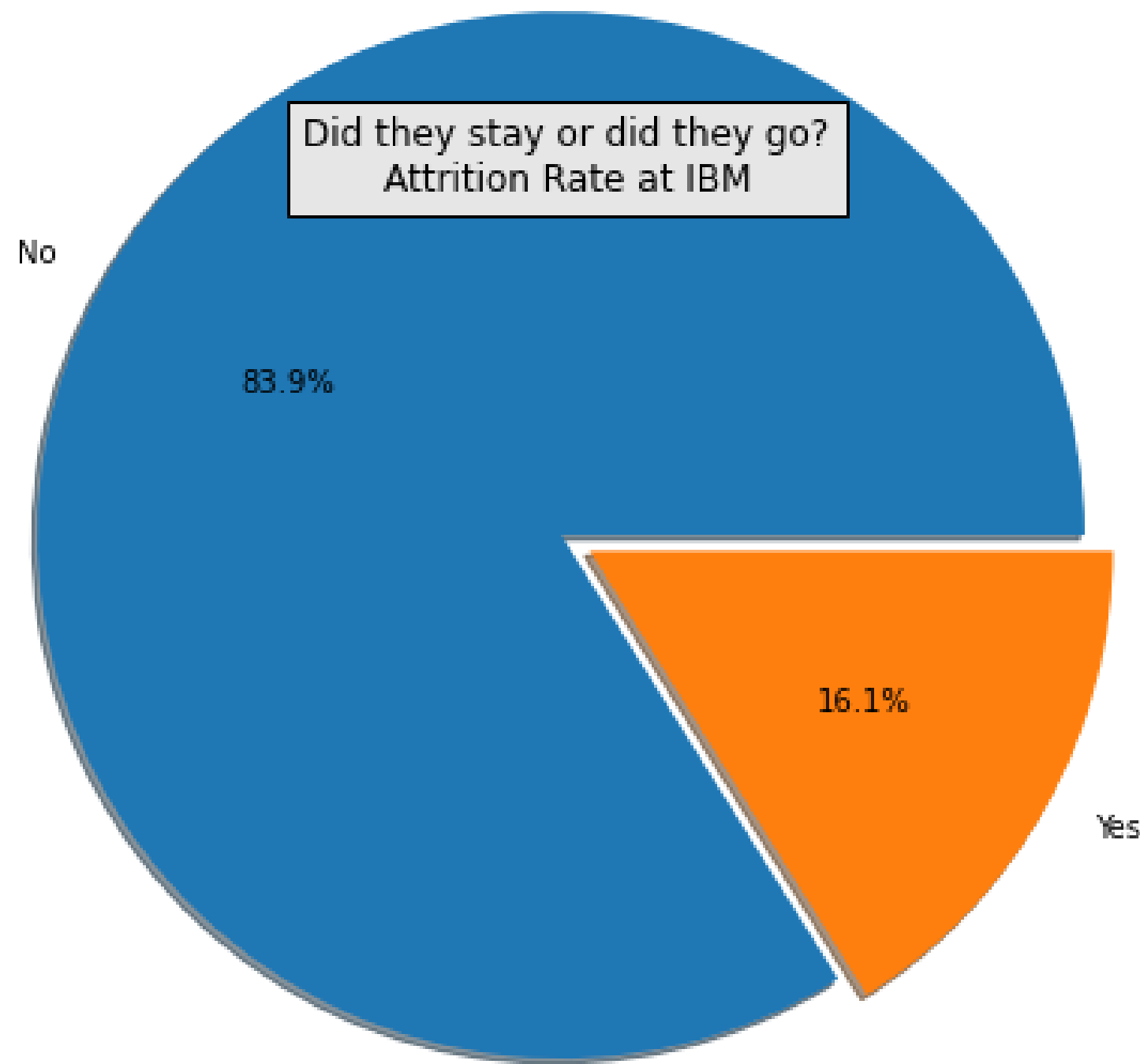




Attrition Prediction

Why are employees leaving?

Can this be modeled?

