

Customer Churn Prediction

Gender

Male

Multiple Lines

Yes

Streaming TV

Yes

Senior Citizen

No

Internet Service

DSL

Streaming Movies

Yes

Partner

Yes

Online Security

Yes

Contract

Month-to-month

Dependents

Yes

Online Backup

Yes

Paperless Billing

Yes

Tenure

Device Protection

Yes

Payment Method

Electronic check

Phone Service

Yes

Tech Support

Yes

Monthly Charges

Total Charges

Predict

Prediction: Churn

Probability: 0.84

Customer Churn Prediction

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Monthly Charges

Total Charges

Predict

Prediction: No Churn

Probability: 0.32

Customer Churn Dashboard



Filters

Contract

All

InternetService

All

PaymentMethod

All

Clear all slicers



7032

Total Customers



1869

Churned Customers



64.80

Average Monthly



26.58%

Churn Rate %

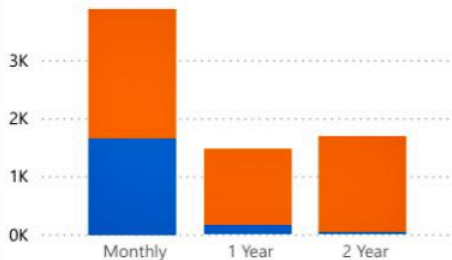


16.06M

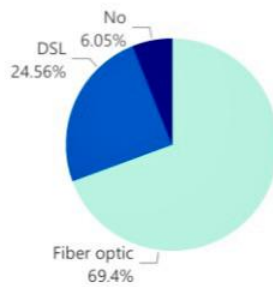
Total Charges

Churned v/s Stayed Customers

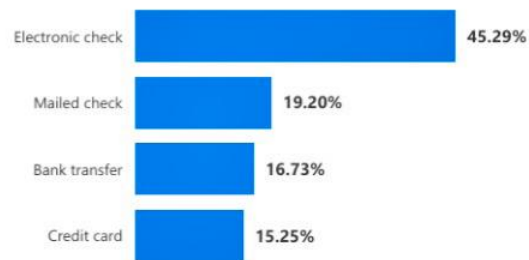
● Churned Customers ● Stayed Customers



Churned Classification

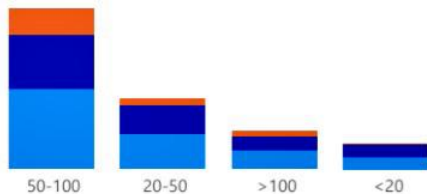


Churn Rate % by PaymentMethod



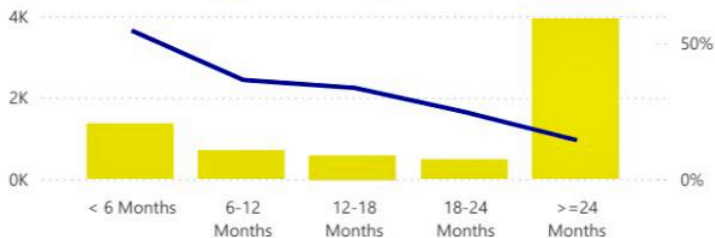
Customer Distribution by Monthly Charge Status

● Total Customers ● Stayed Customers ● Churned Customers



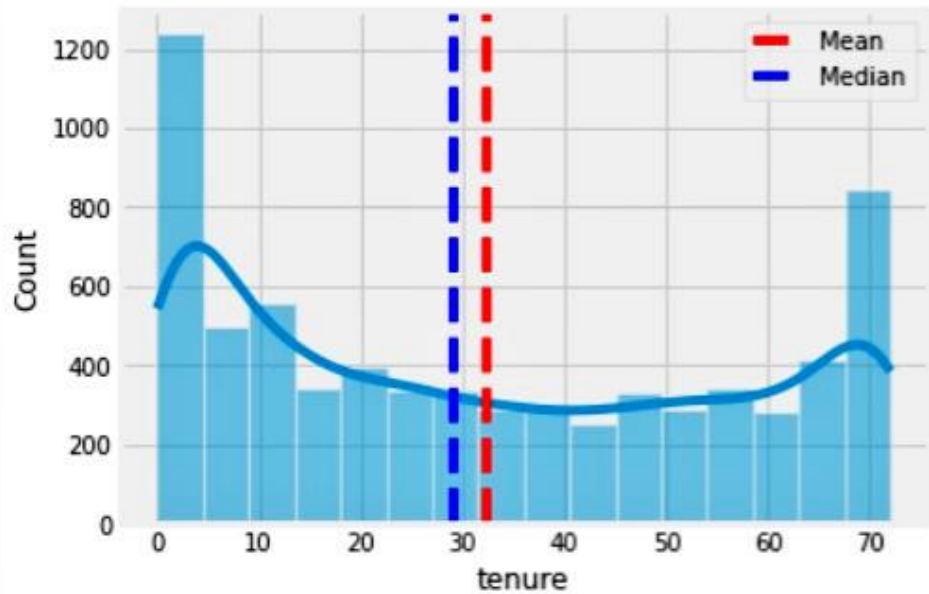
Churn Rate % by Tenure

● Total Customers ● Churn Rate %



Services	No	Yes
DeviceProtection	70.84%	29.16%
MultipleLines	54.52%	45.48%
OnlineBackup	72.02%	27.98%
OnlineSecurity	84.22%	15.78%
PaperlessBilling	25.09%	74.91%
PhoneService	9.10%	90.90%
StreamingMovies	56.23%	43.77%
StreamingTV	56.45%	43.55%
TechSupport	83.41%	16.59%

