

Customer Churn Prediction

Gender	Multiple Lines	Streaming TV
Male	Yes	Yes
Senior Citizen	Internet Service	Streaming Movies
No	DSL	Yes
Partner	Online Security	Contract
Yes	Yes	Month-to-month
Dependents	Online Backup	Paperless Billing
Yes	Yes	Yes
Tenure	Device Protection	Payment Method
	Yes	Electronic check
Phone Service	Tech Support	Monthly Charges
Yes	Yes	
		Total Charges

Predict

Prediction: Churn

Probability: 0.84

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Phone Service	Tech Support	Monthly Charges
Yes	Yes	
		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 %

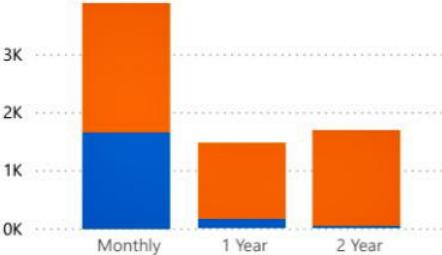


16.06M

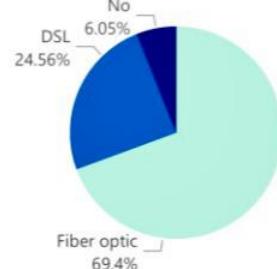
Total Charges

Churned v/s Stayed Customers

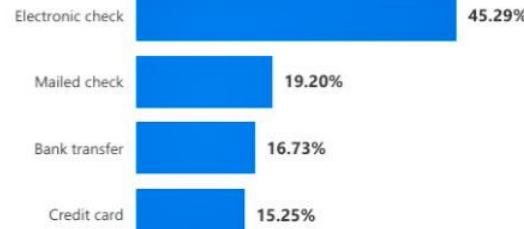
● Churned Customers ● Stayed Customers



Churned Classification

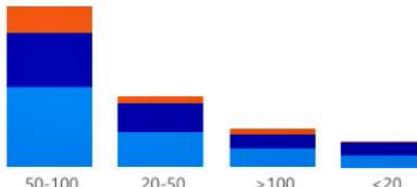


Churn Rate % by PaymentMethod



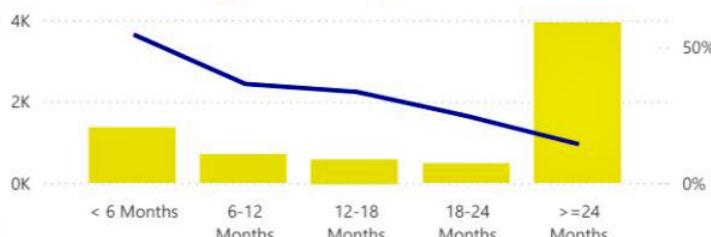
Customer Distribution by Monthly Charge Status