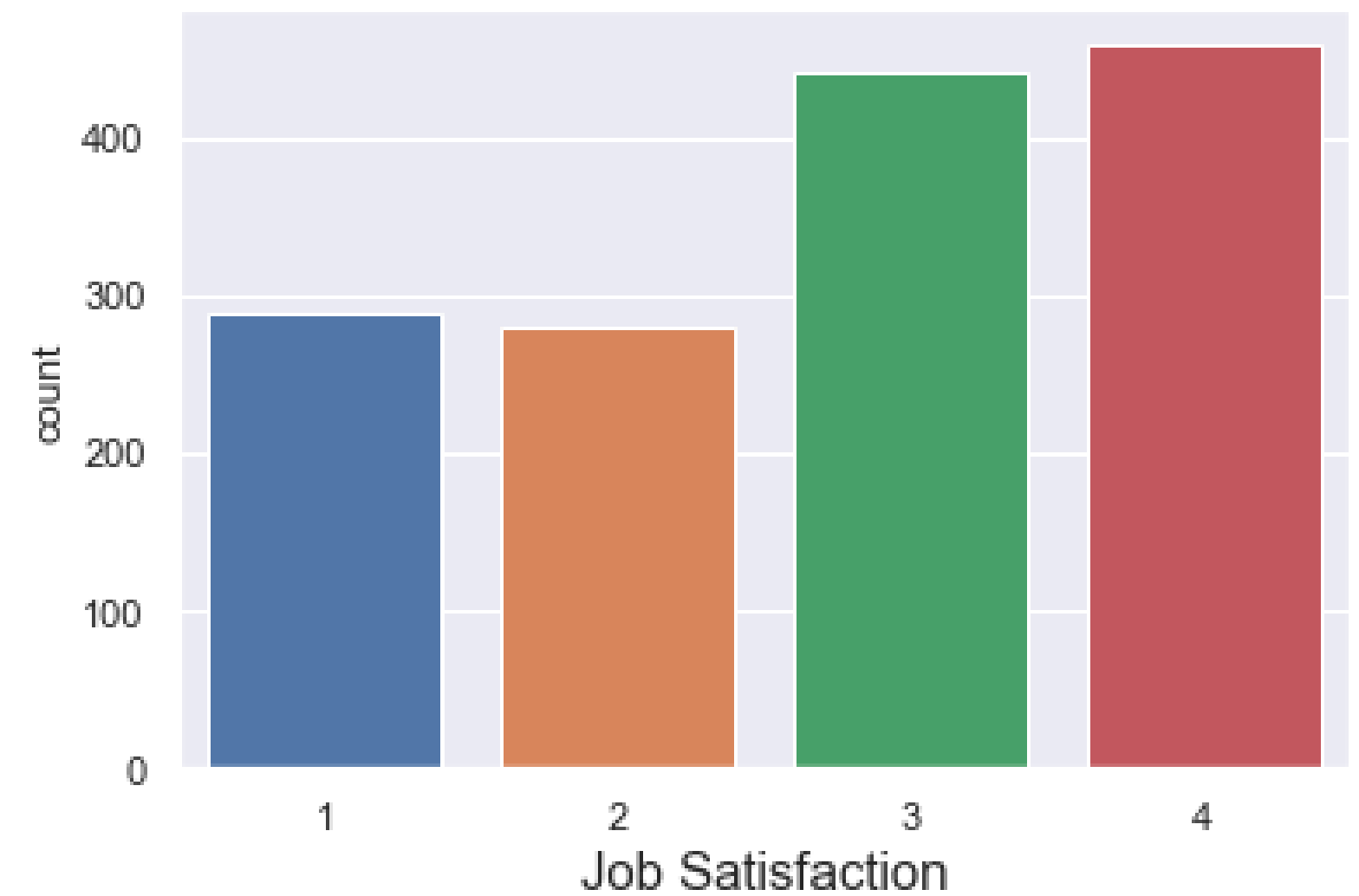
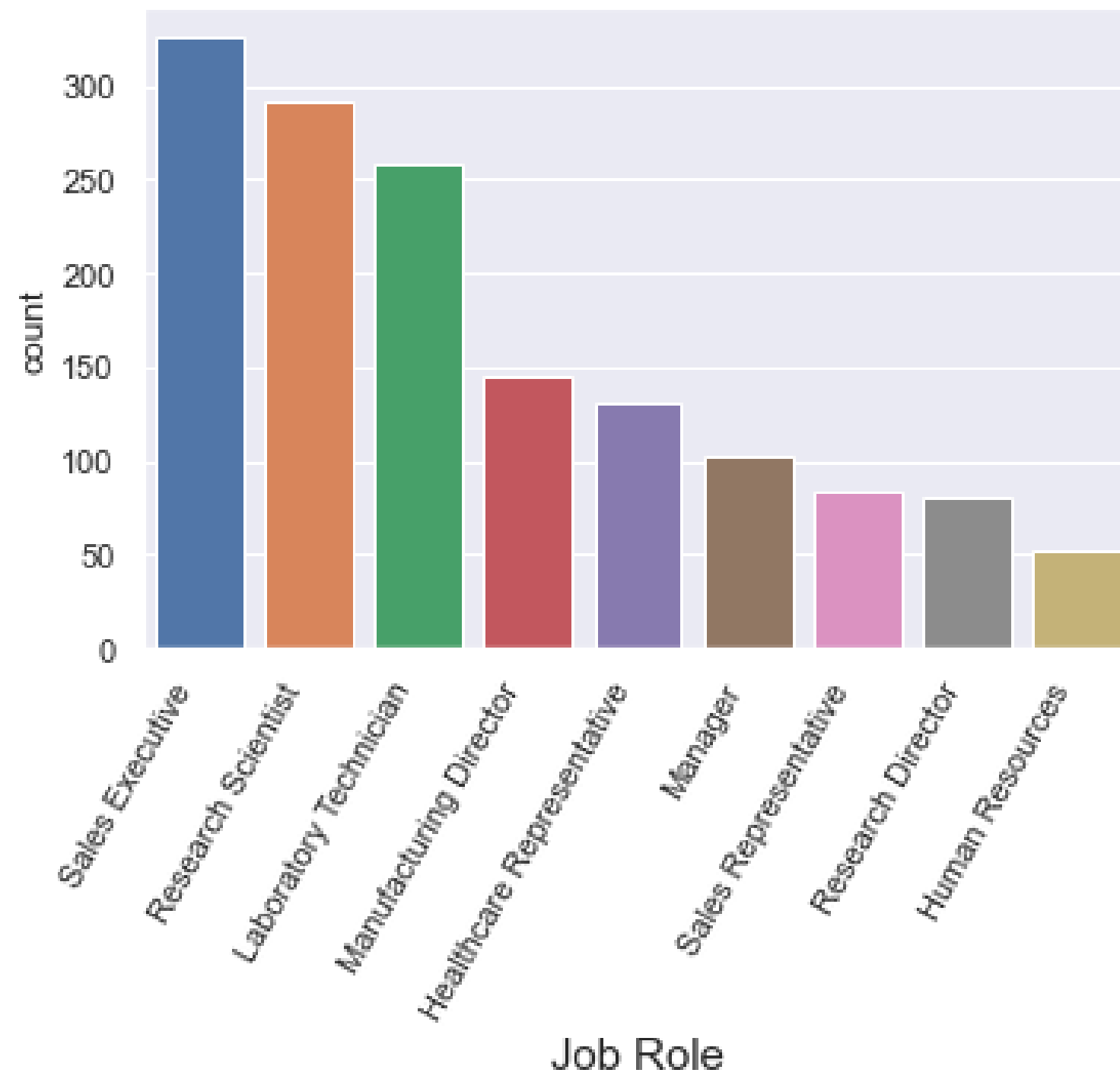