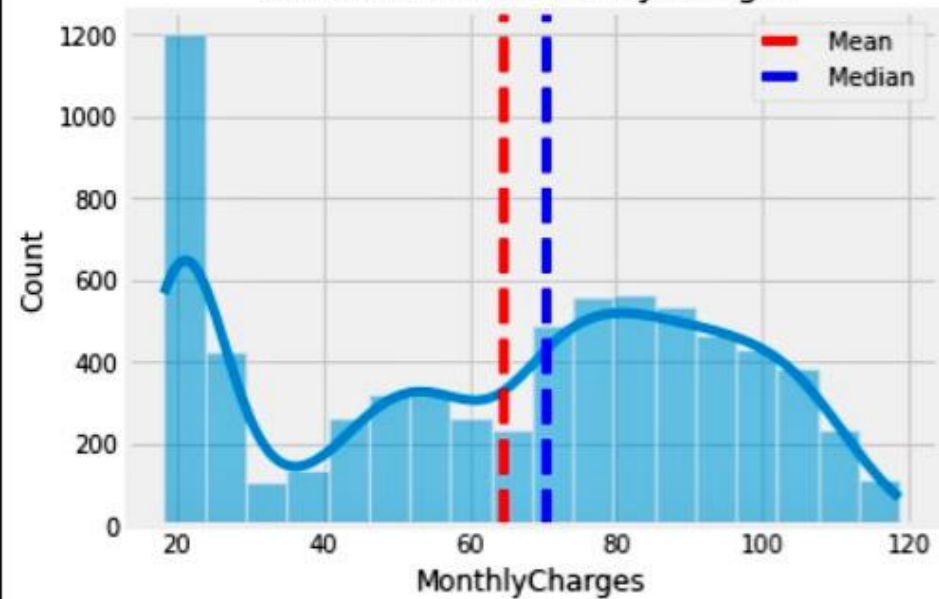
Distribution of tenure



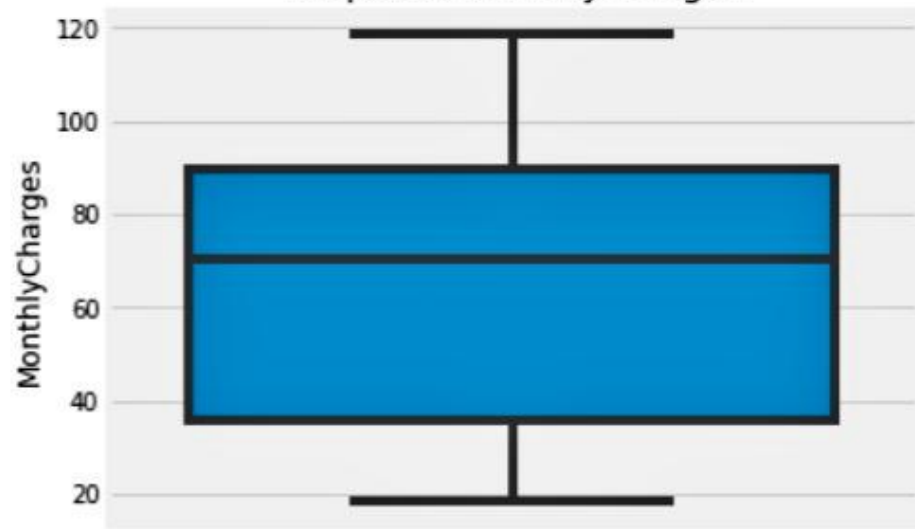
Boxplot of tenure



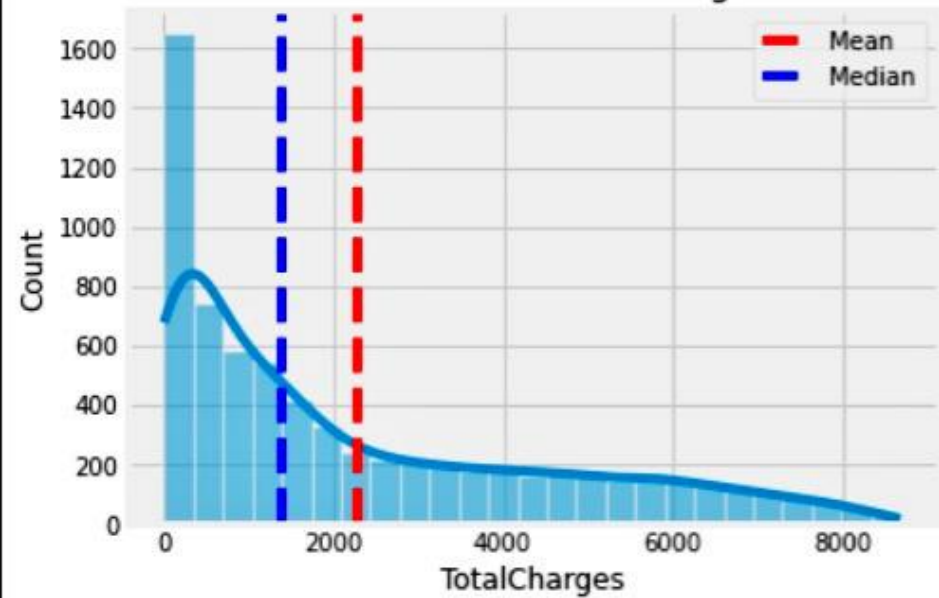
Distribution of MonthlyCharges



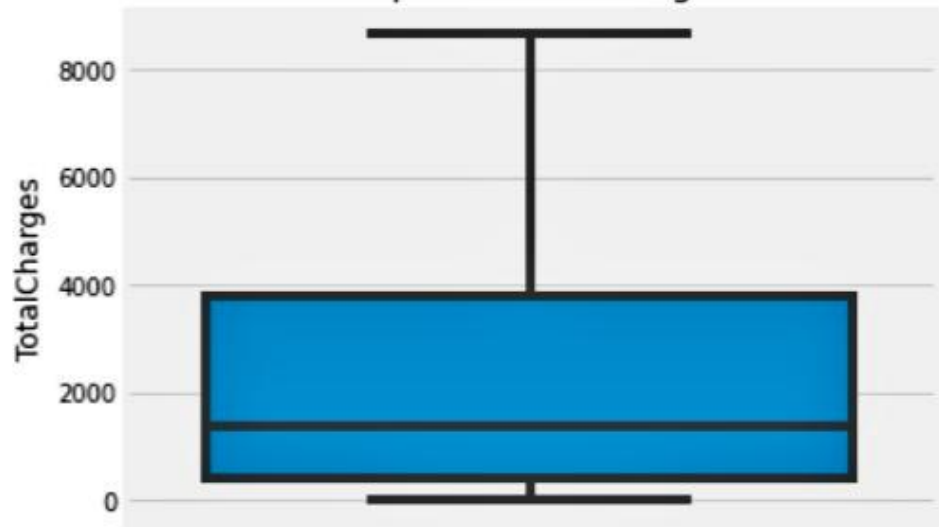
Boxplot of MonthlyCharges



Distribution of TotalCharges



Boxplot of TotalCharges



Correlation Matrix



Accuracy : 0.7799858055358411

ROC - AUC Score : 0.7414382498162658

Confusion Matrix :

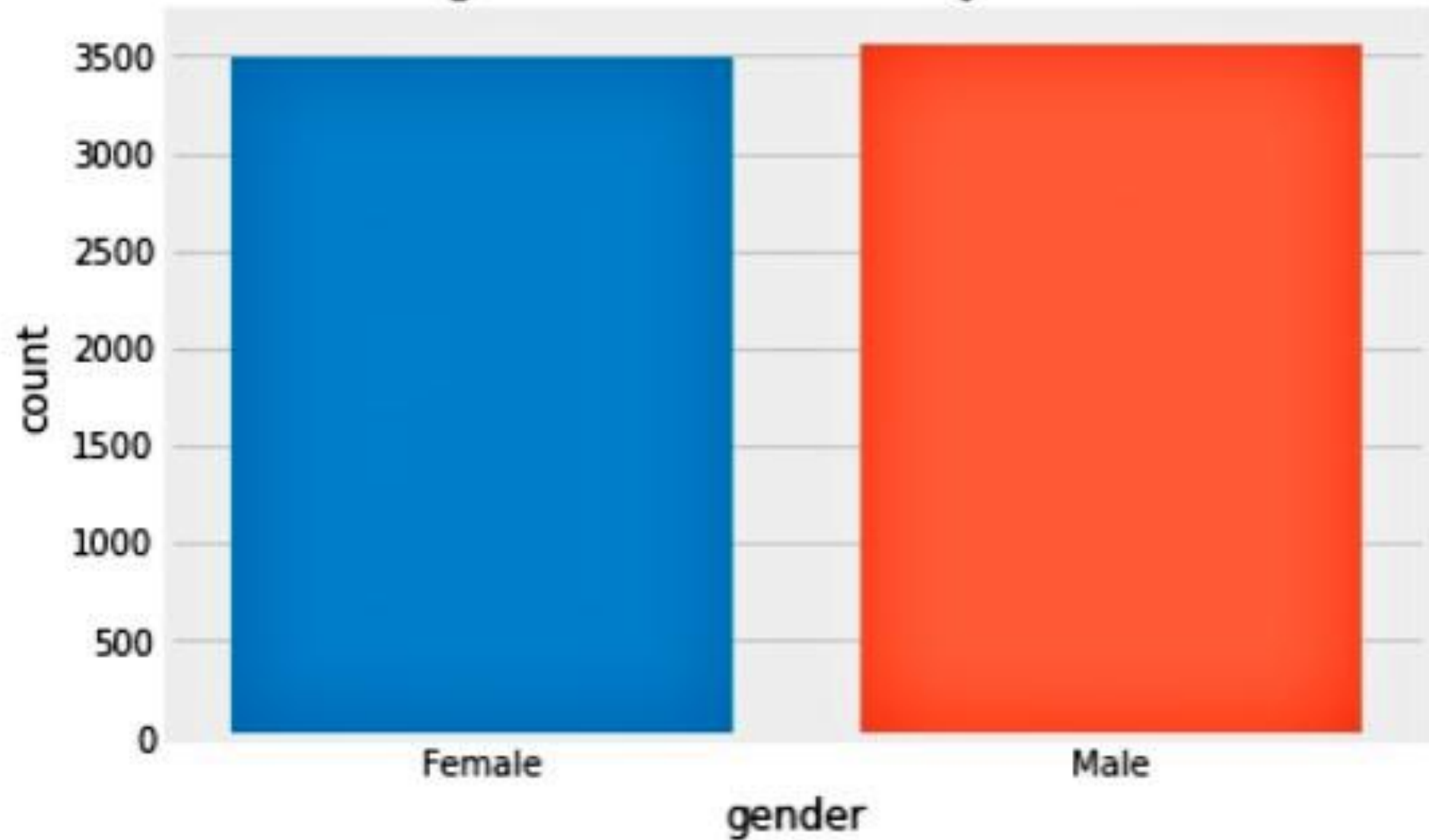
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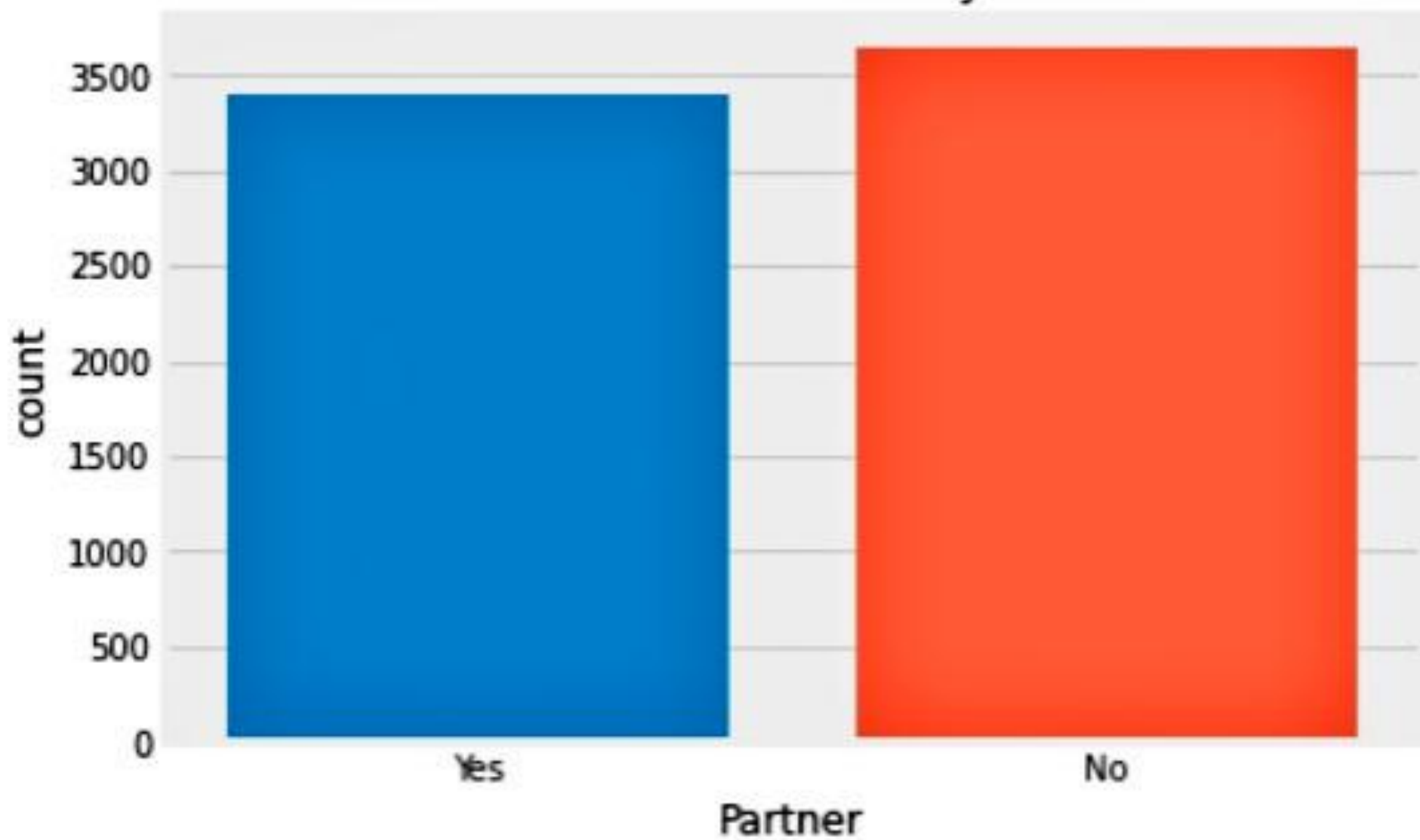
Classification Report :

