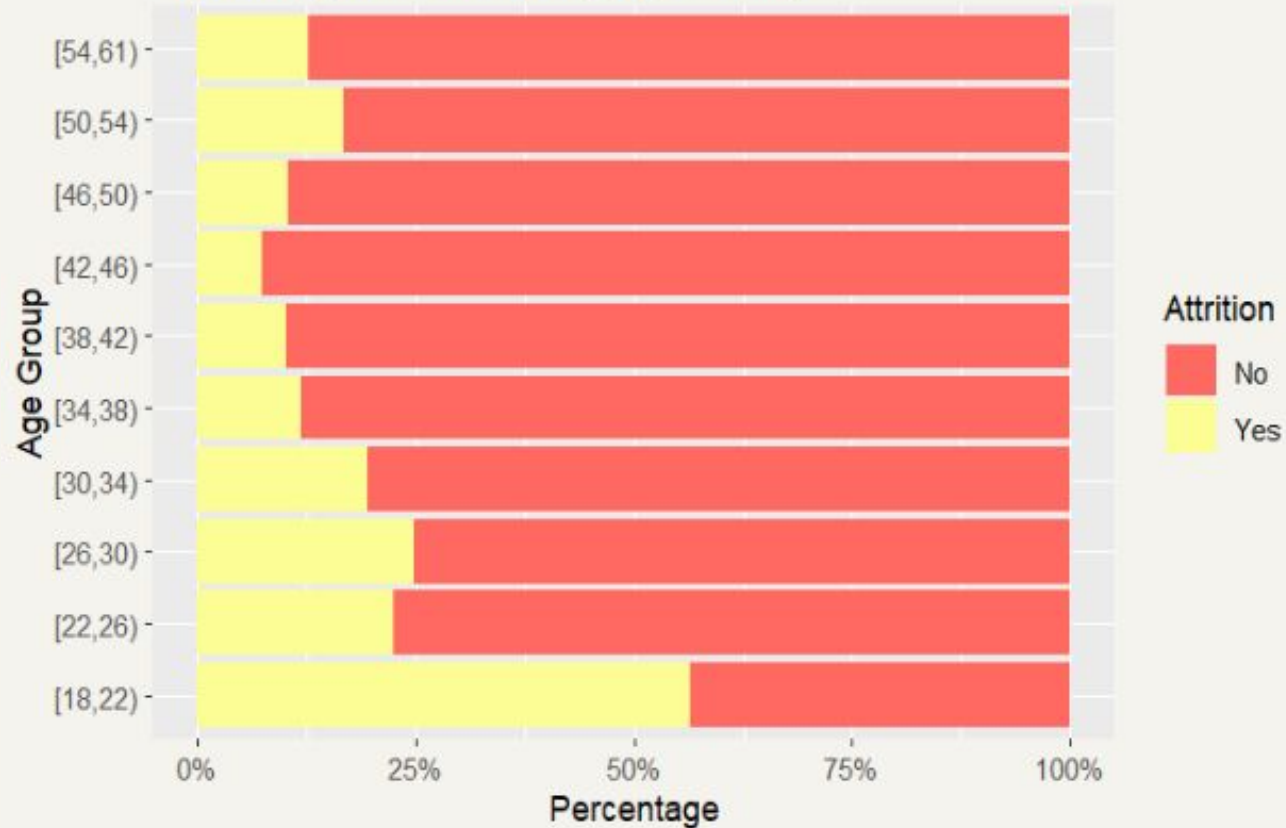
Percentage of Attrition by Over Time



Attrition by Monthly Income



Percentage of Attrition by Age Group



# KNN-Classifier

# Attrition Model Predictor