● Total Customers ● Stayed Customers ● Churned Customers



Churn Rate % by Tenure

● Total Customers ● Churn Rate %

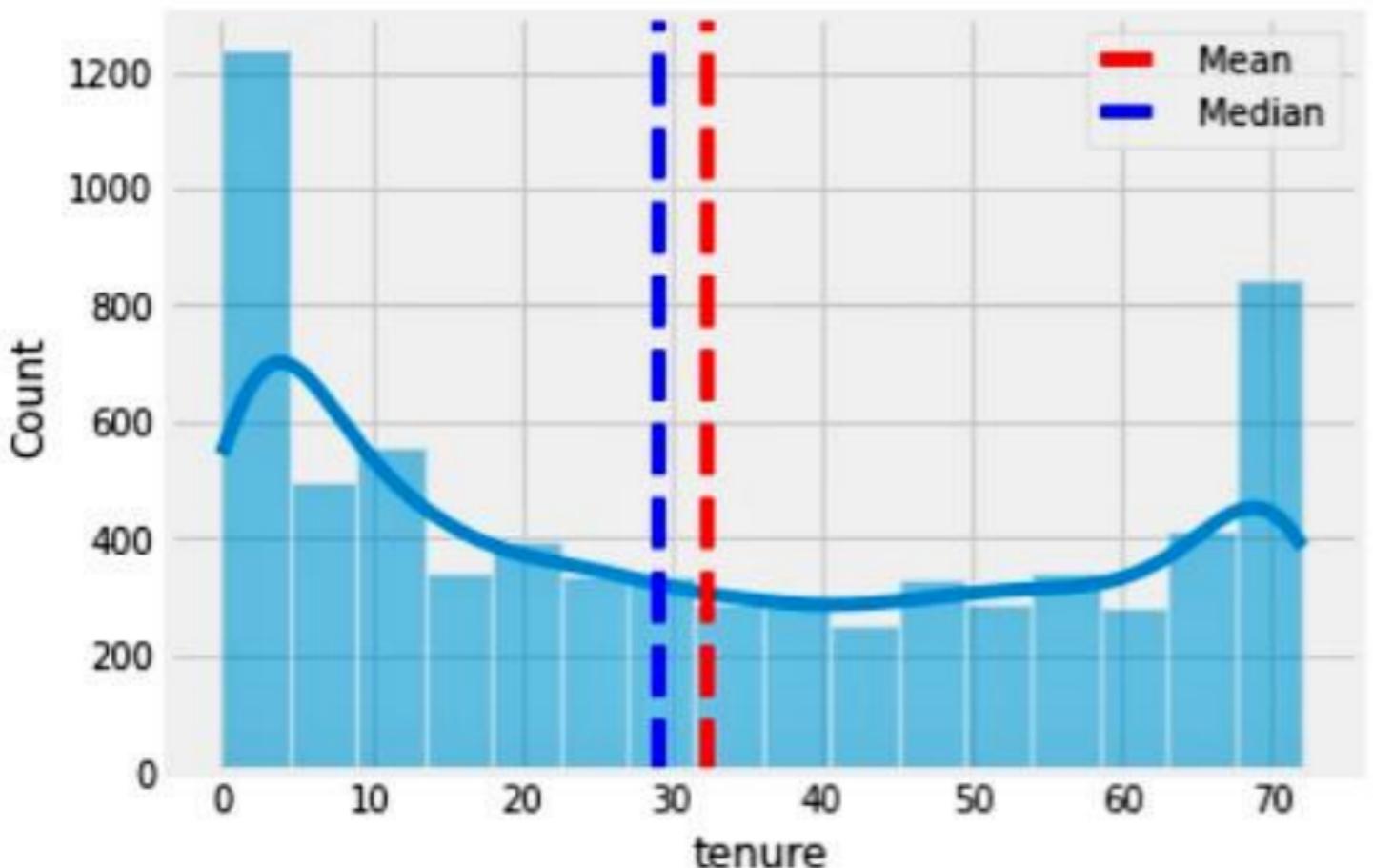


Services

No Yes

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%

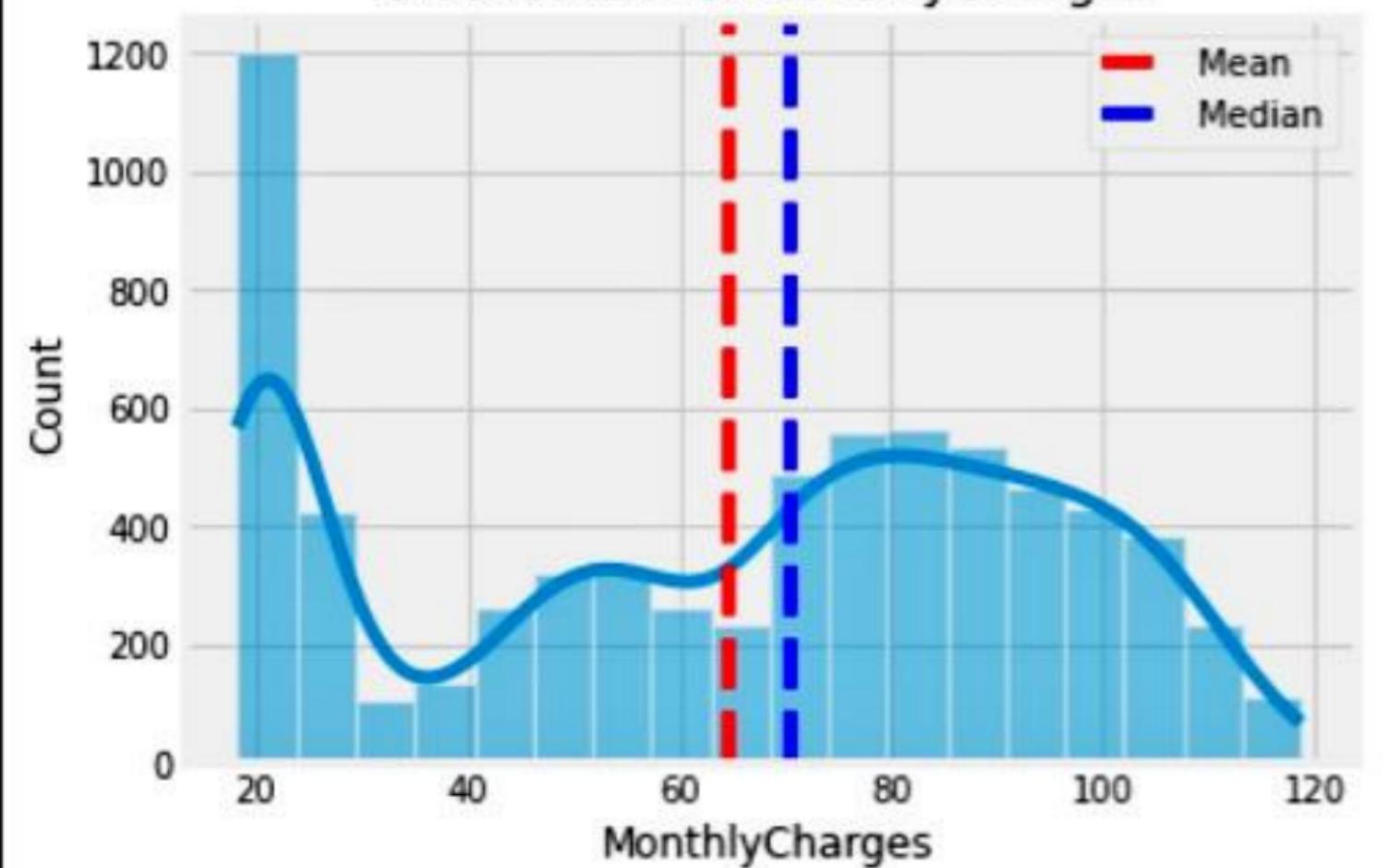
Distribution of tenure