	precision	recall	f1-score	support
0	0.87	0.82	0.85	1036
1	0.57	0.66	0.61	373
accuracy			0.78	1409
macro avg	0.72	0.74	0.73	1409
weighted avg	0.79	0.78	0.78	1409

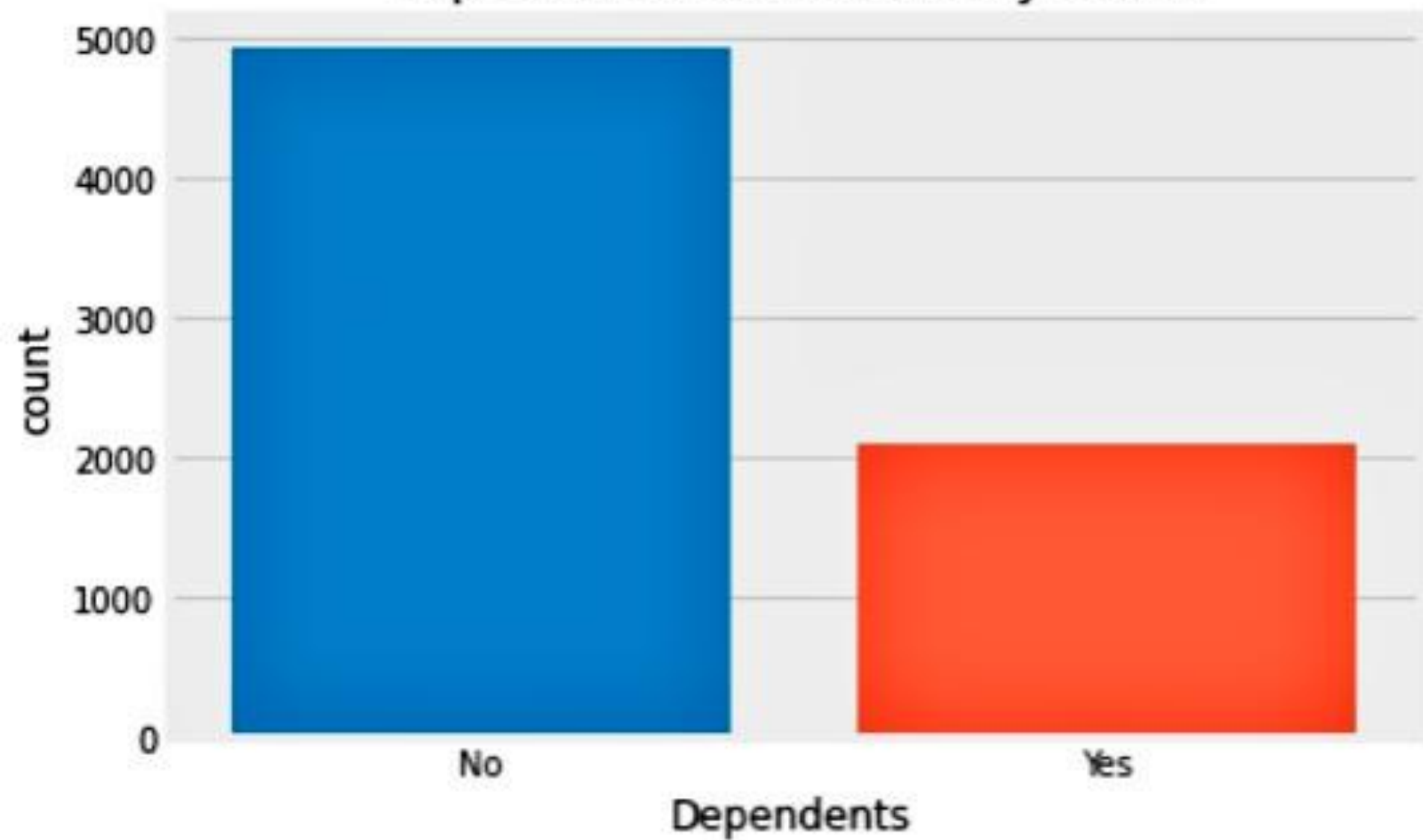