## Predictors

Over Time, Monthly  
Income, Age Group

## Response

Attrition

## Model

KNN-Classifier

## Accuracy

### Mean

80.23%

## Specificity

### Mean

93.10%

## Sensitivity

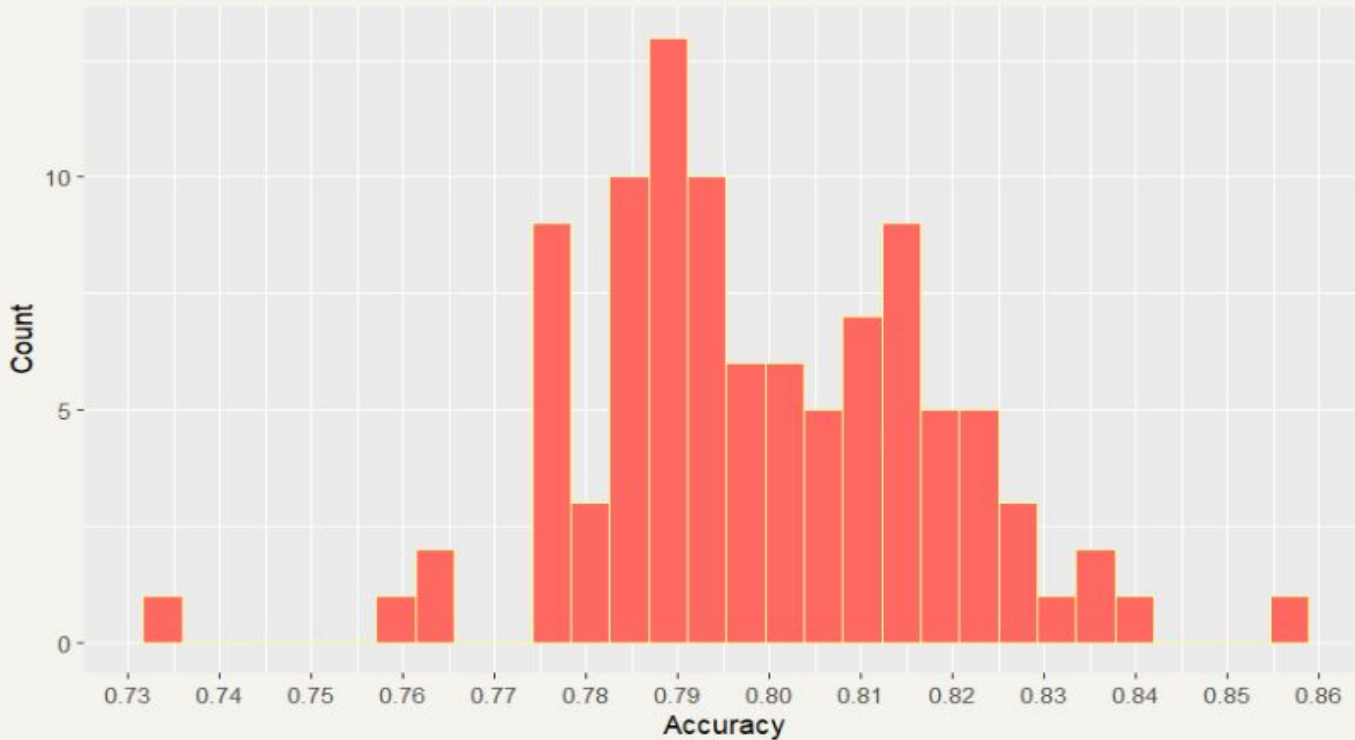
### Mean

73.32%

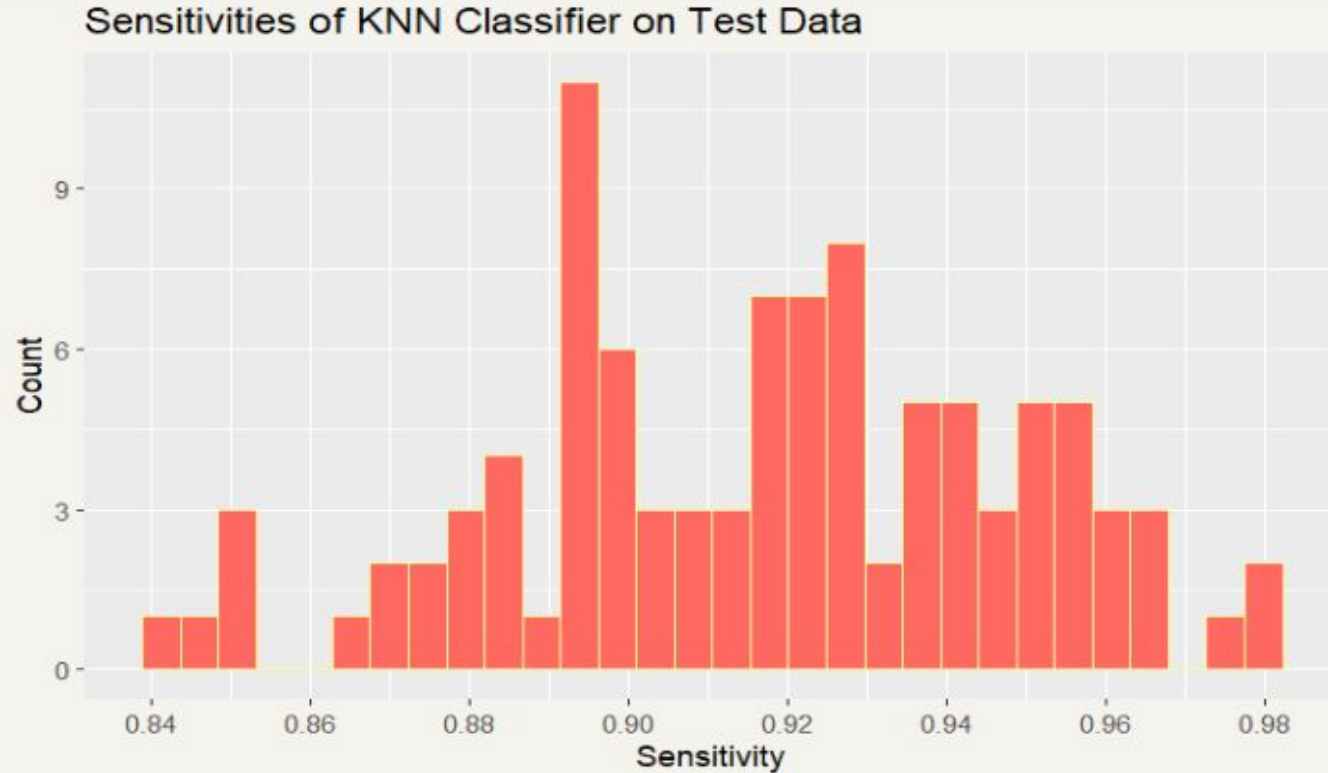


# Accuracy

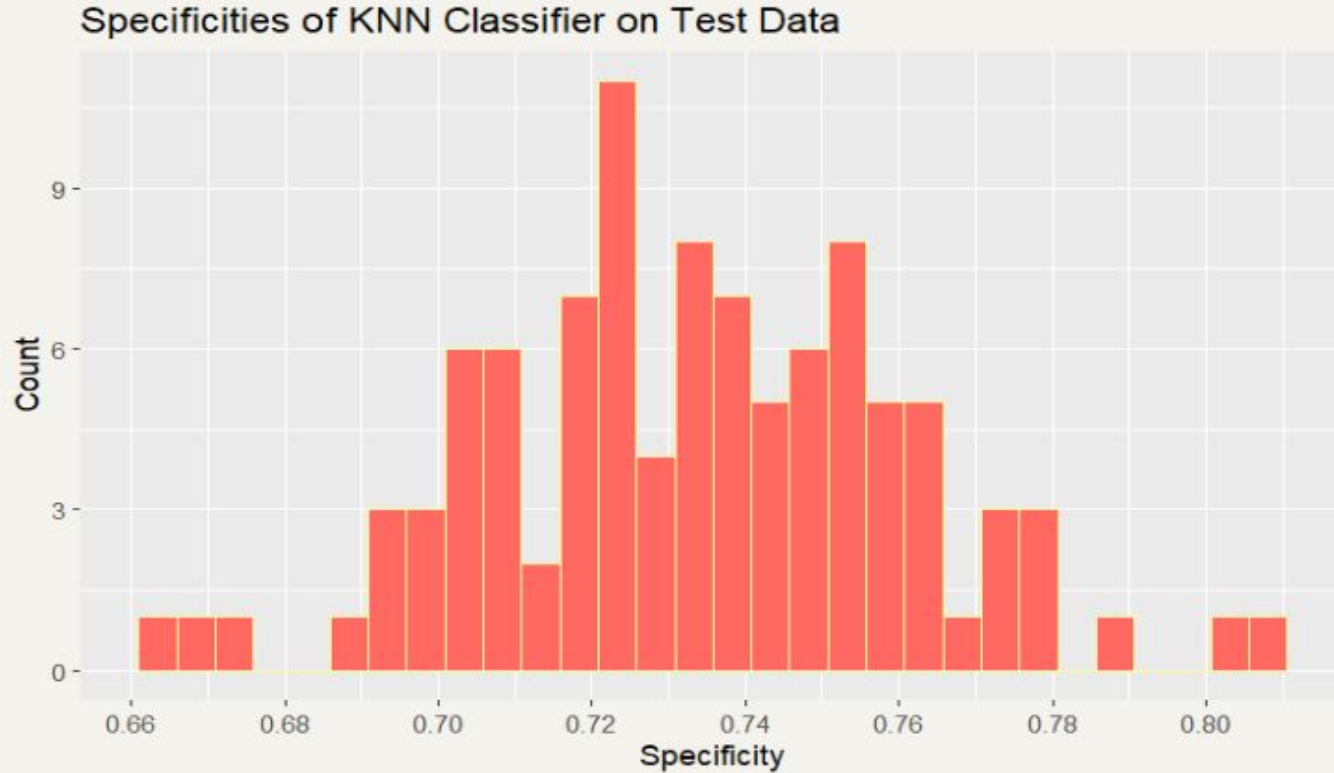
Accuracies of KNN Classifier on Test Data