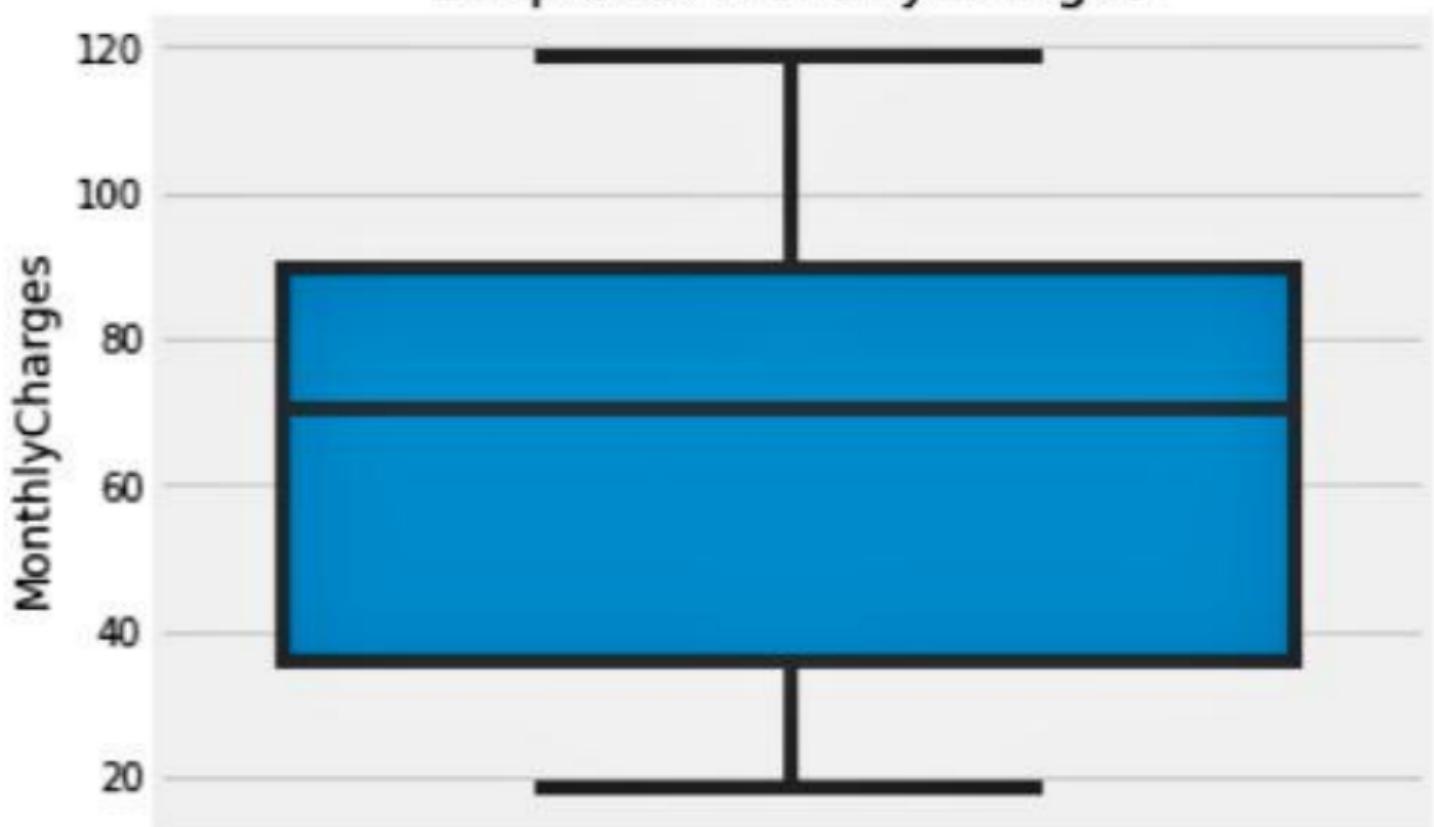
Boxplot of tenure



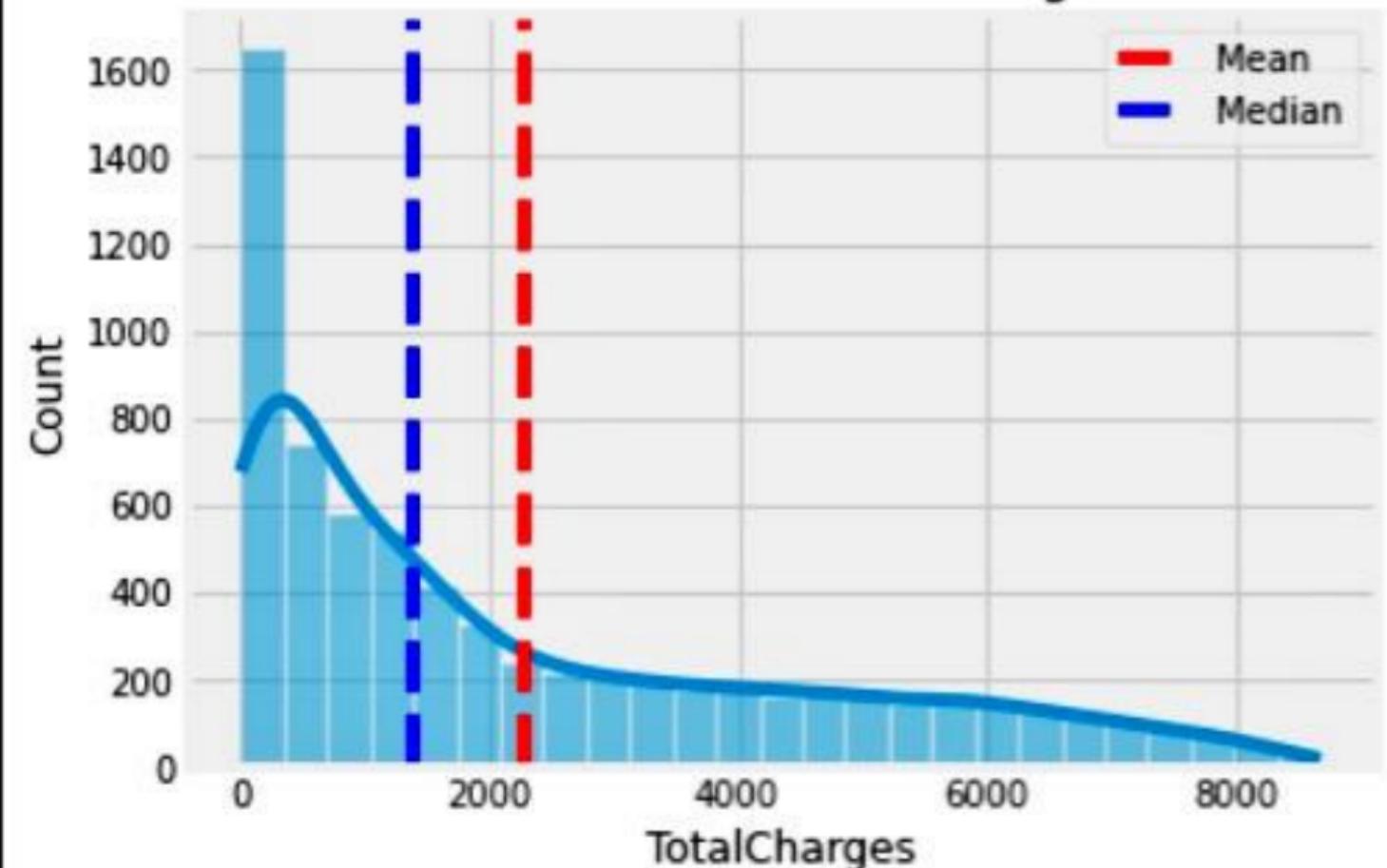
Distribution of MonthlyCharges



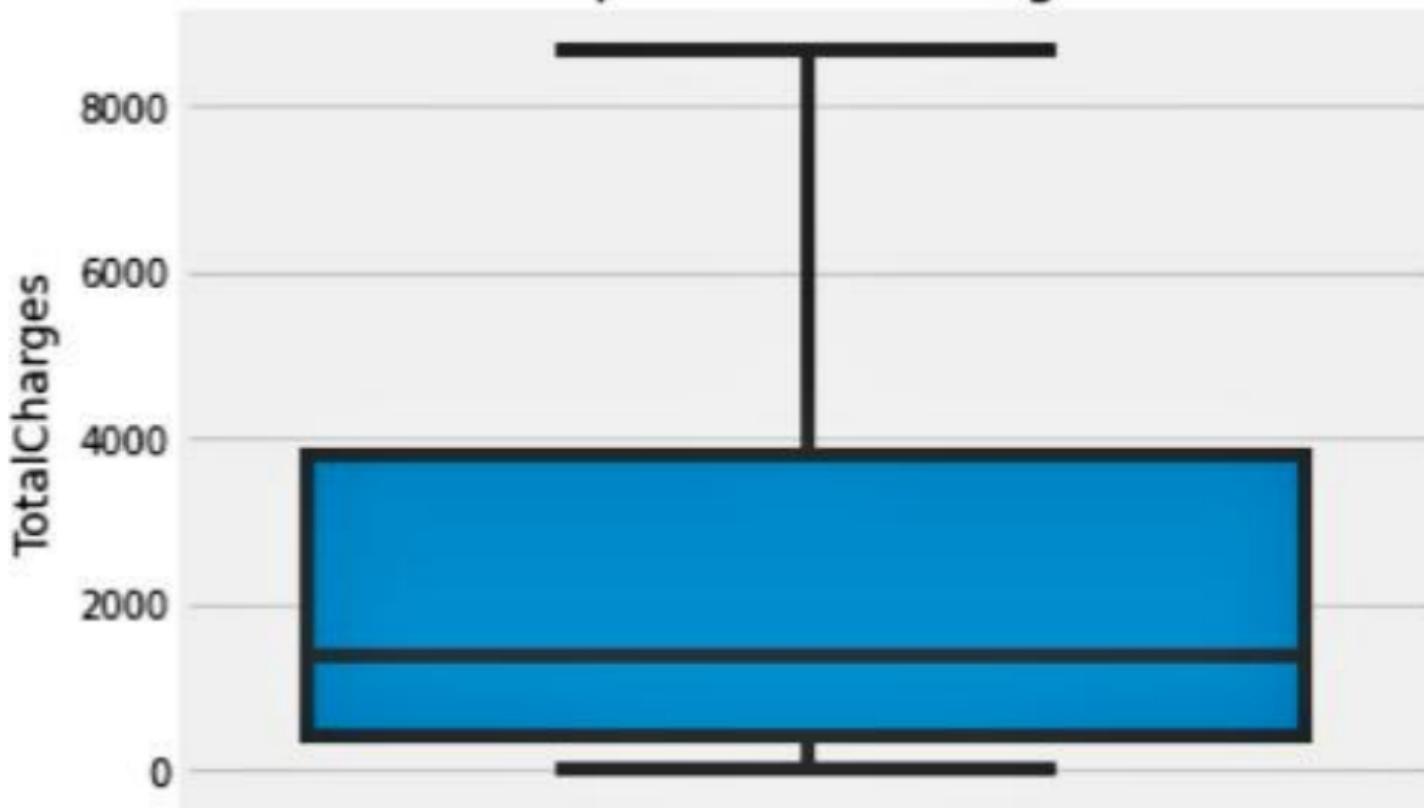
Boxplot of MonthlyCharges



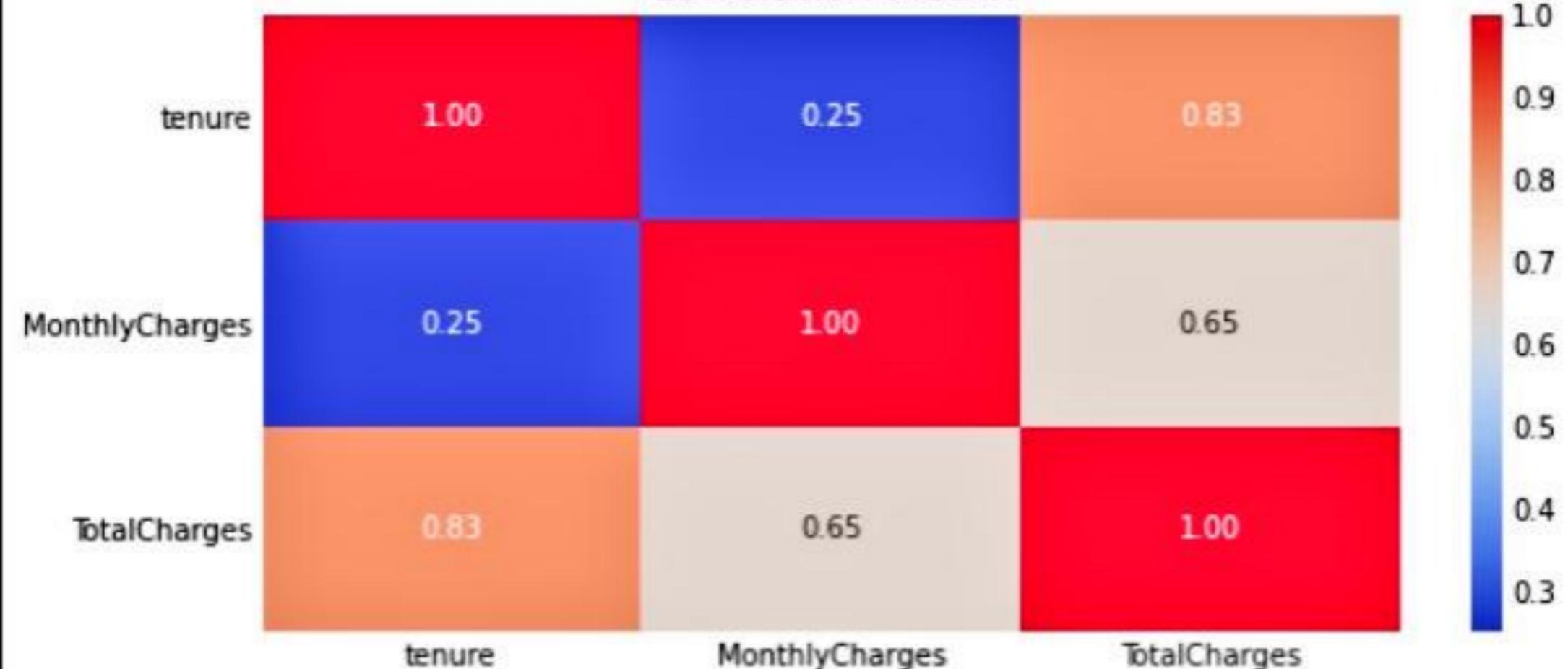
Distribution of TotalCharges



Boxplot of TotalCharges



Correlation Matrix