gender Distribution by Churn



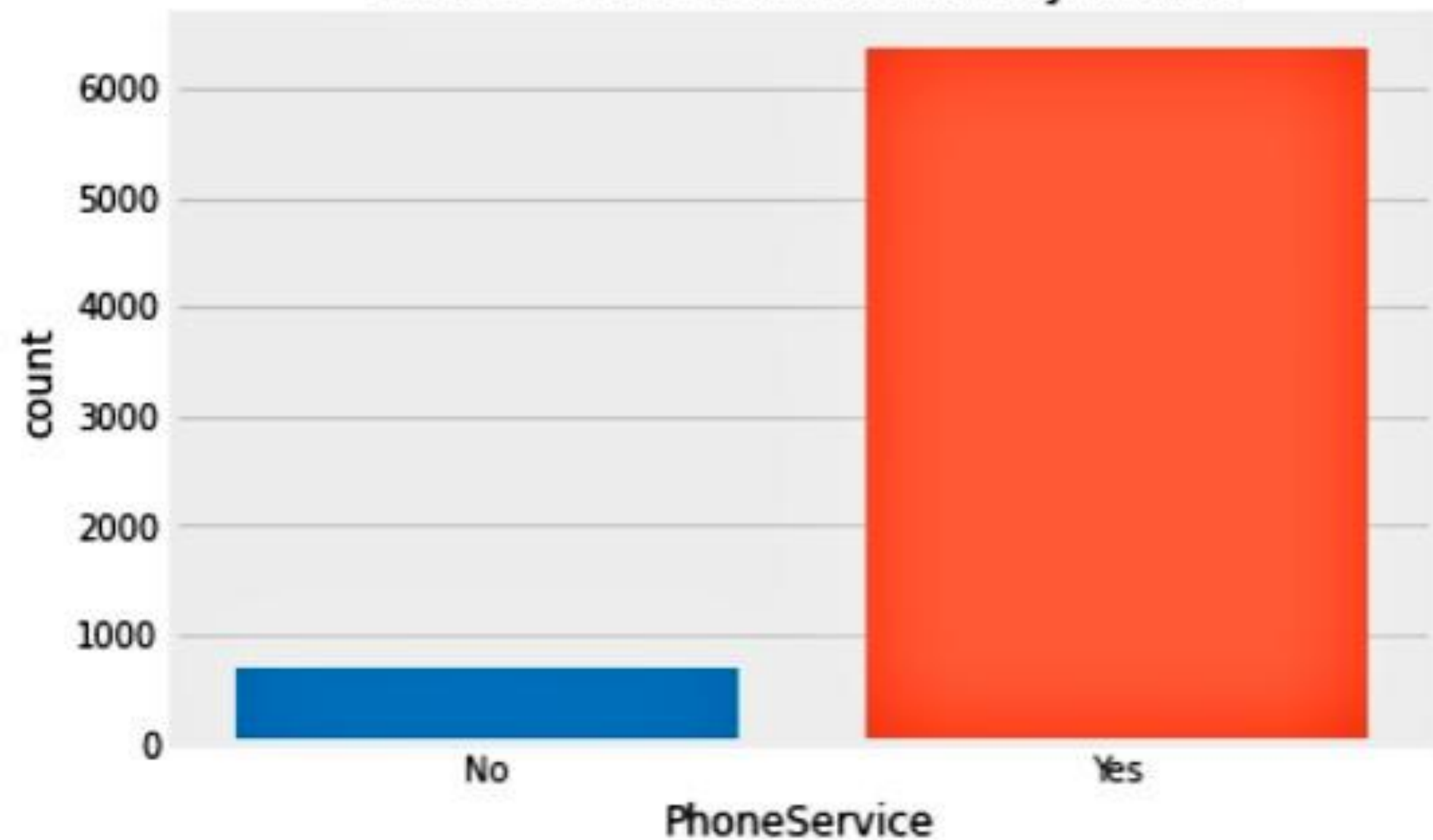
Partner Distribution by Churn



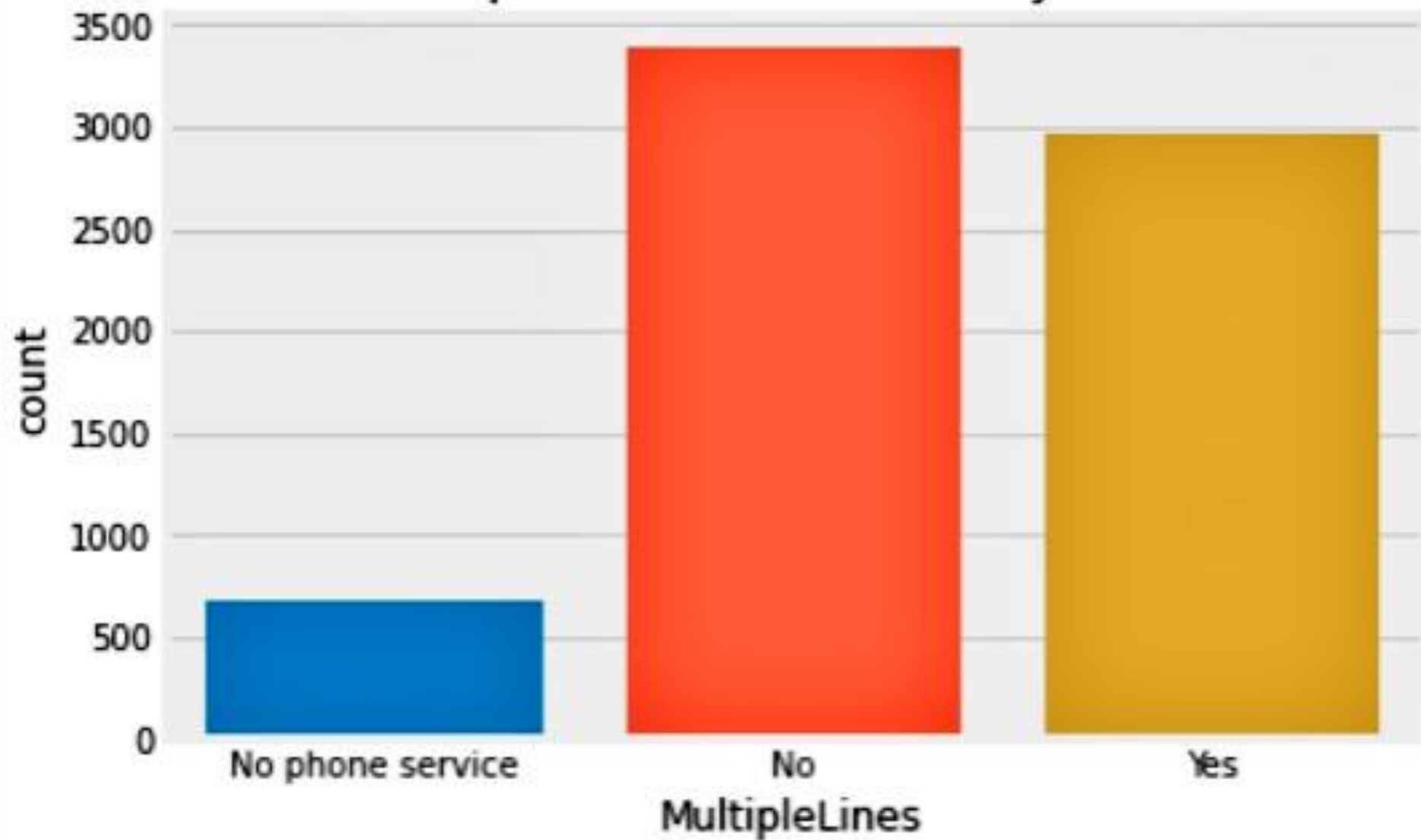
Dependents Distribution by Churn



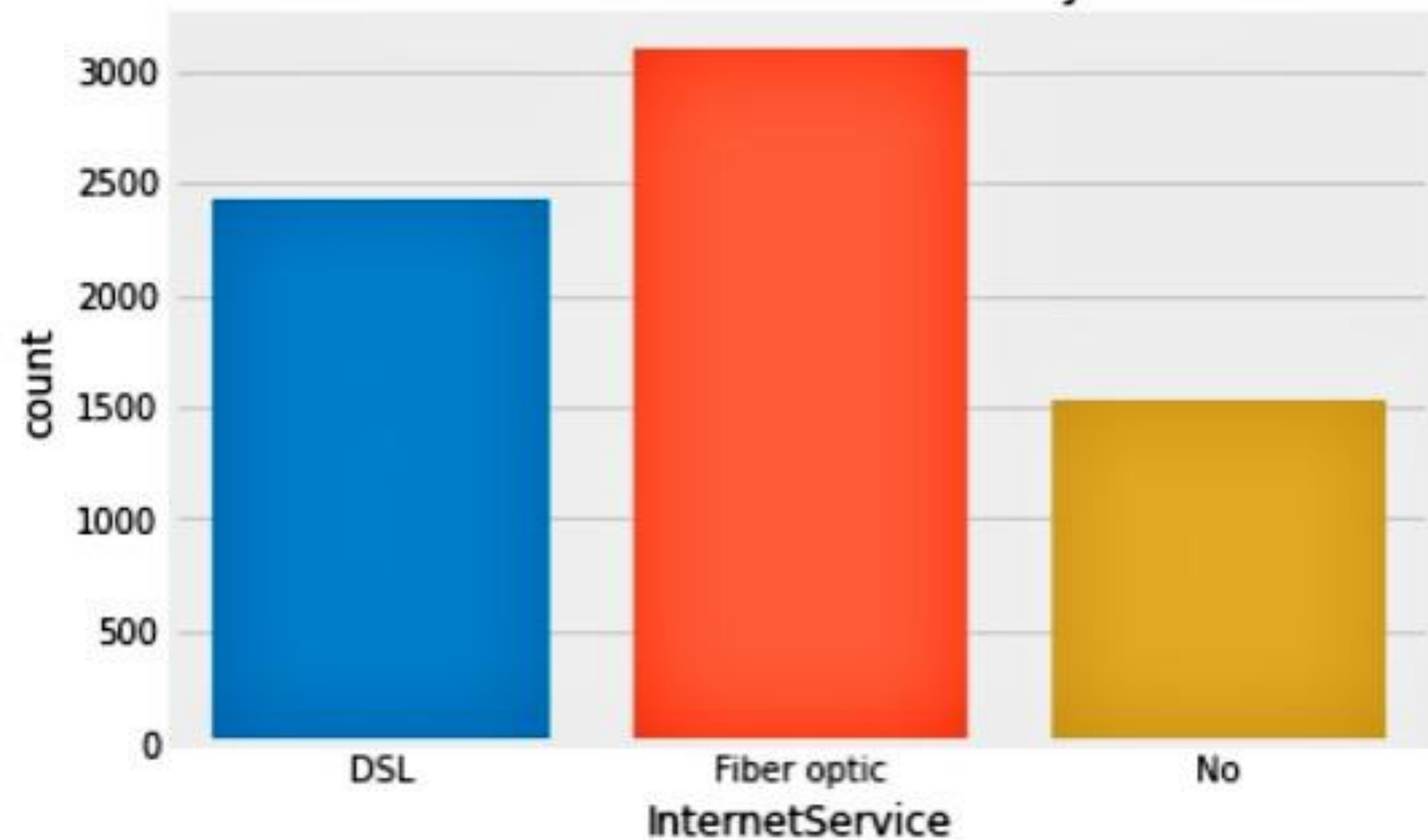