# Sensitivity



# Specificity



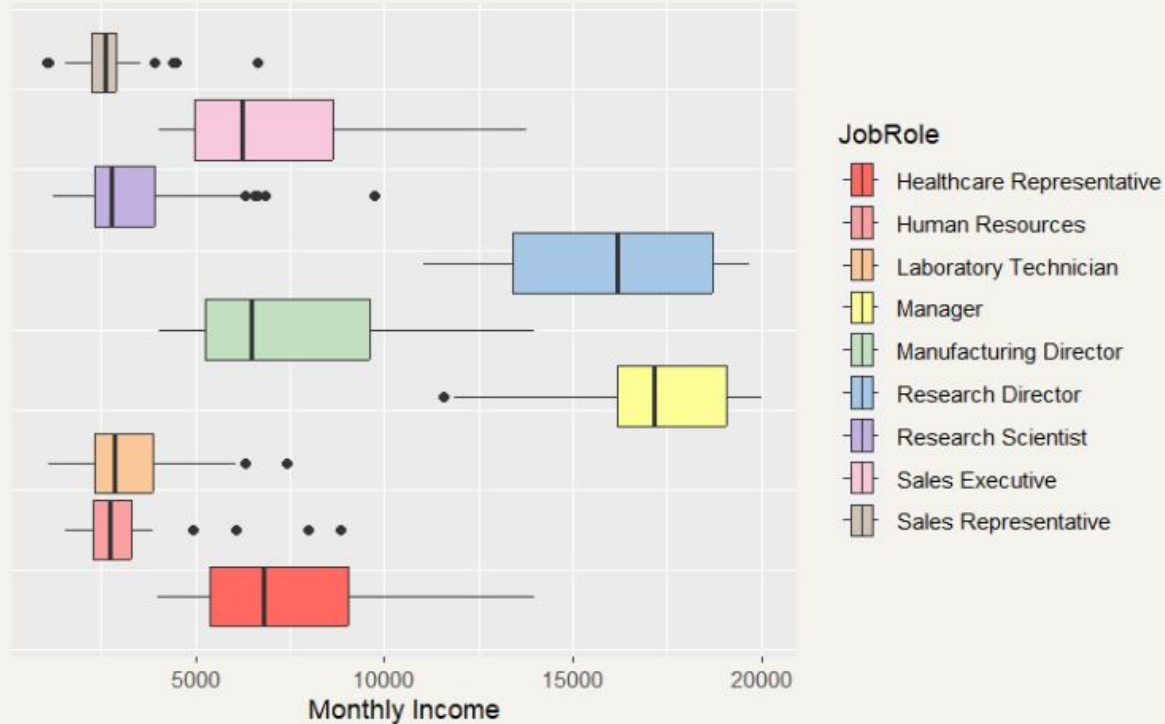


# Salary Prediction

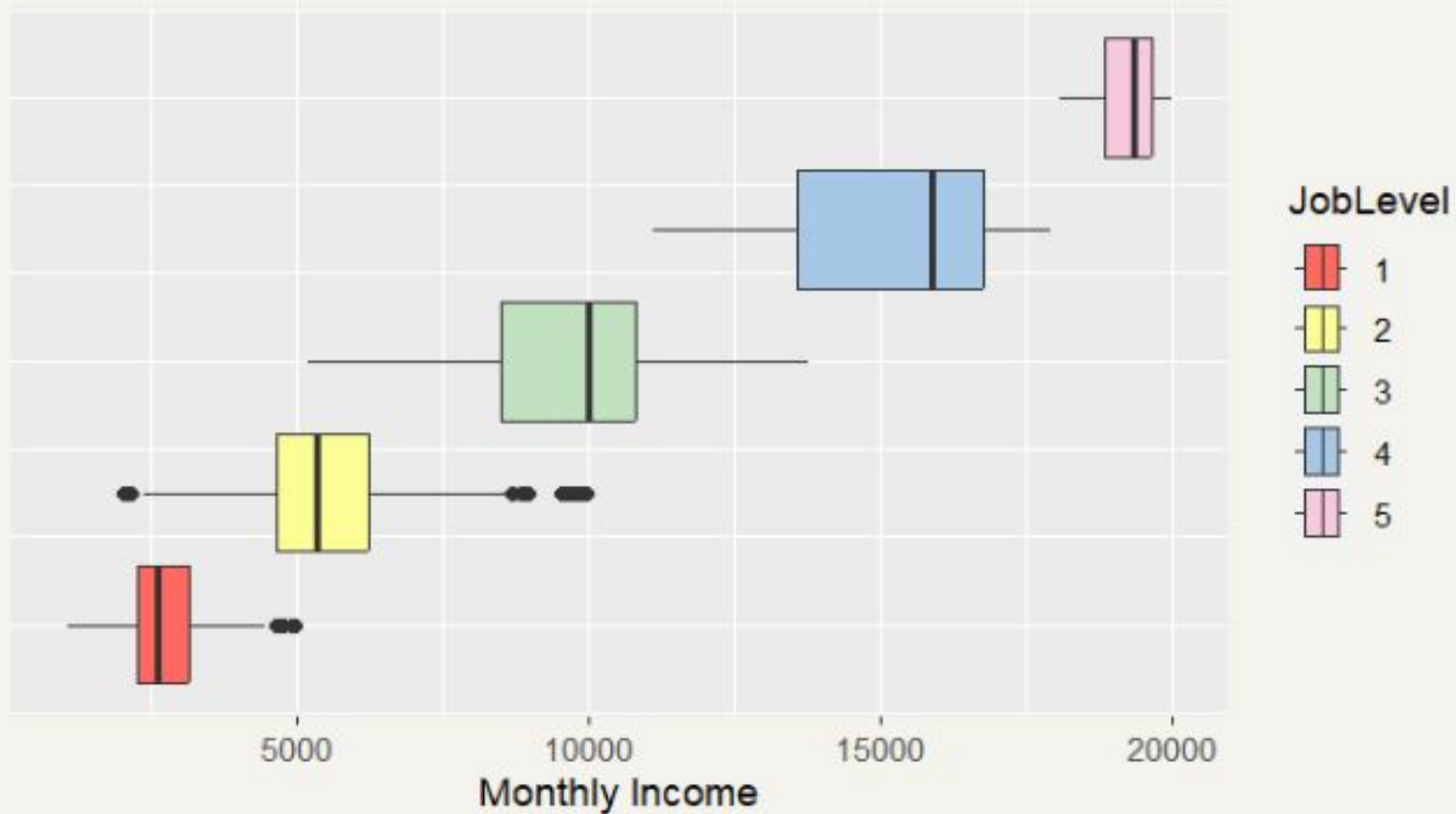


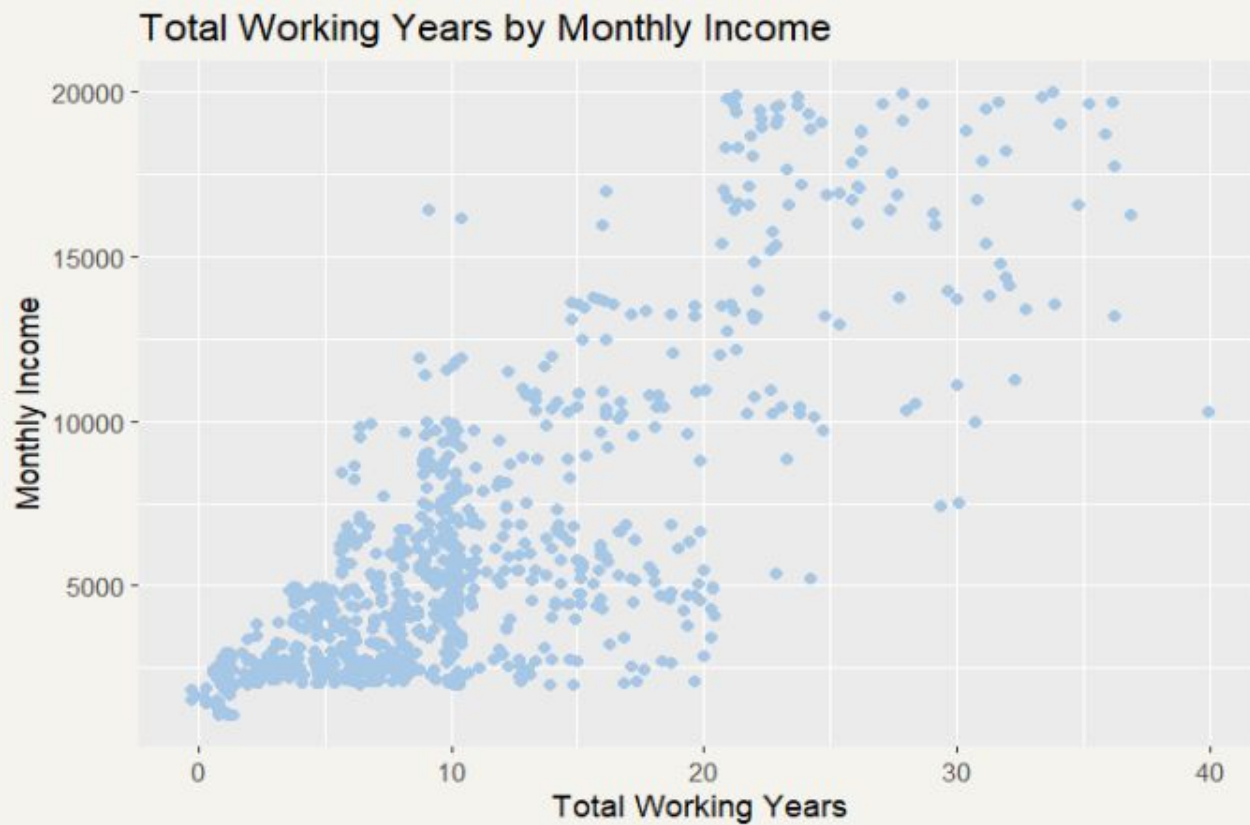
# Top 3 Factors

Monthly Income by Job Role