Accuracy : 0.7799858055358411

ROC - AUC Score : 0.7414382498162658

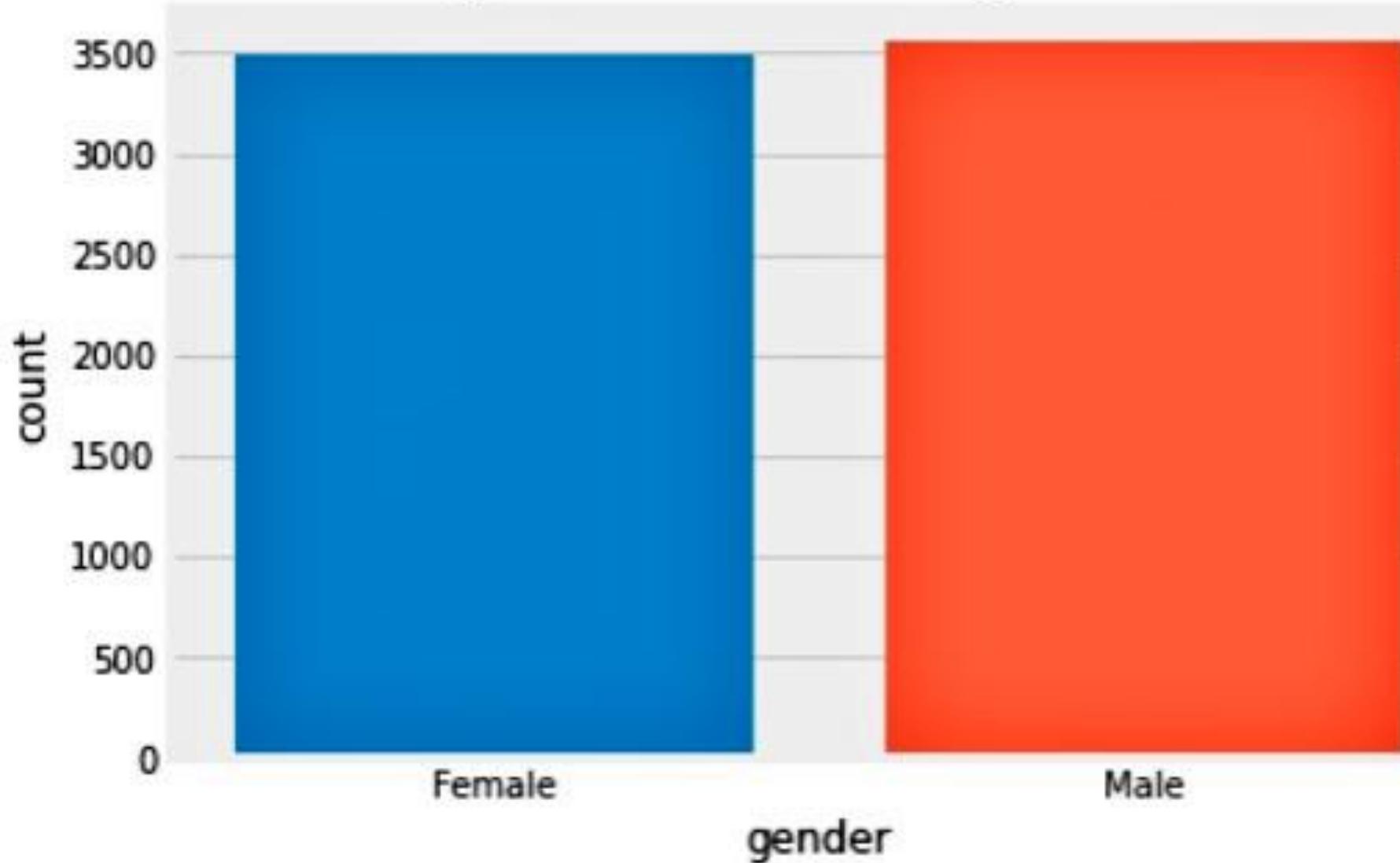
Confusion Matrix :

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[[853 183]
 [127 246]]
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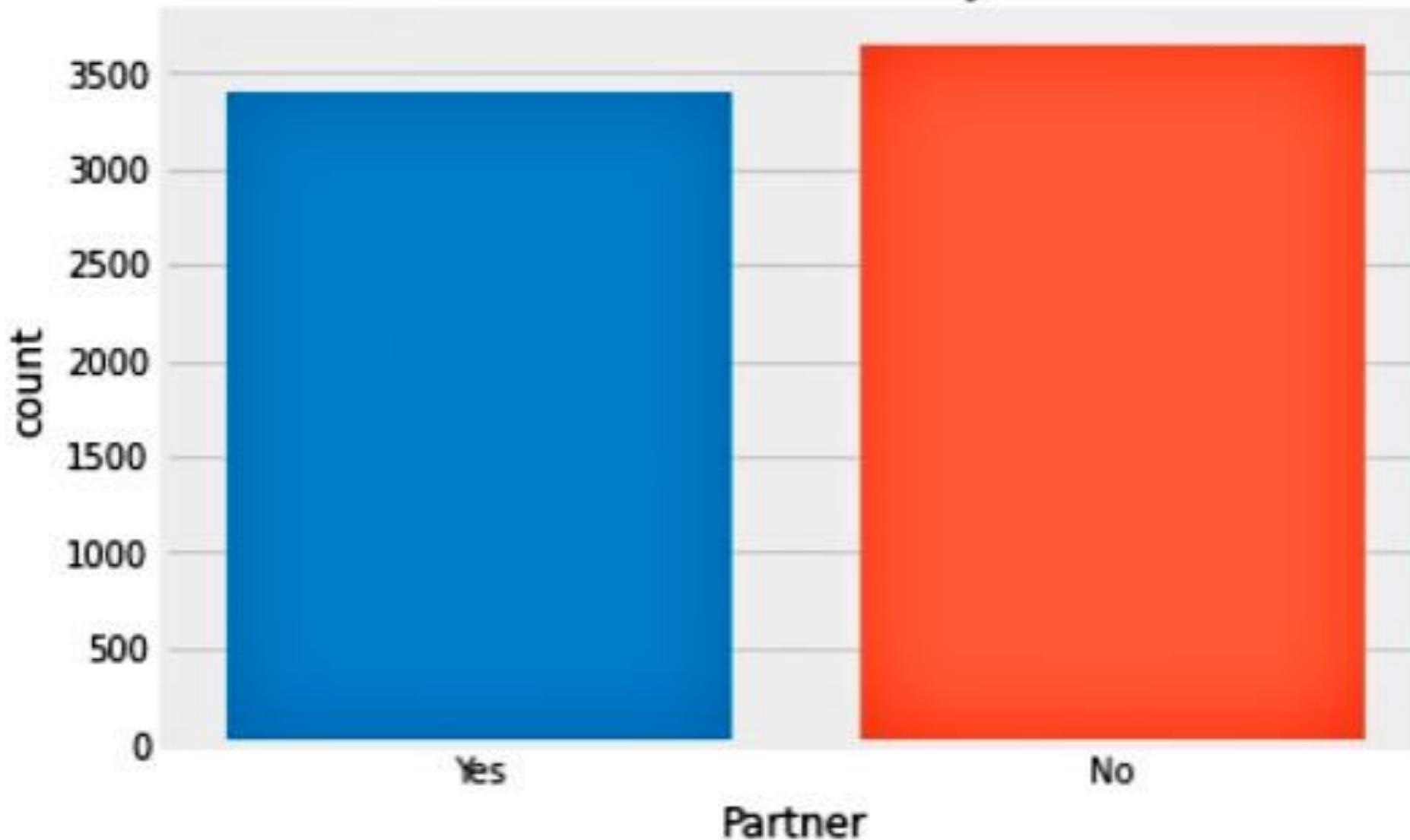
Classification Report :