PhoneService Distribution by Churn



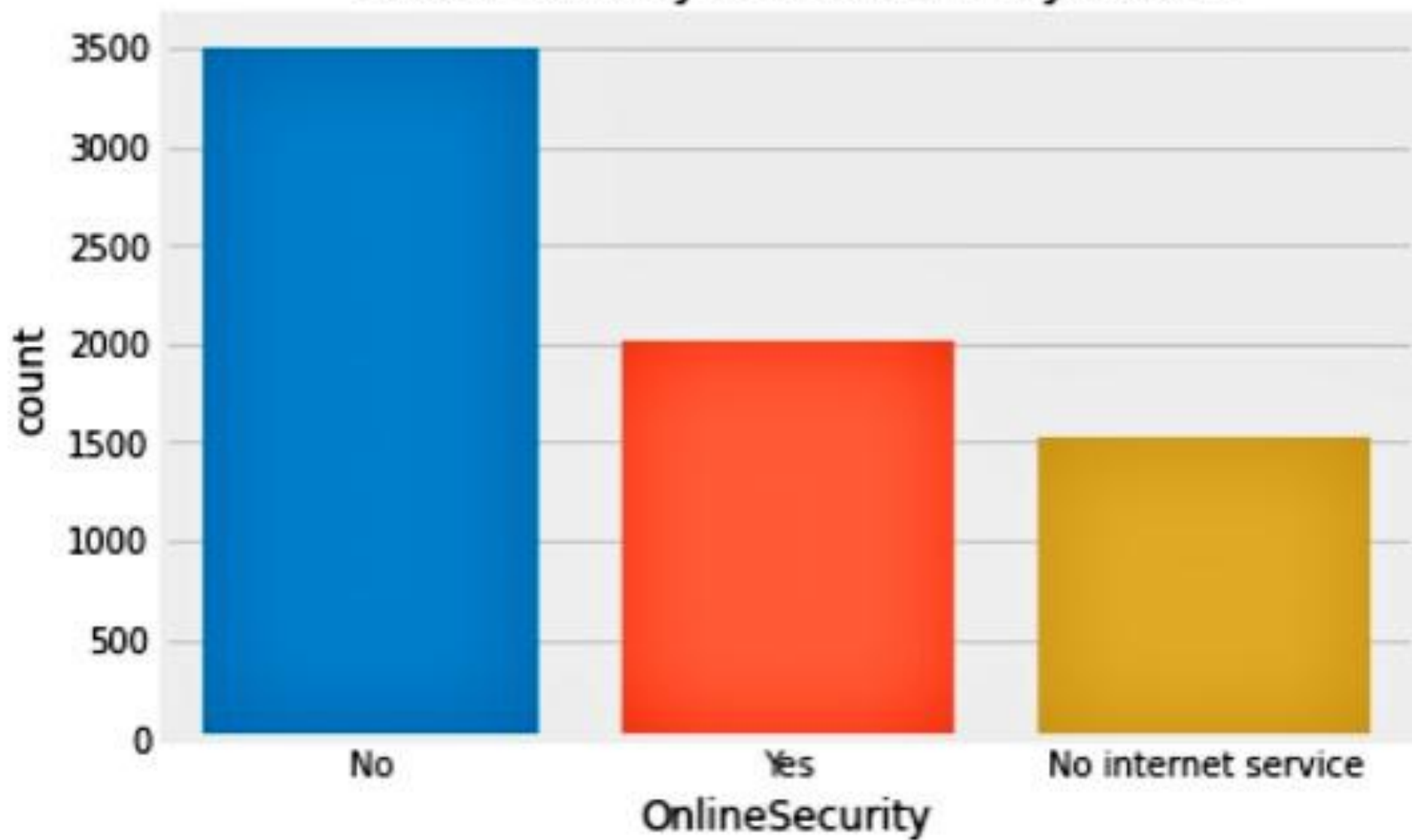
MultipleLines Distribution by Churn



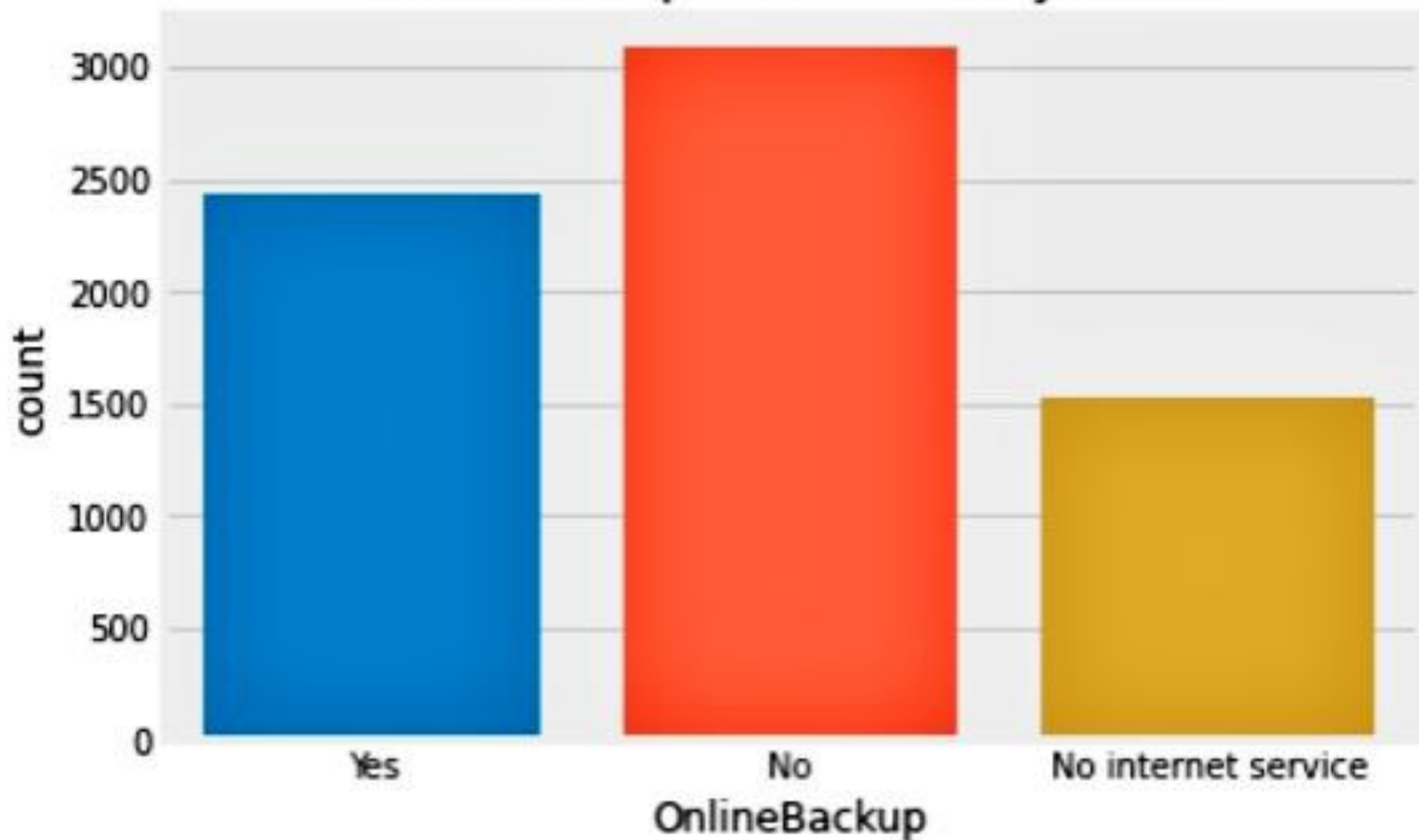
InternetService Distribution by Churn



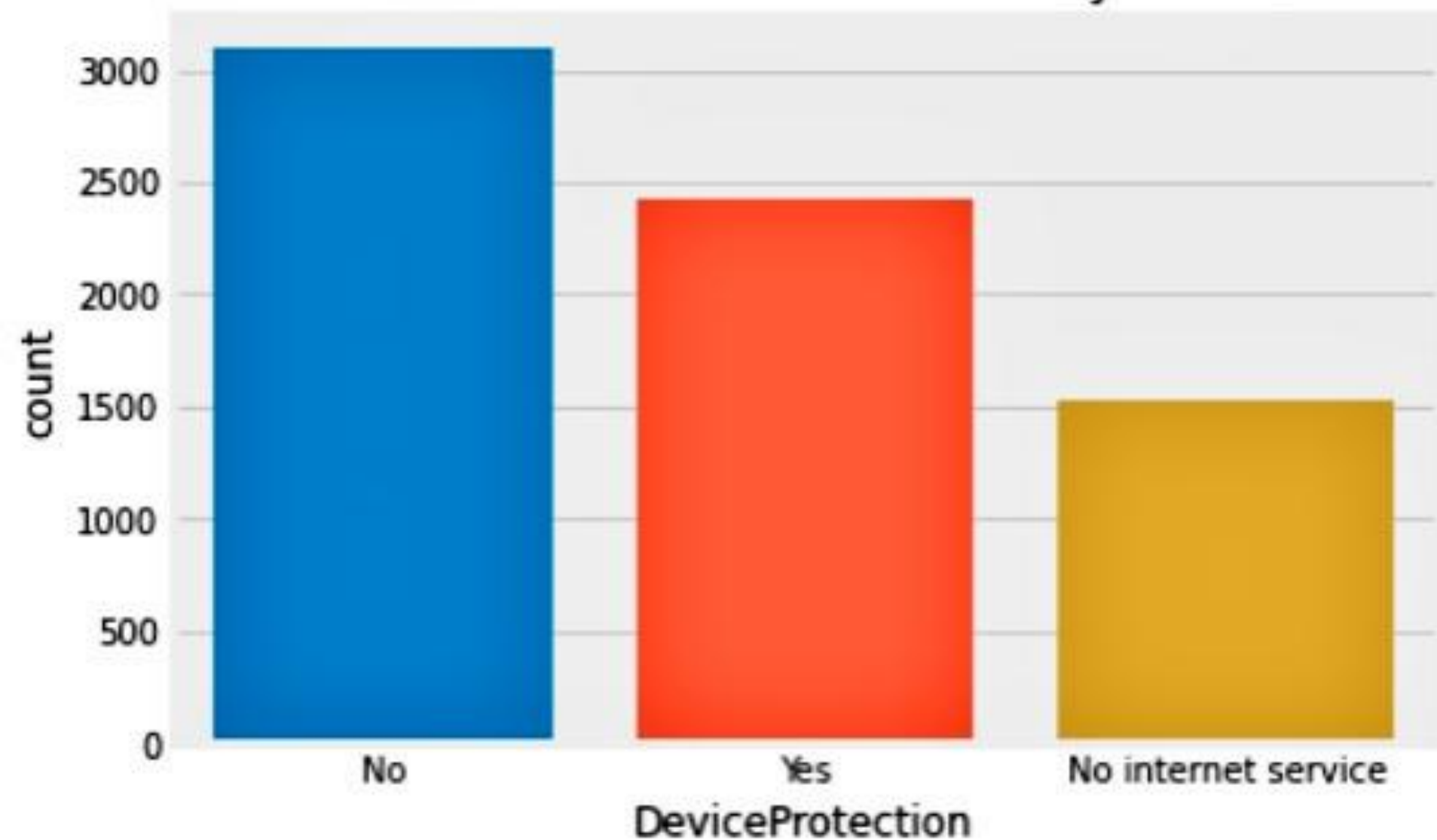