Possible Predictors

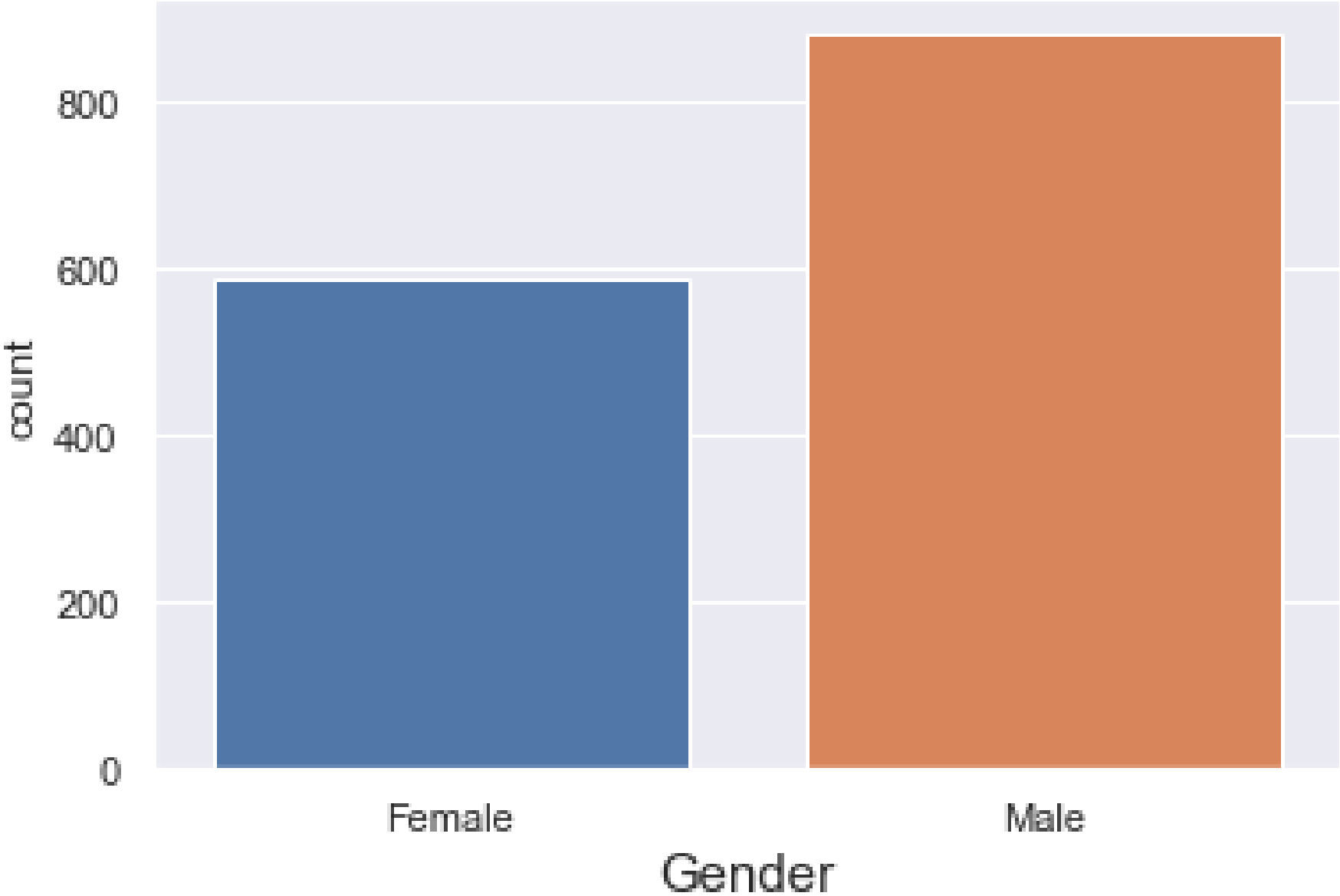
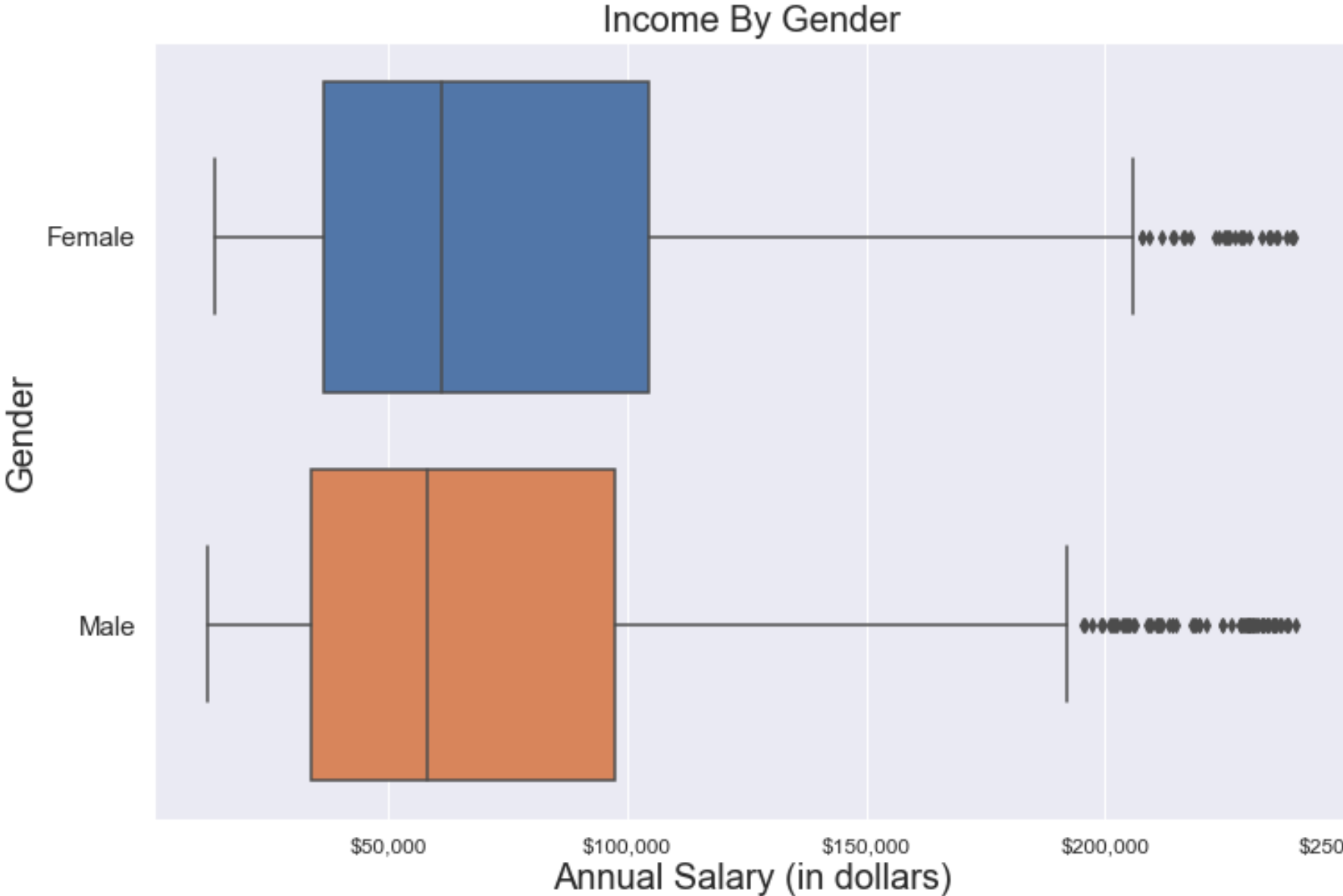
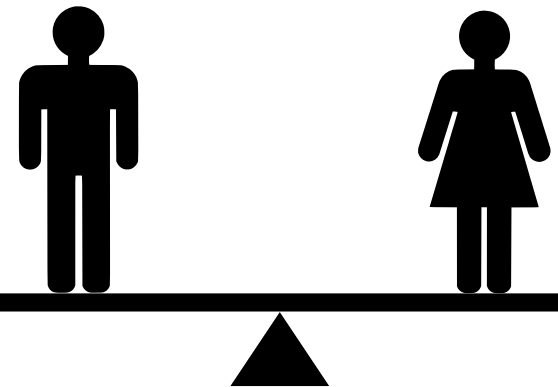
Title
Department
Salary
Education Level
Worklife Balance