# Monthly Income by Job Level





# Monthly Income Model Predictor

## Predictors

Job Level, Job Role,  
Total Working Years

## Model

Linear Regression

## Response

Monthly Salary

## RMSE

\$957.97

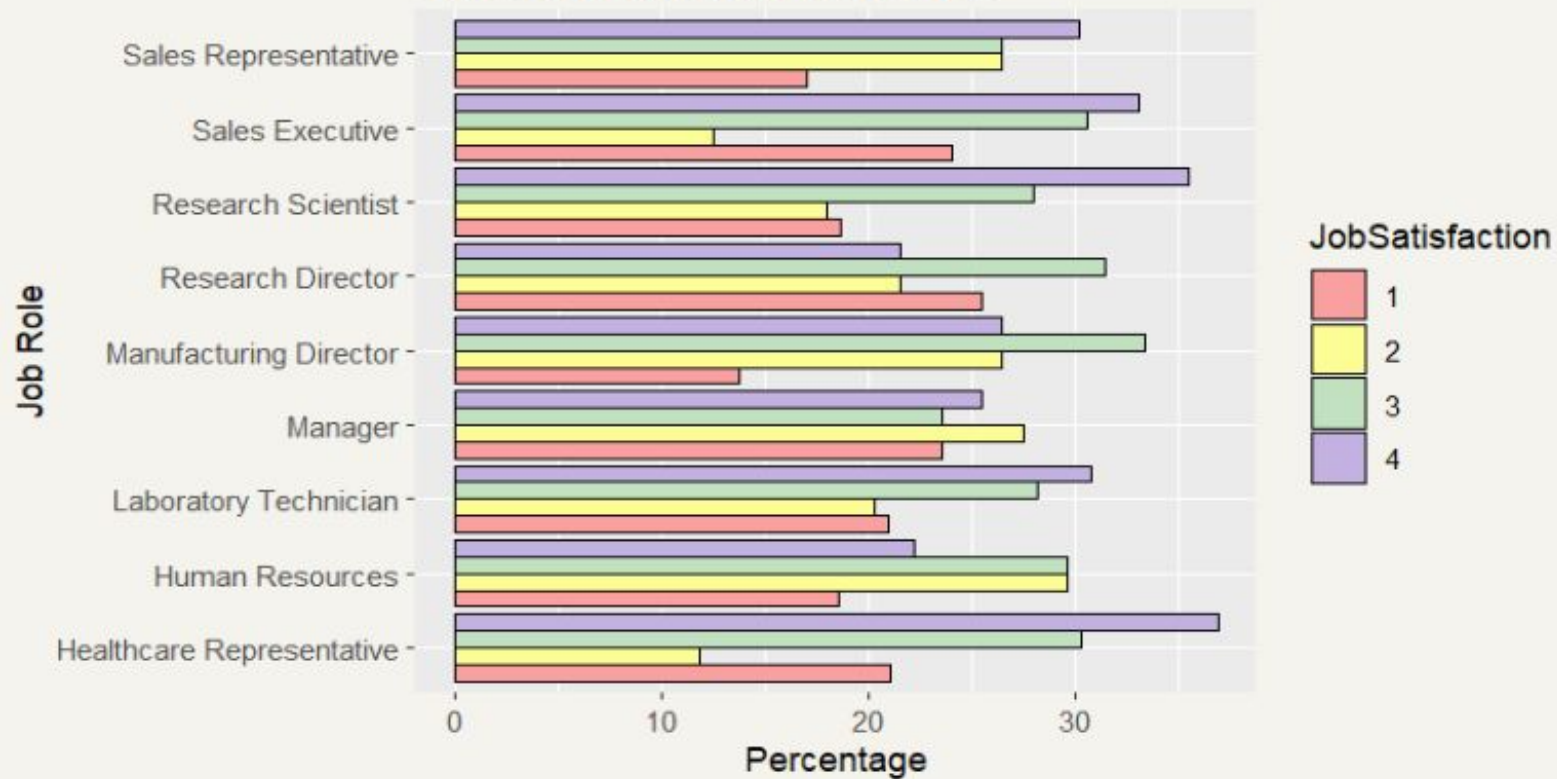




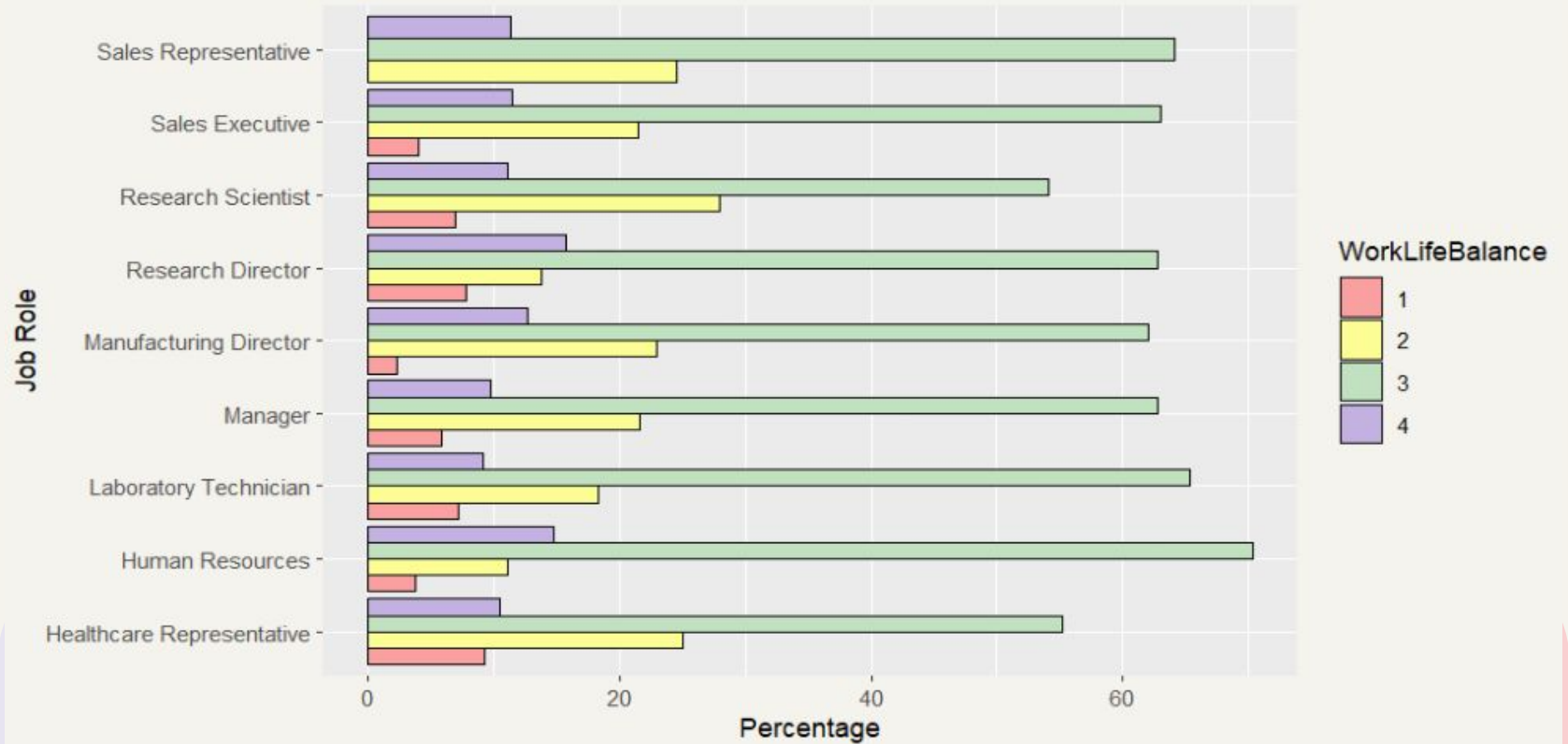
# Job Role Trends



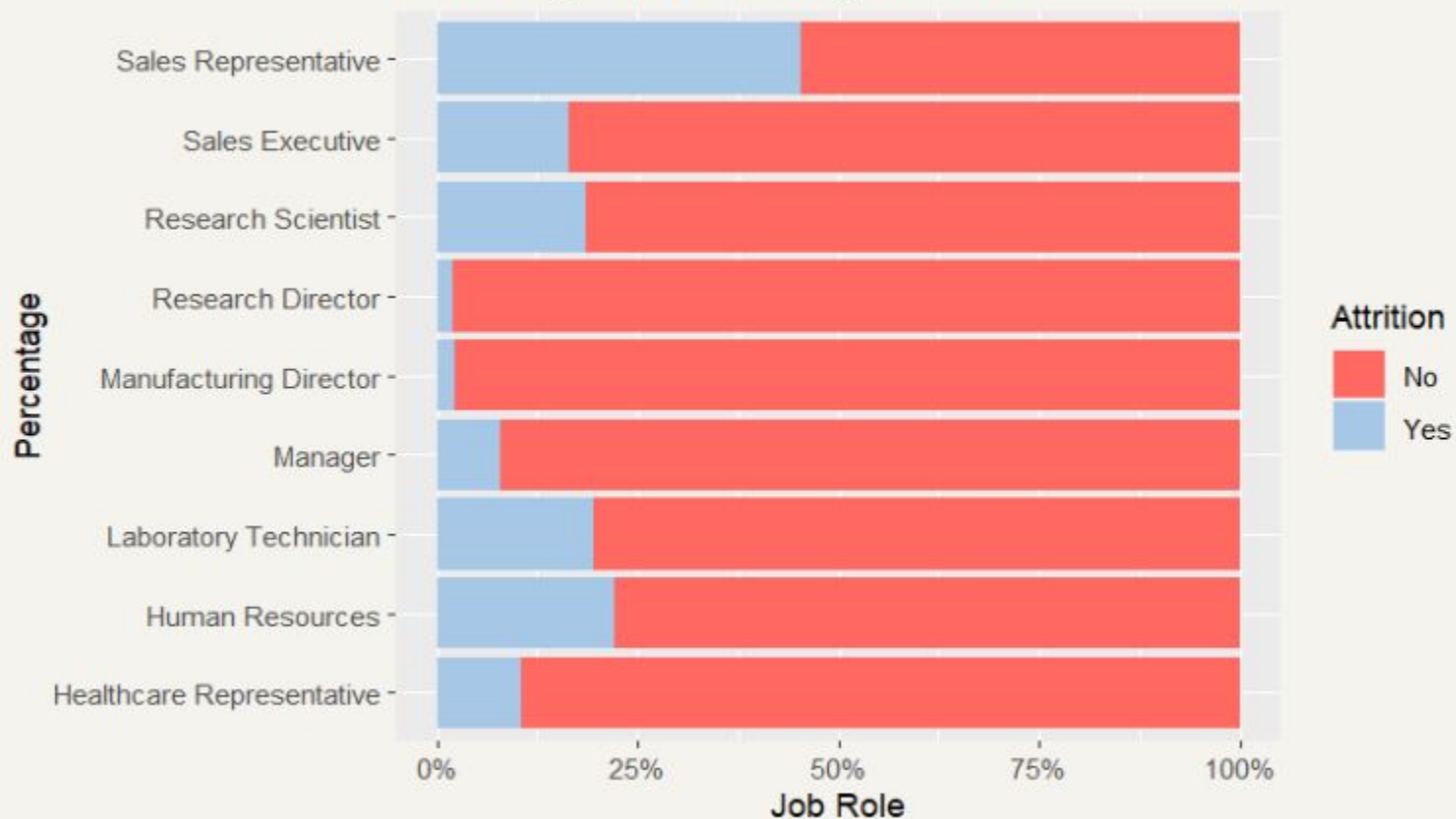
## Job Satisfaction for Each Role