	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

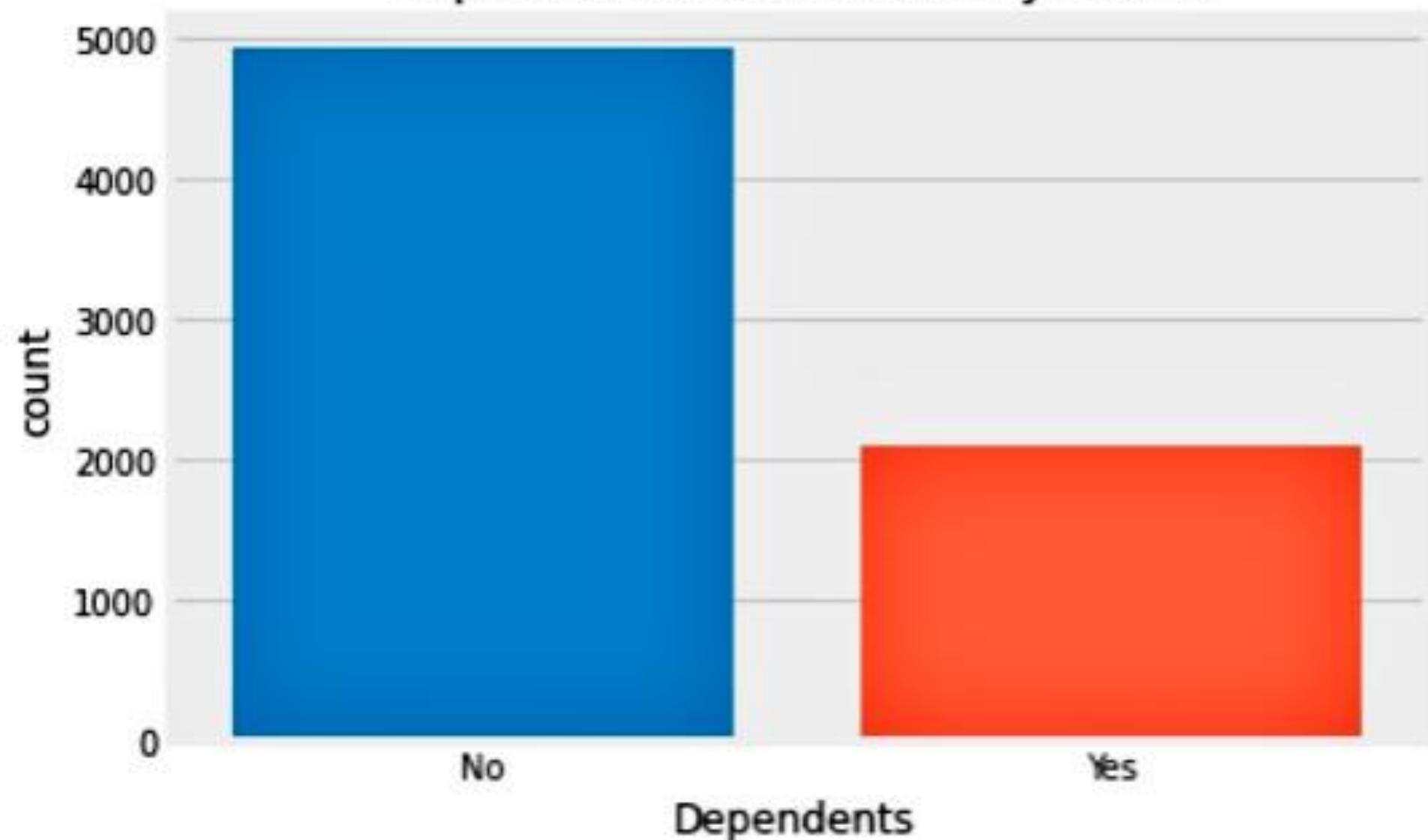
gender Distribution by Churn



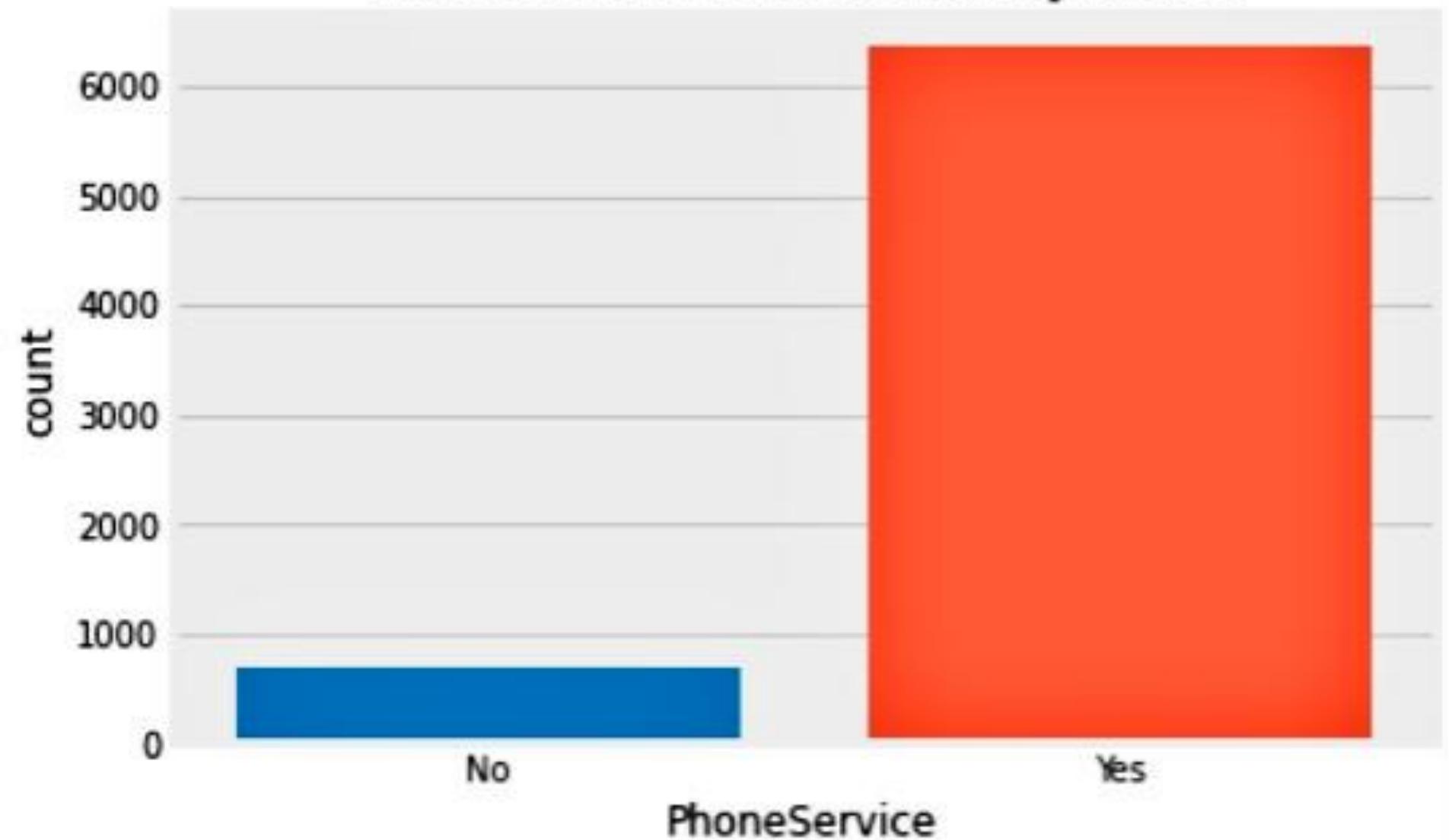
Partner Distribution by Churn