Job Satisfaction
Performance
Promotion Status
Tenure

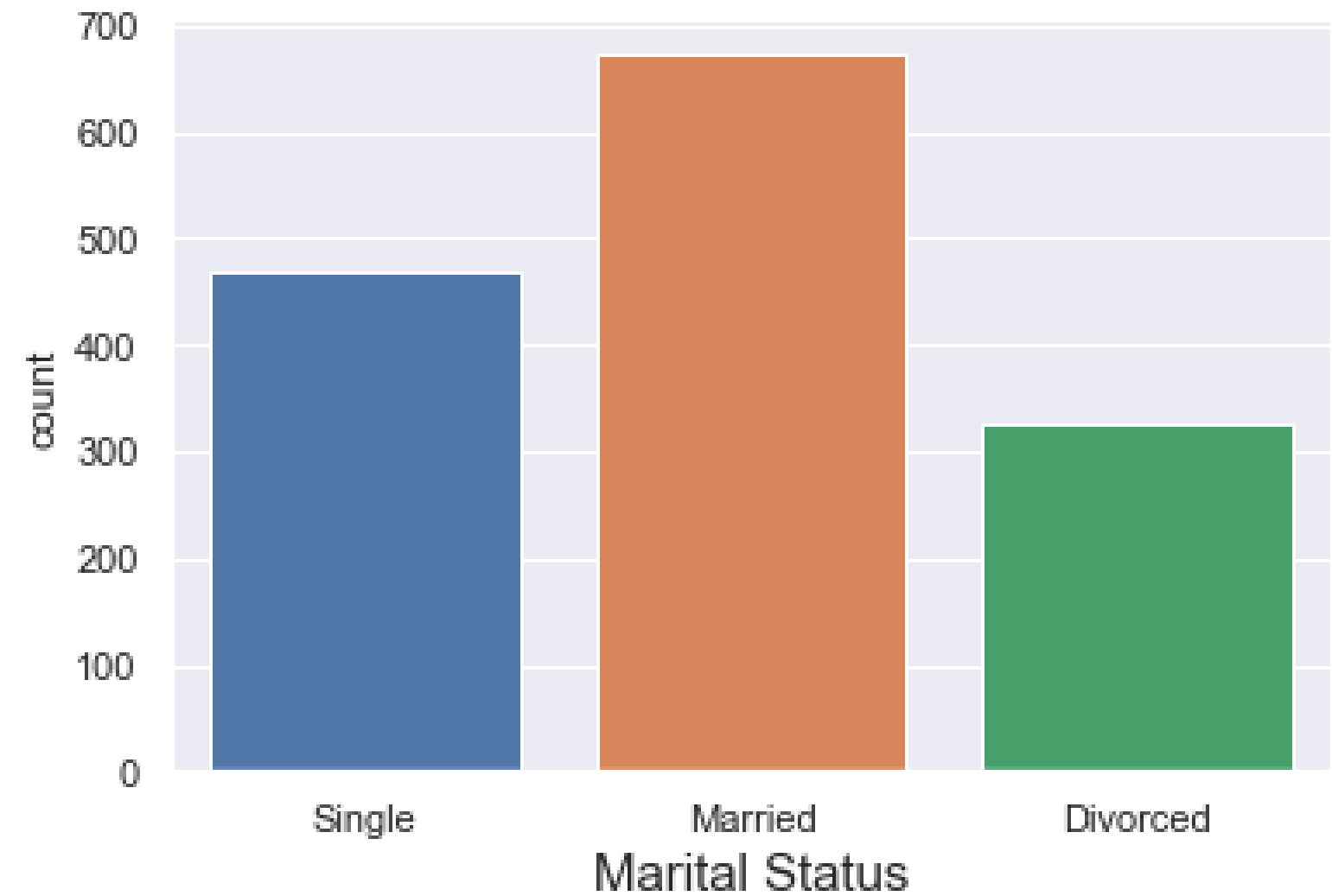
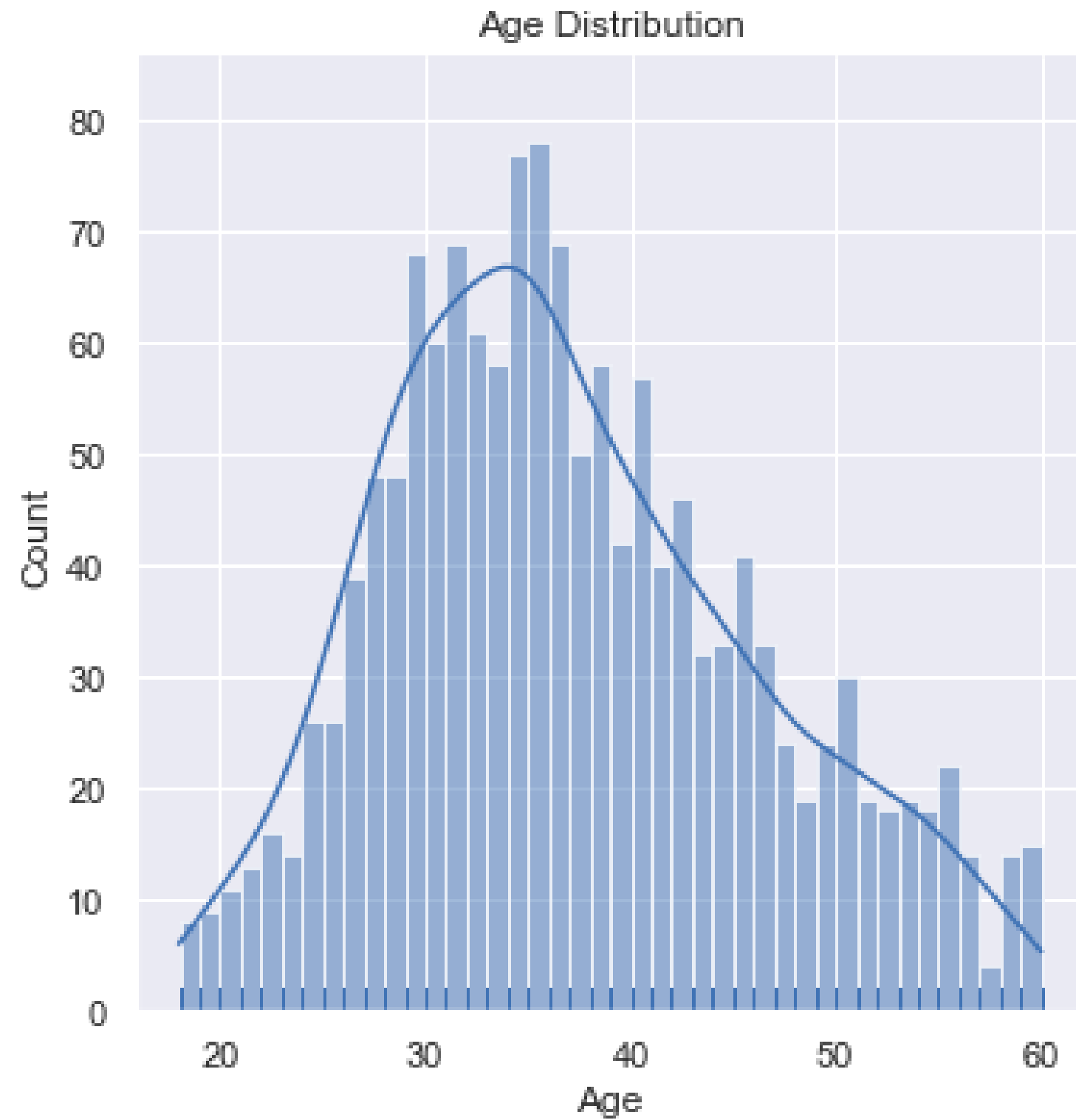
Demographics