OnlineSecurity Distribution by Churn



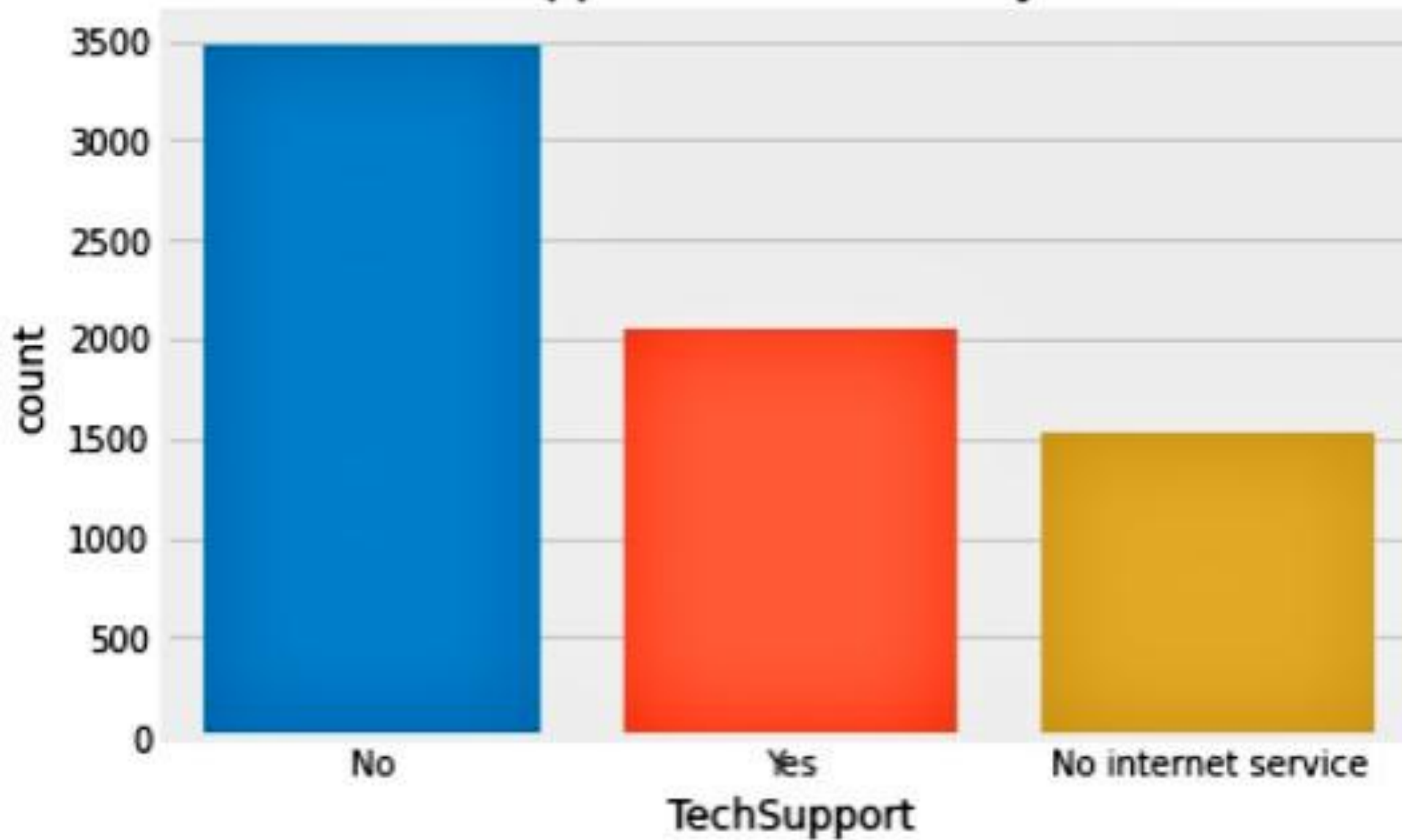
OnlineBackup Distribution by Churn



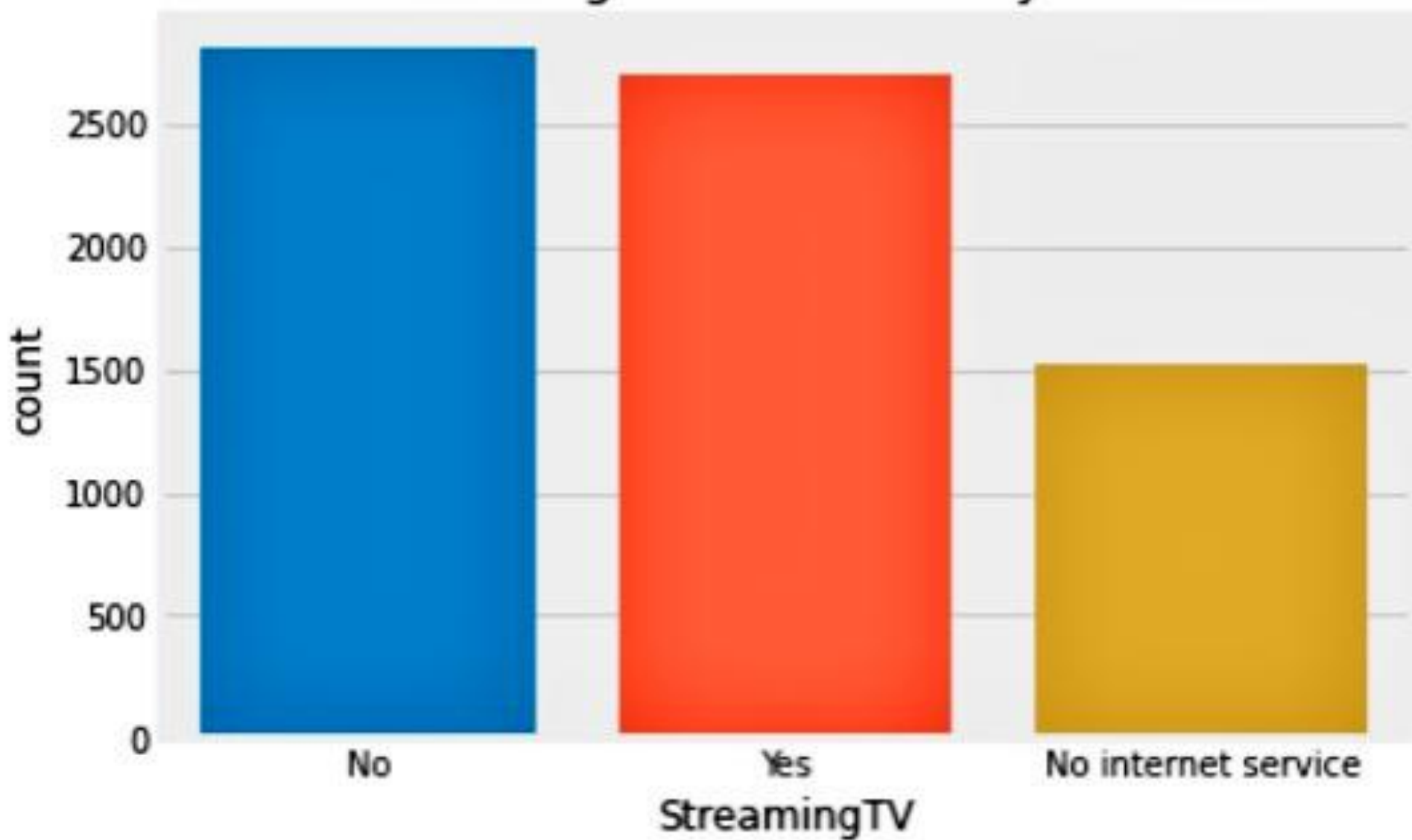
DeviceProtection Distribution by Churn