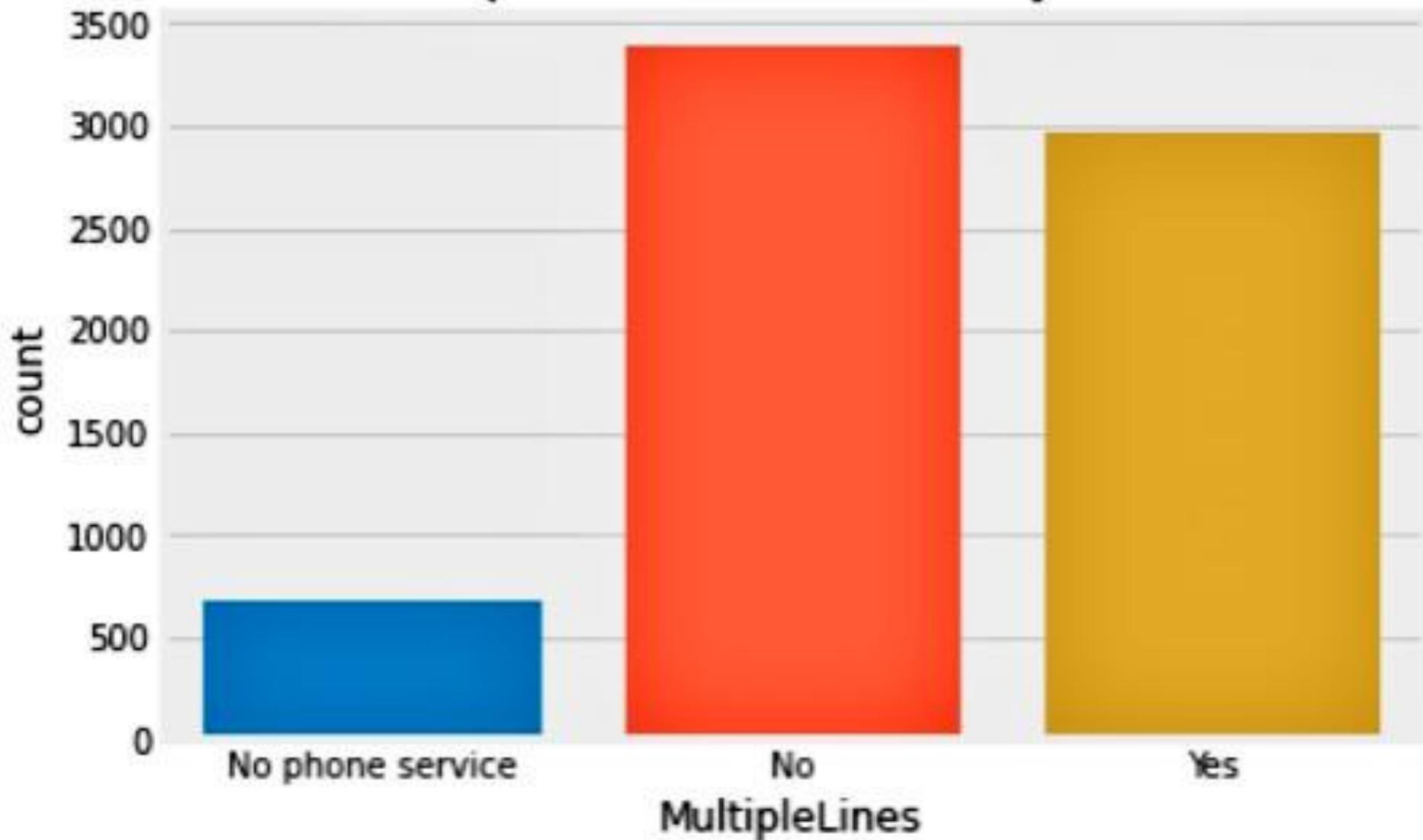
Dependents Distribution by Churn



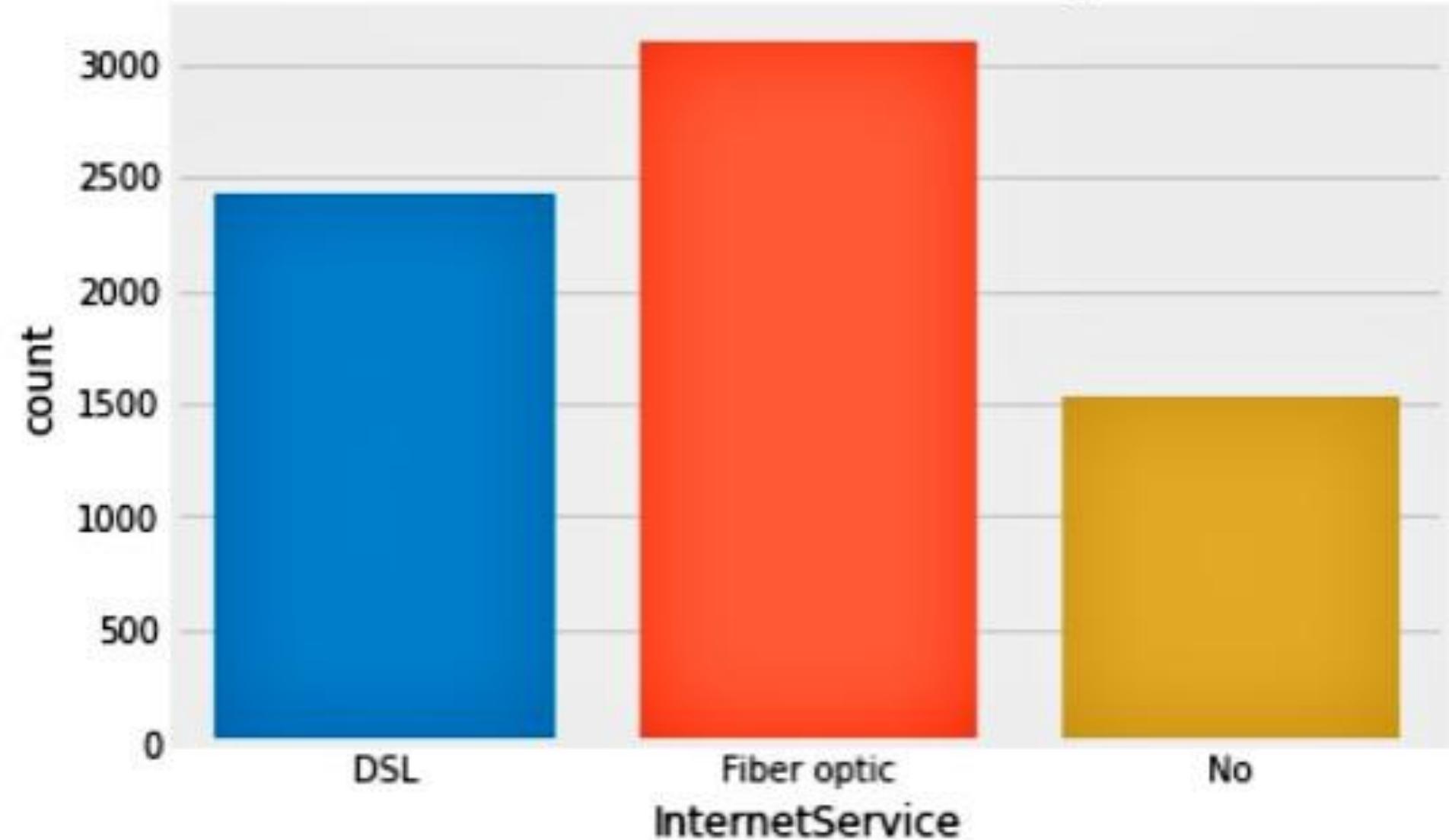
PhoneService Distribution by Churn



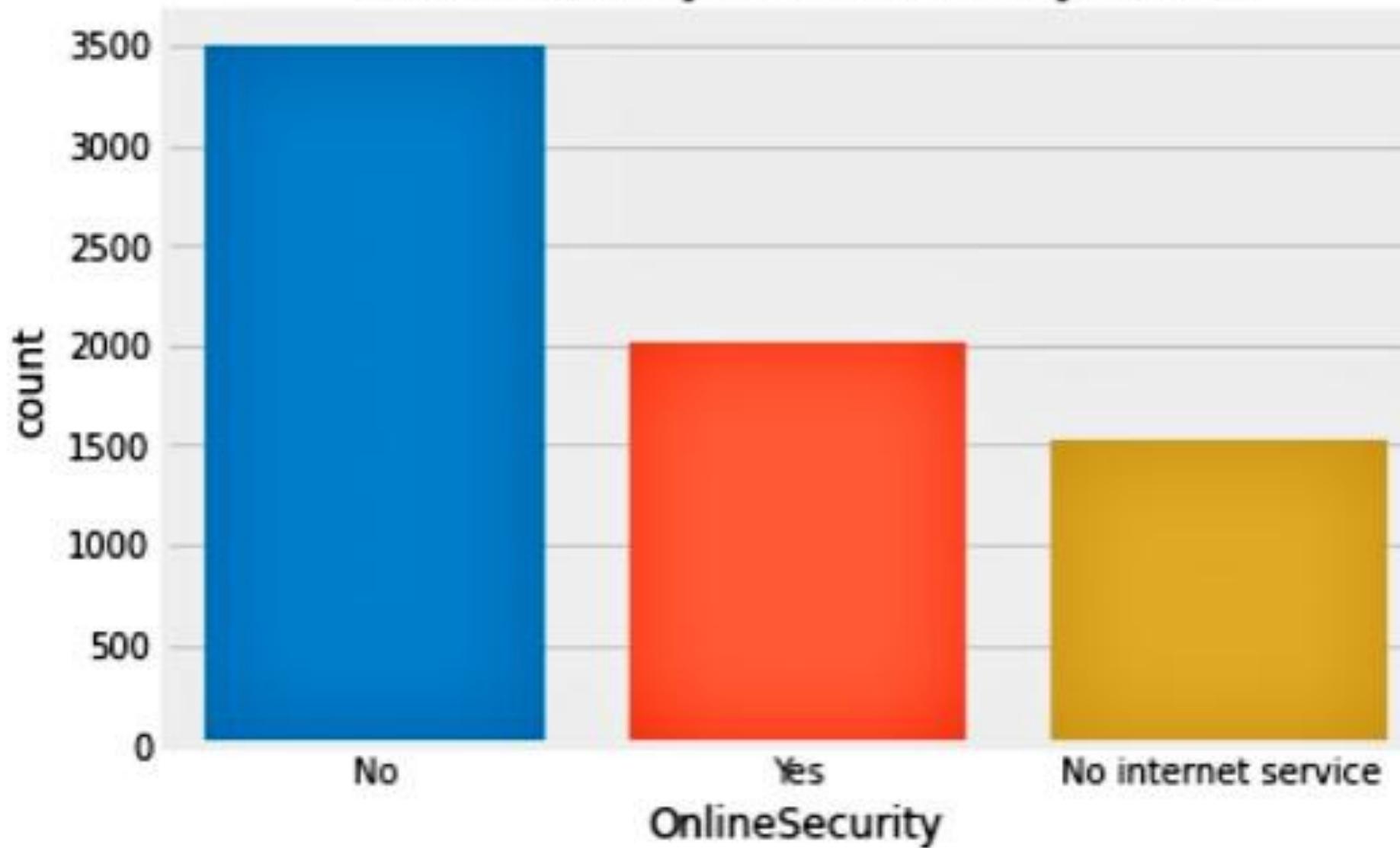
MultipleLines Distribution by Churn