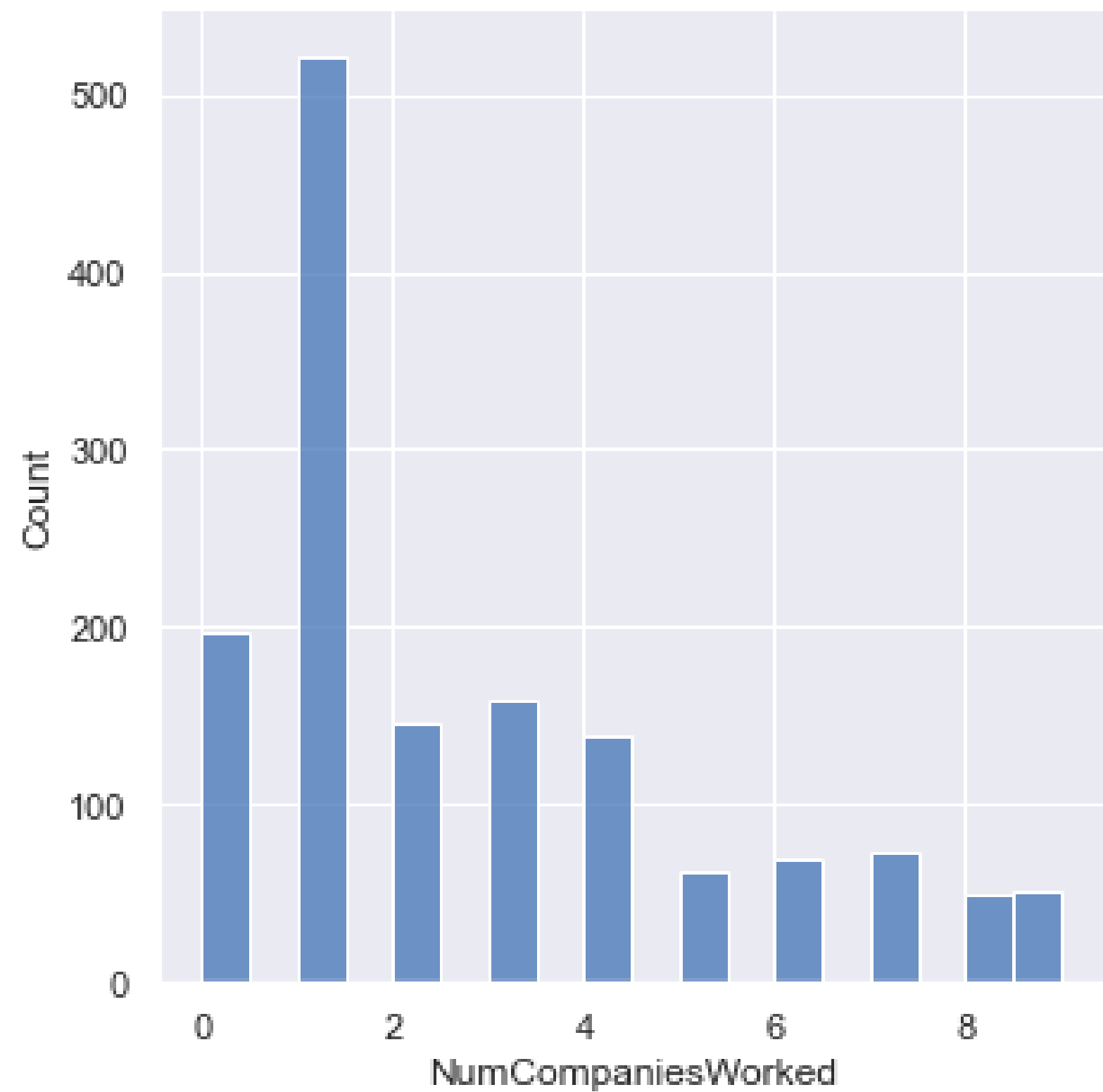
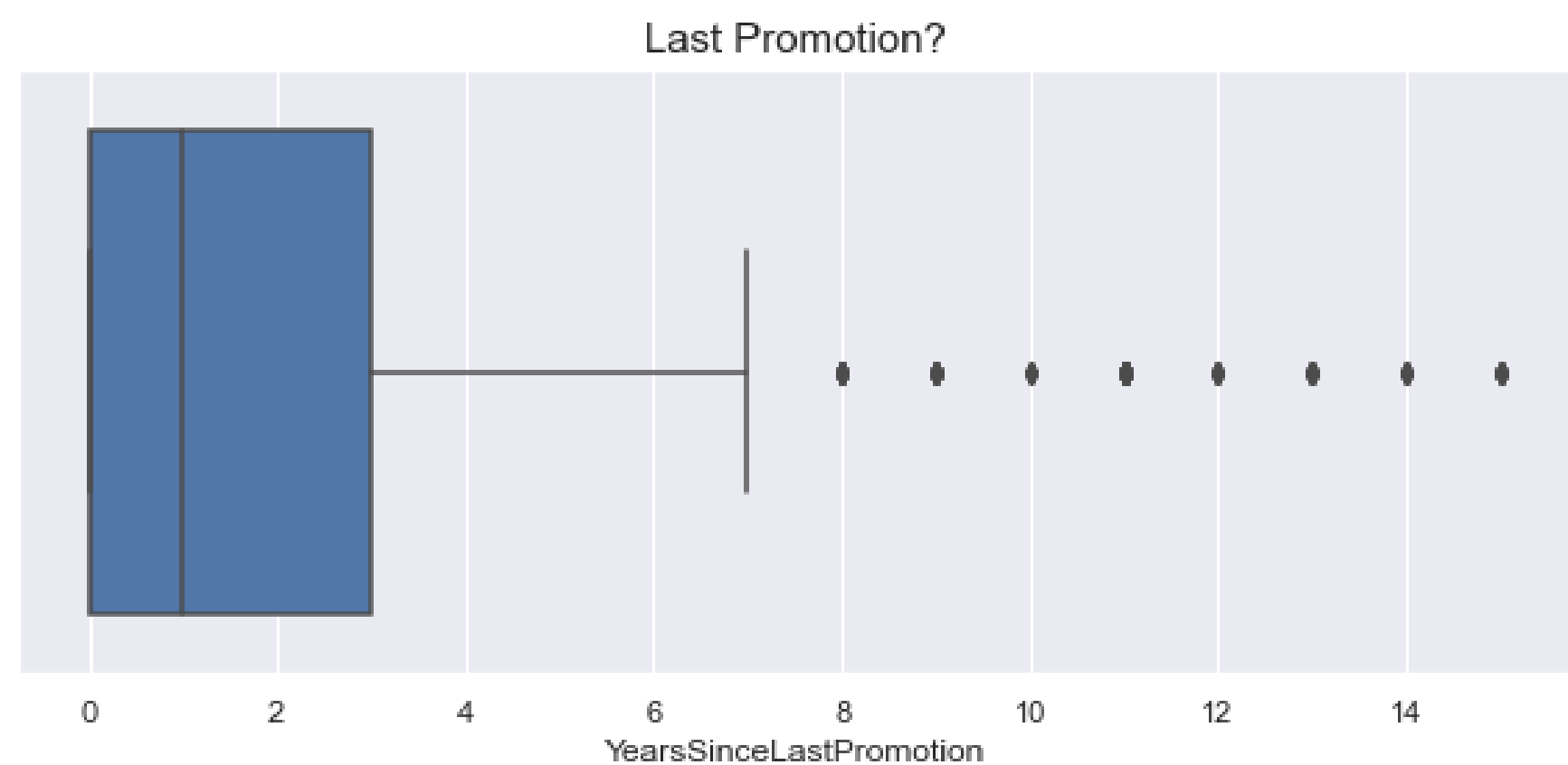