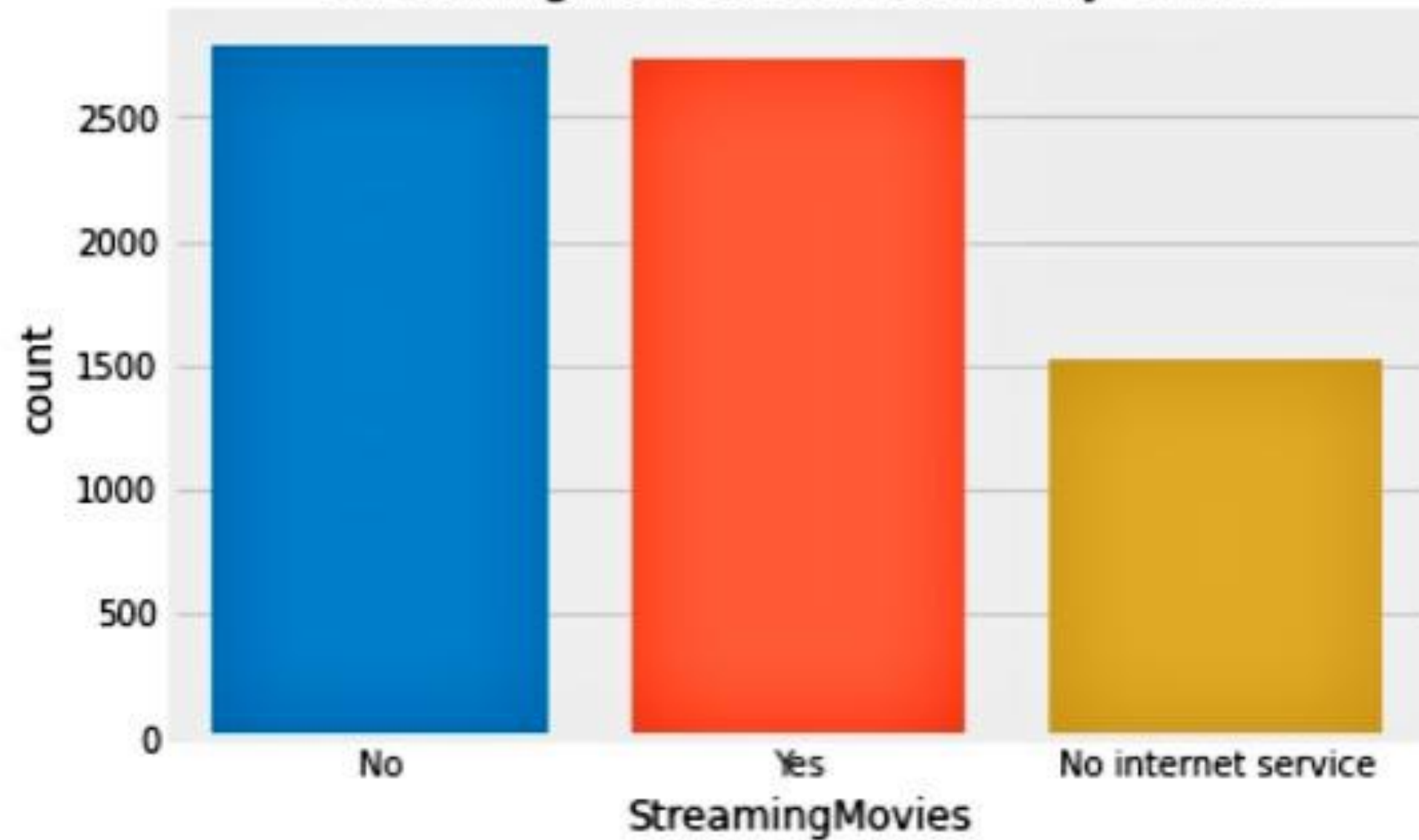
TechSupport Distribution by Churn



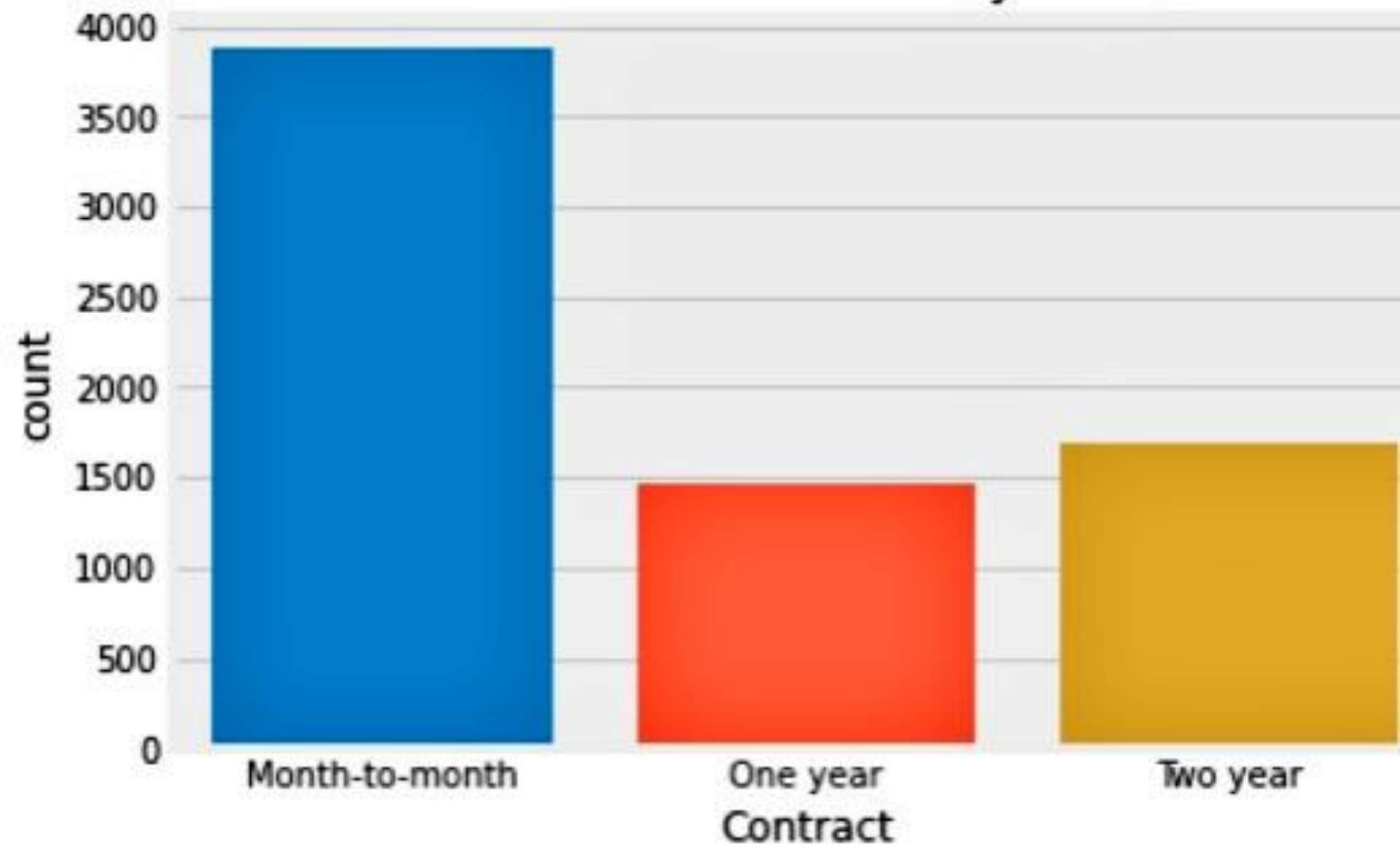
StreamingTV Distribution by Churn



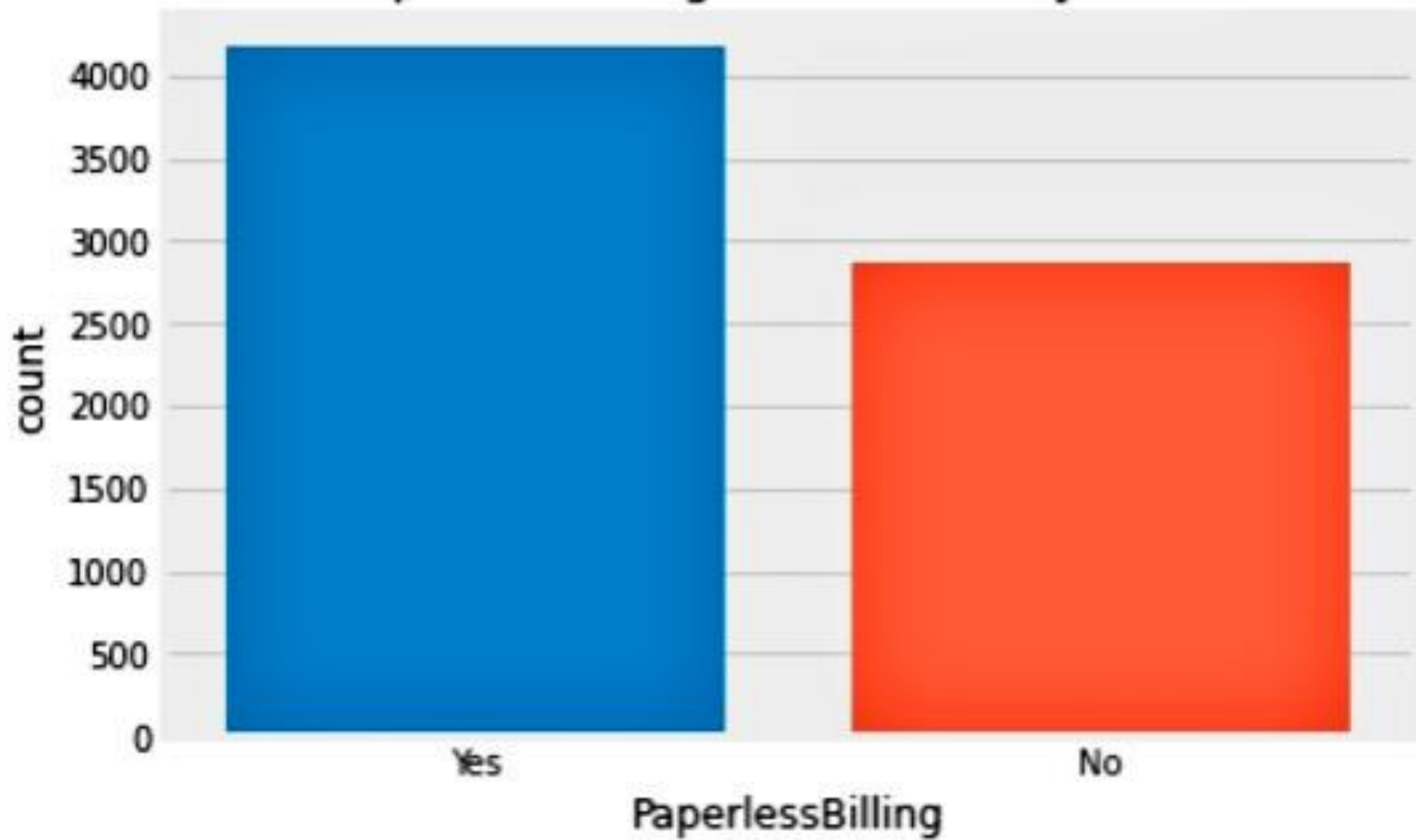