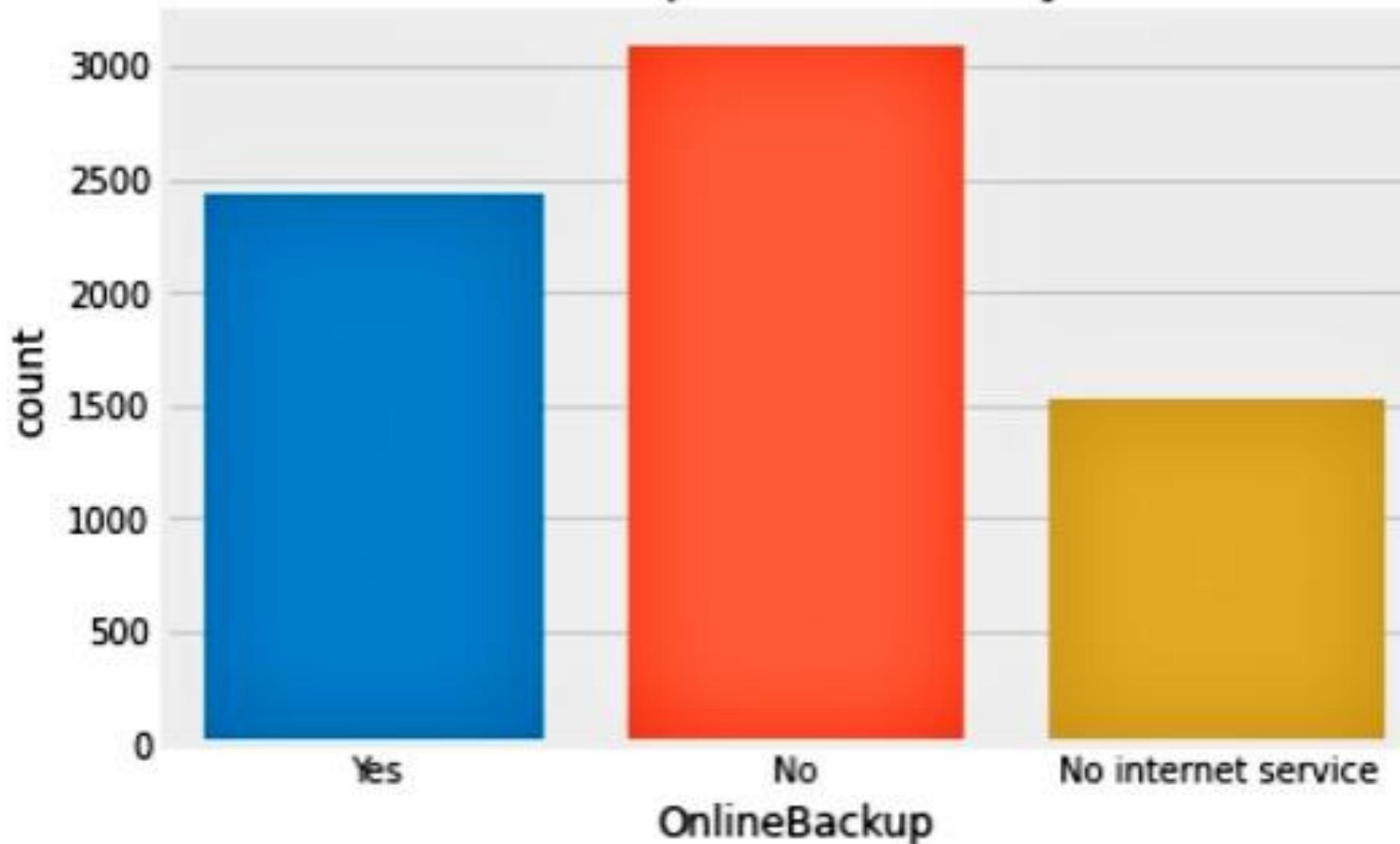
InternetService Distribution by Churn



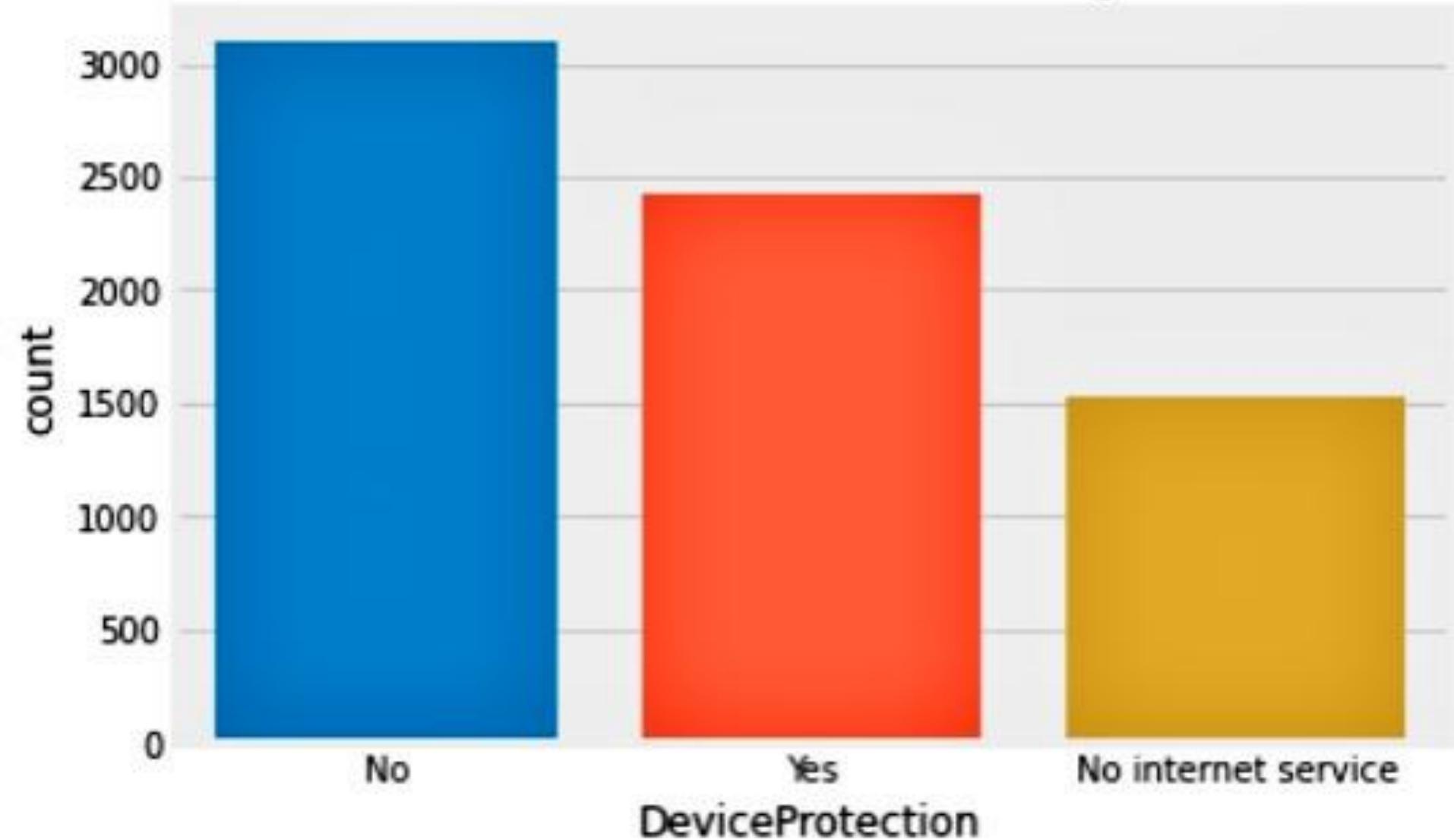
OnlineSecurity Distribution by Churn



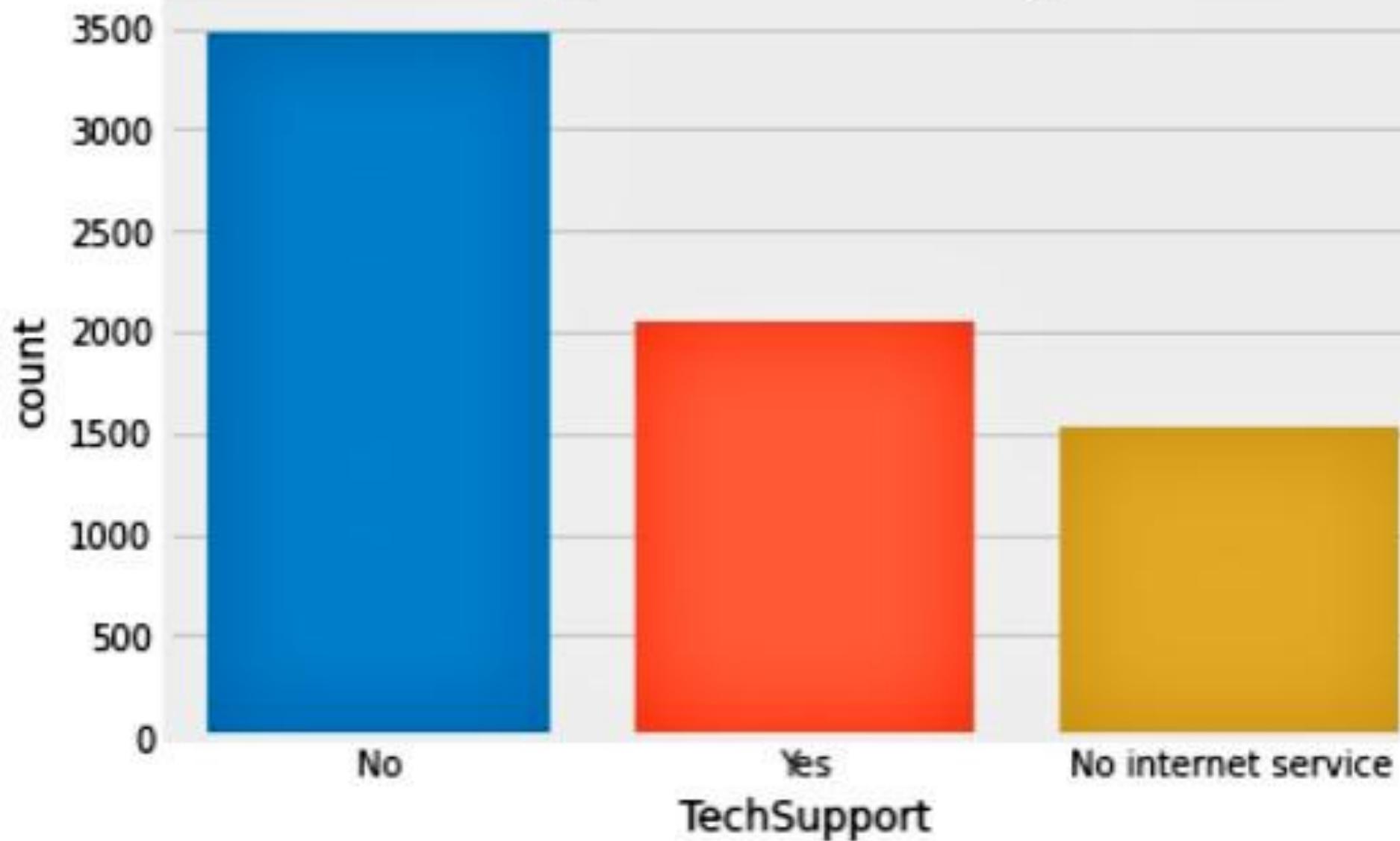