Work Life Balance Rating for Each Role



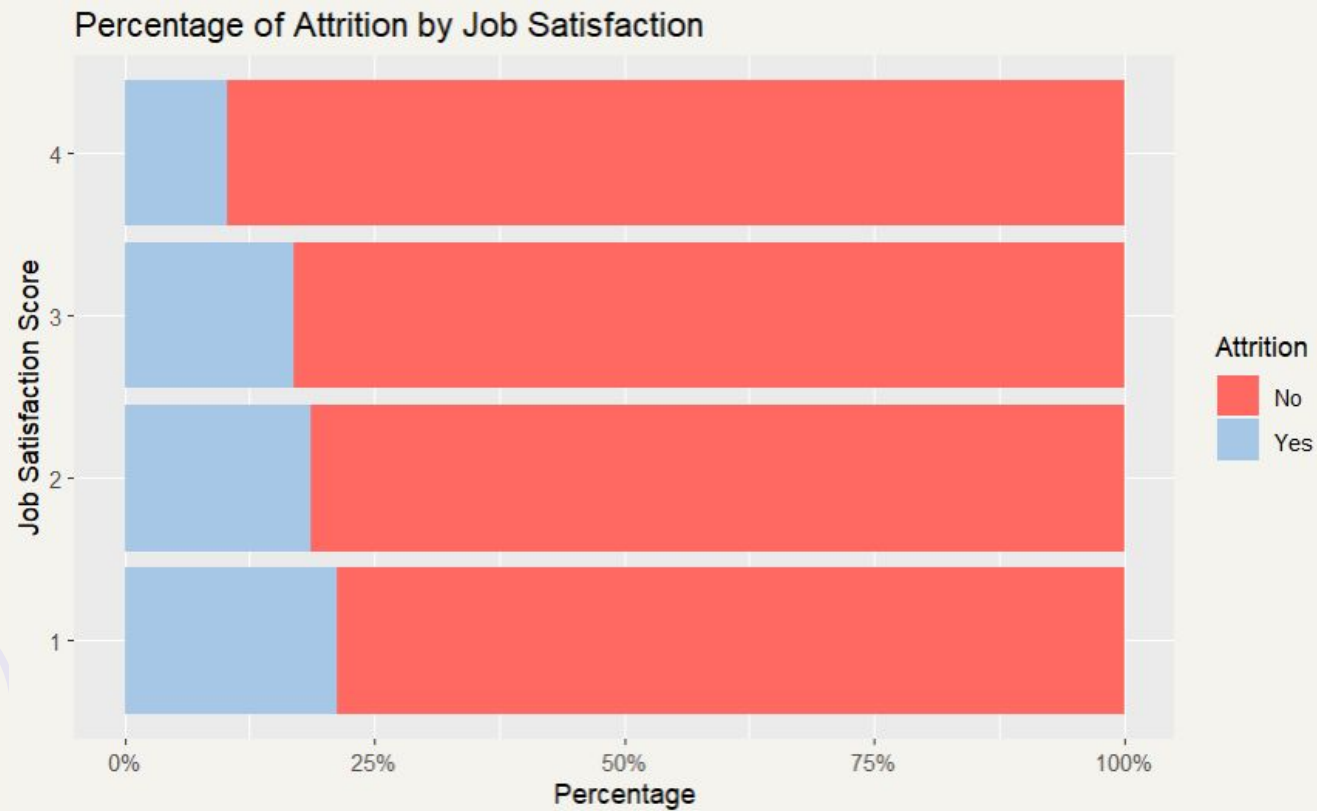
### Percentage of Attrition by Job Role



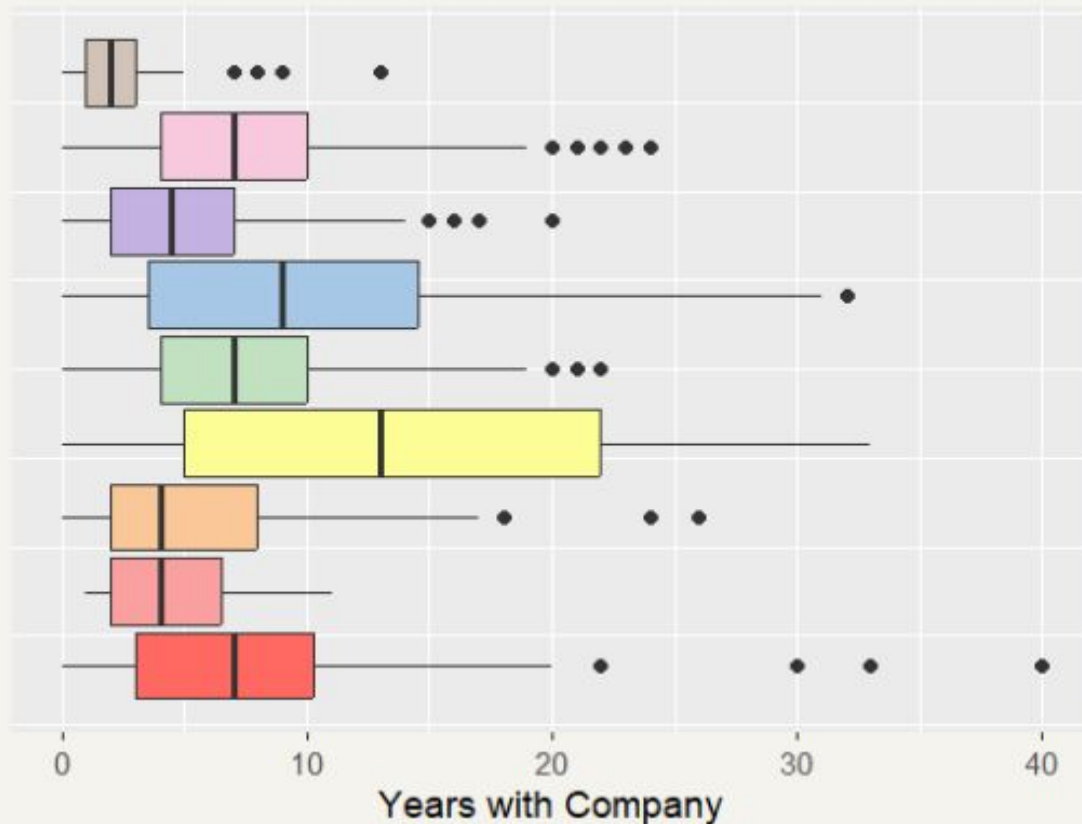


**Thank You**





Years with Company by Role



JobRole

- Healthcare Representative
- Human Resources
- Laboratory Technician
- Manager
- Manufacturing Director
- Research Director
- Research Scientist
- Sales Executive
- Sales Representative