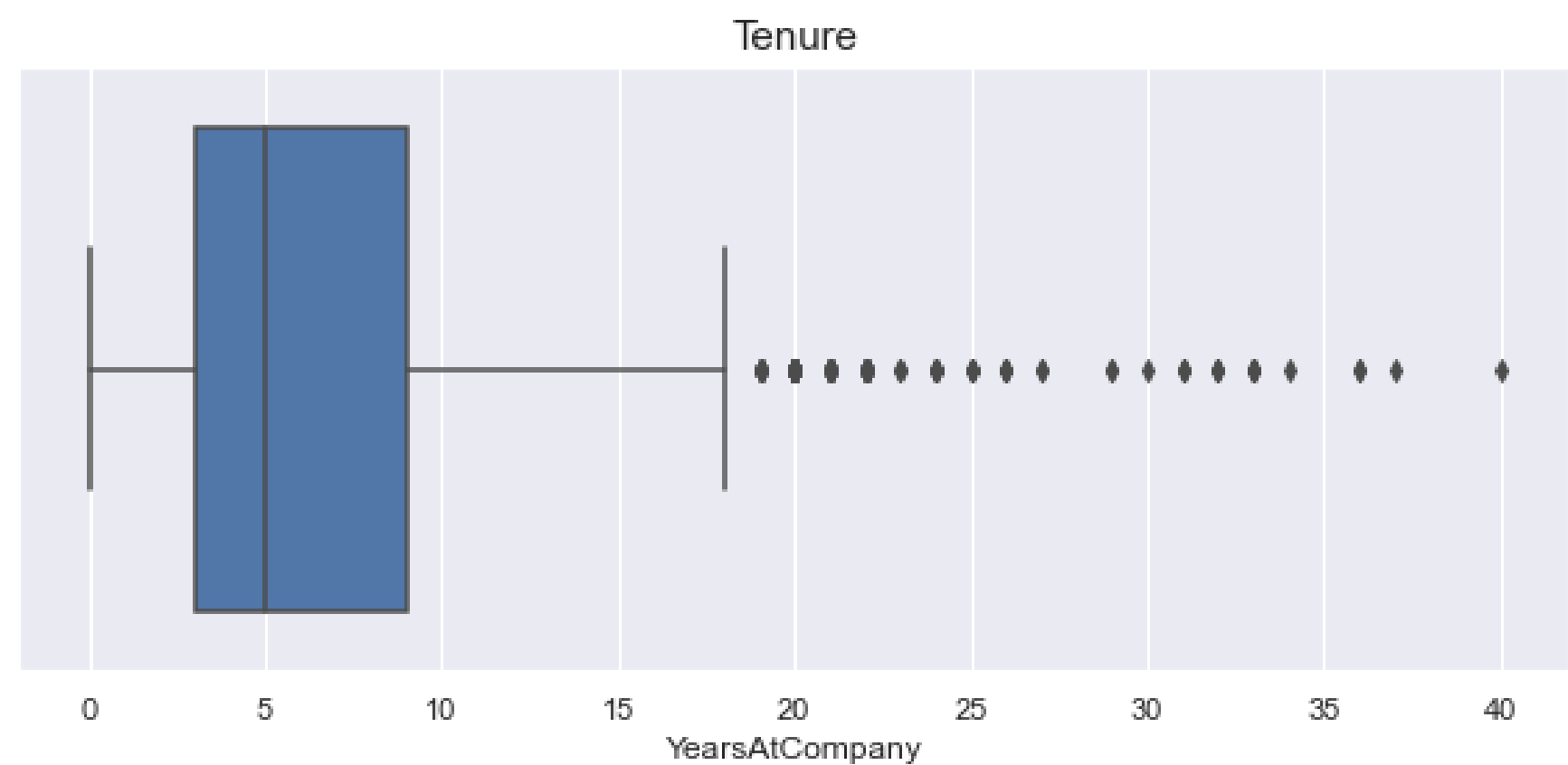
Demographics