StreamingMovies Distribution by Churn



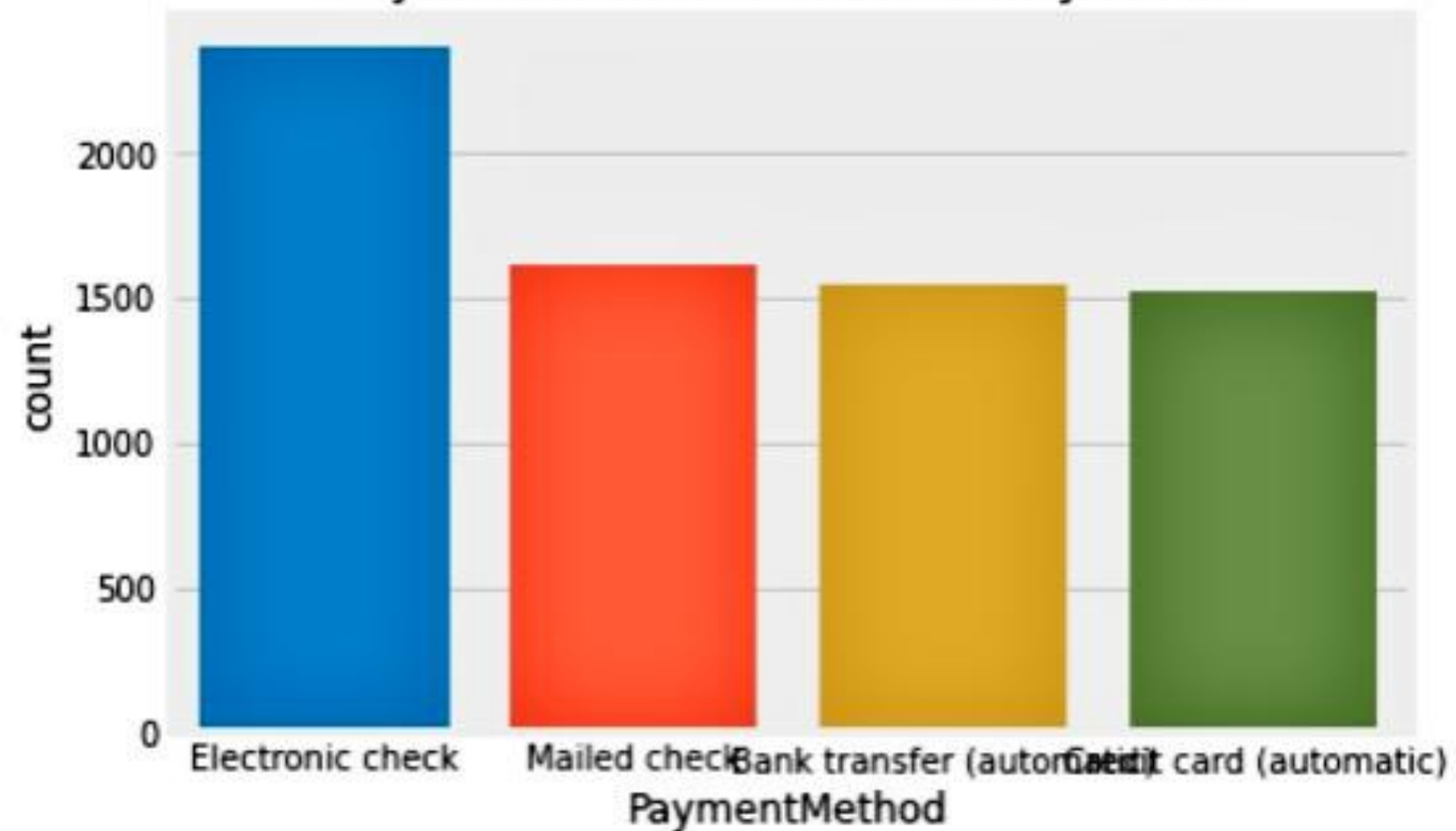
Contract Distribution by Churn



PaperlessBilling Distribution by Churn



PaymentMethod Distribution by Churn



SeniorCitizen Distribution by Churn