Demographics



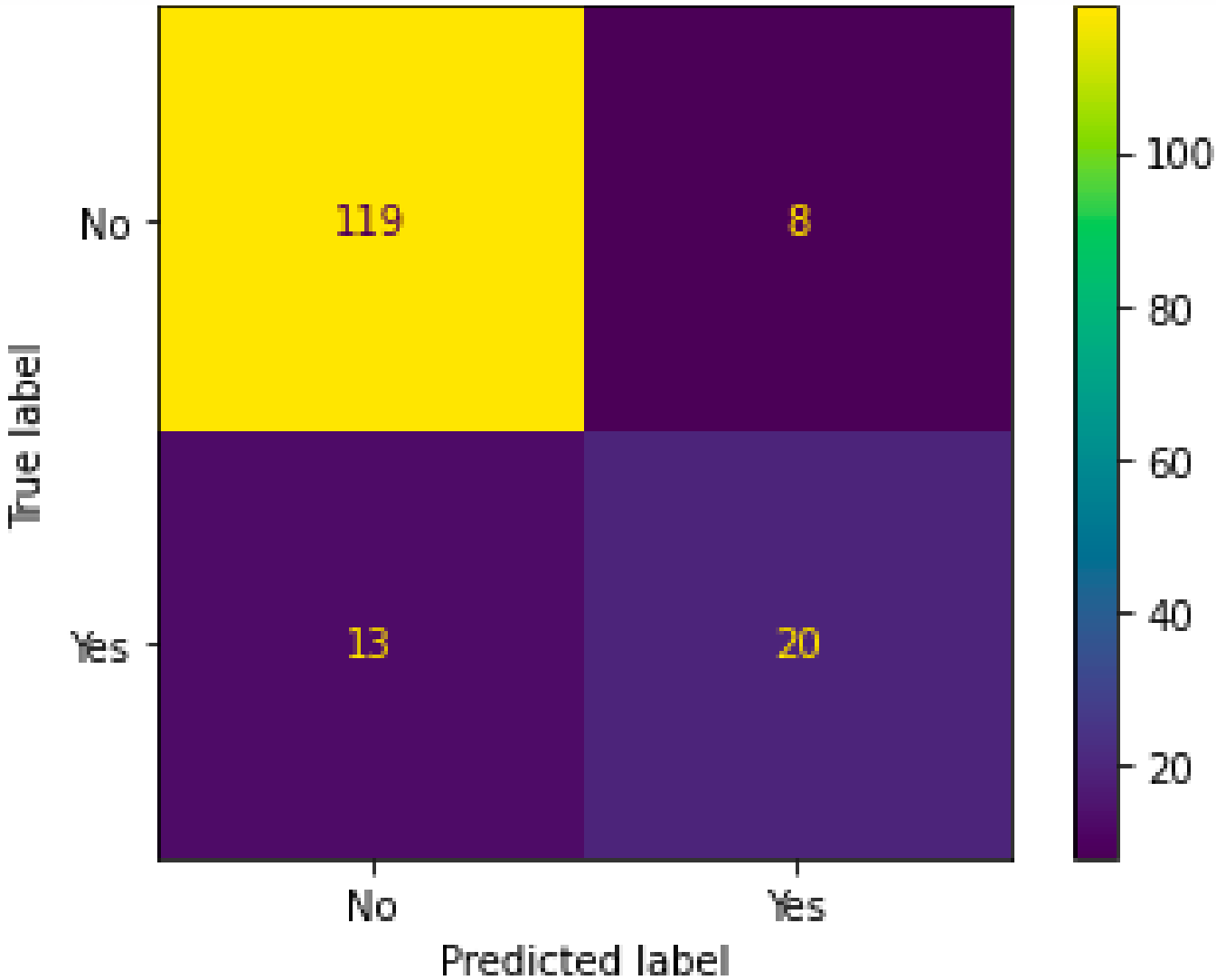
Dealing with Outliers



Best Model

Model: C .1 Param
Accuracy score: 0.86875

	precision	recall	f1-score	support
No	0.90	0.94	0.92	127
Yes	0.71	0.61	0.66	33
accuracy			0.87	160
macro avg	0.81	0.77	0.79	160
weighted avg	0.86	0.87	0.86	160



Model Specifications:

Logistic Regression
Stratified on Job Role
C of 0.1
Liblinear Solver

Other models:

Random Forest Classifier
Decision Tree
XGBoost

Takeaways

IBM- Great employee retention

Questioning the parameters

Protected classes

Years since last promotion

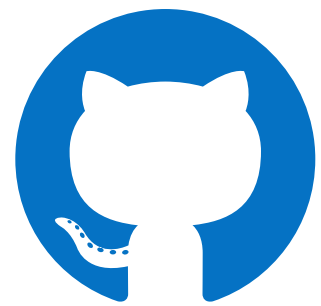
Next Steps

More data

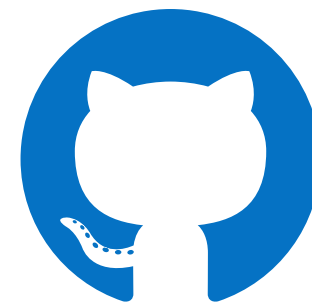
Other companies



Monica Haderthauer



Henry Graham Costello



Thank You!