OnlineBackup Distribution by Churn



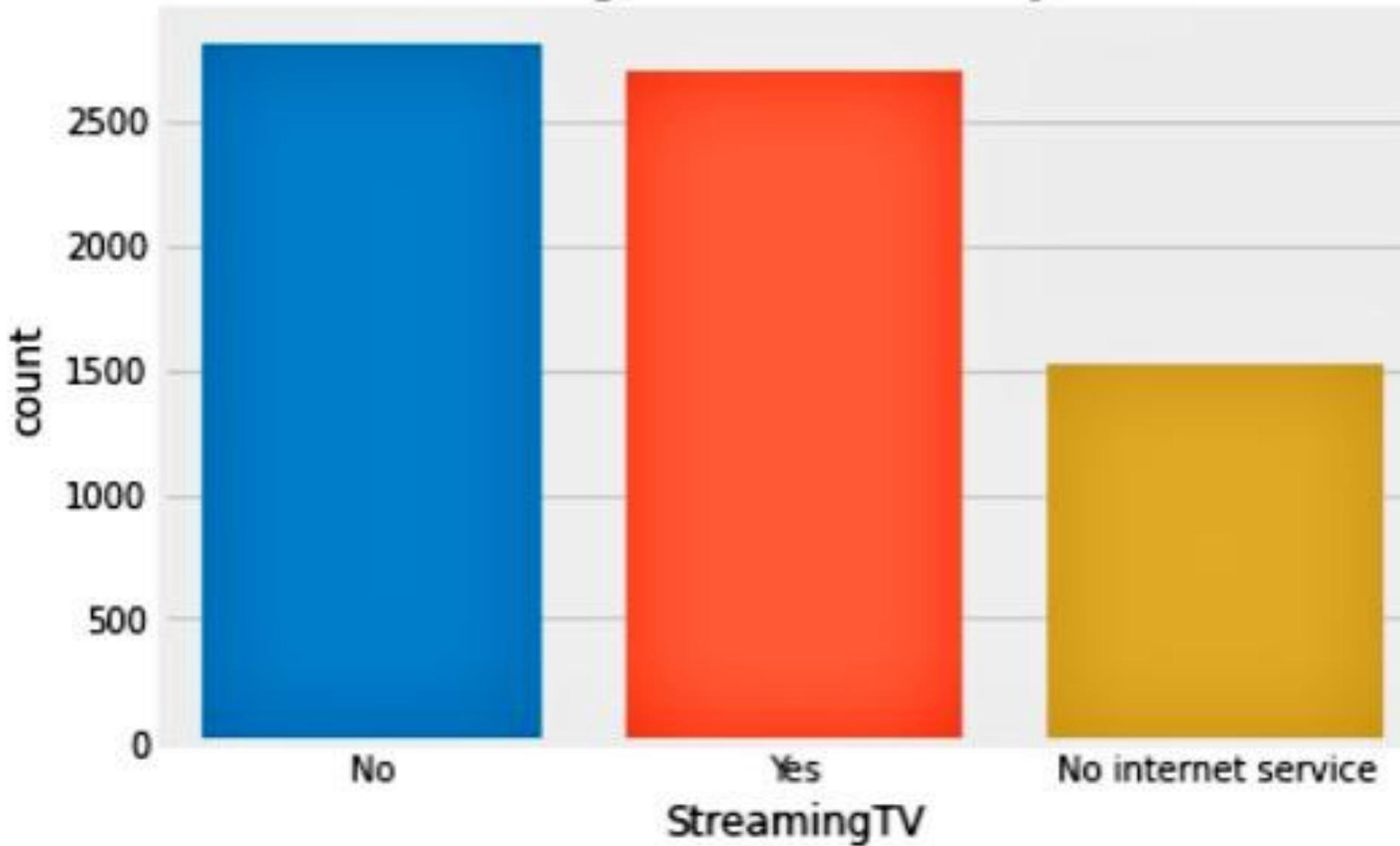
DeviceProtection Distribution by Churn



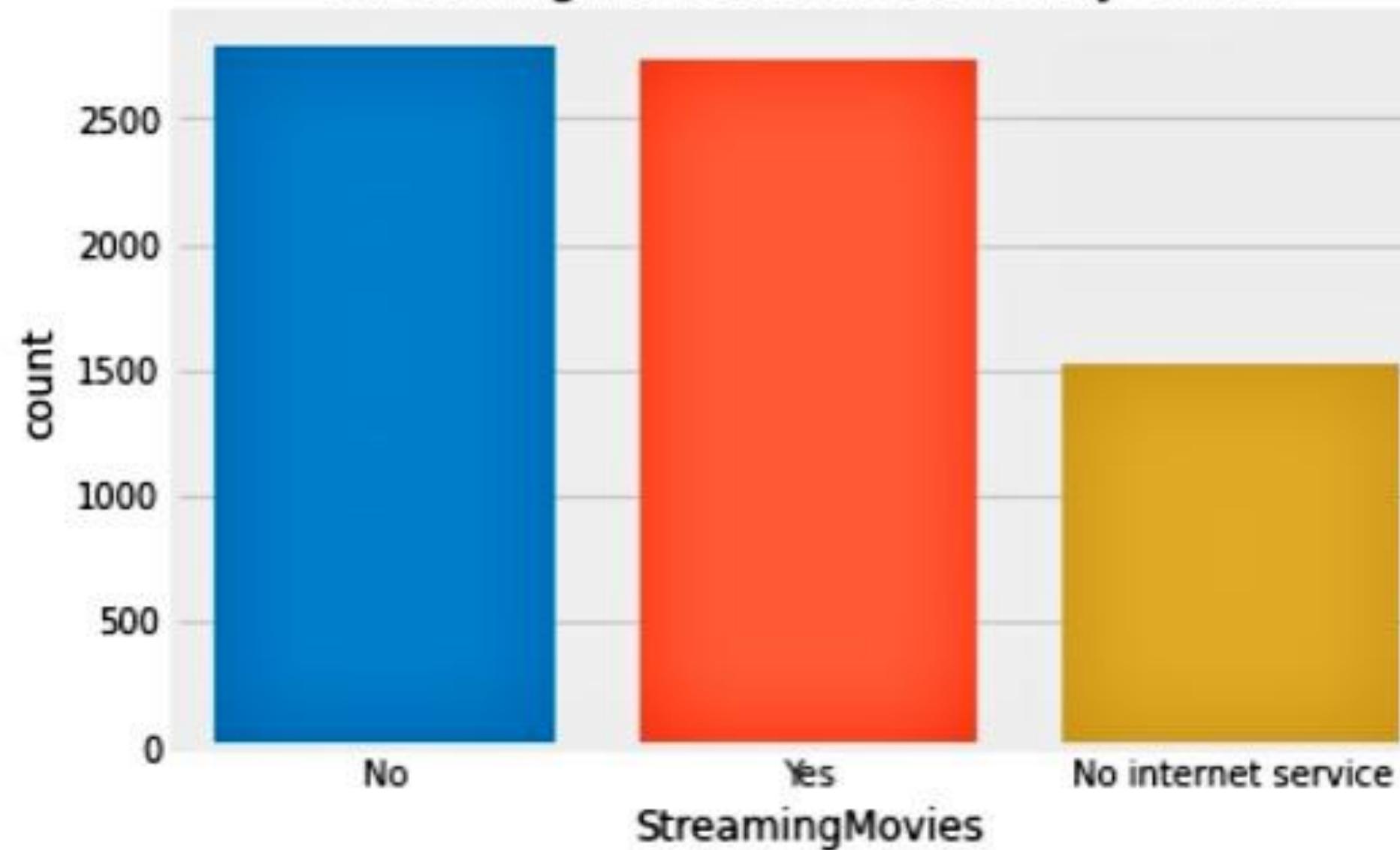
TechSupport Distribution by Churn



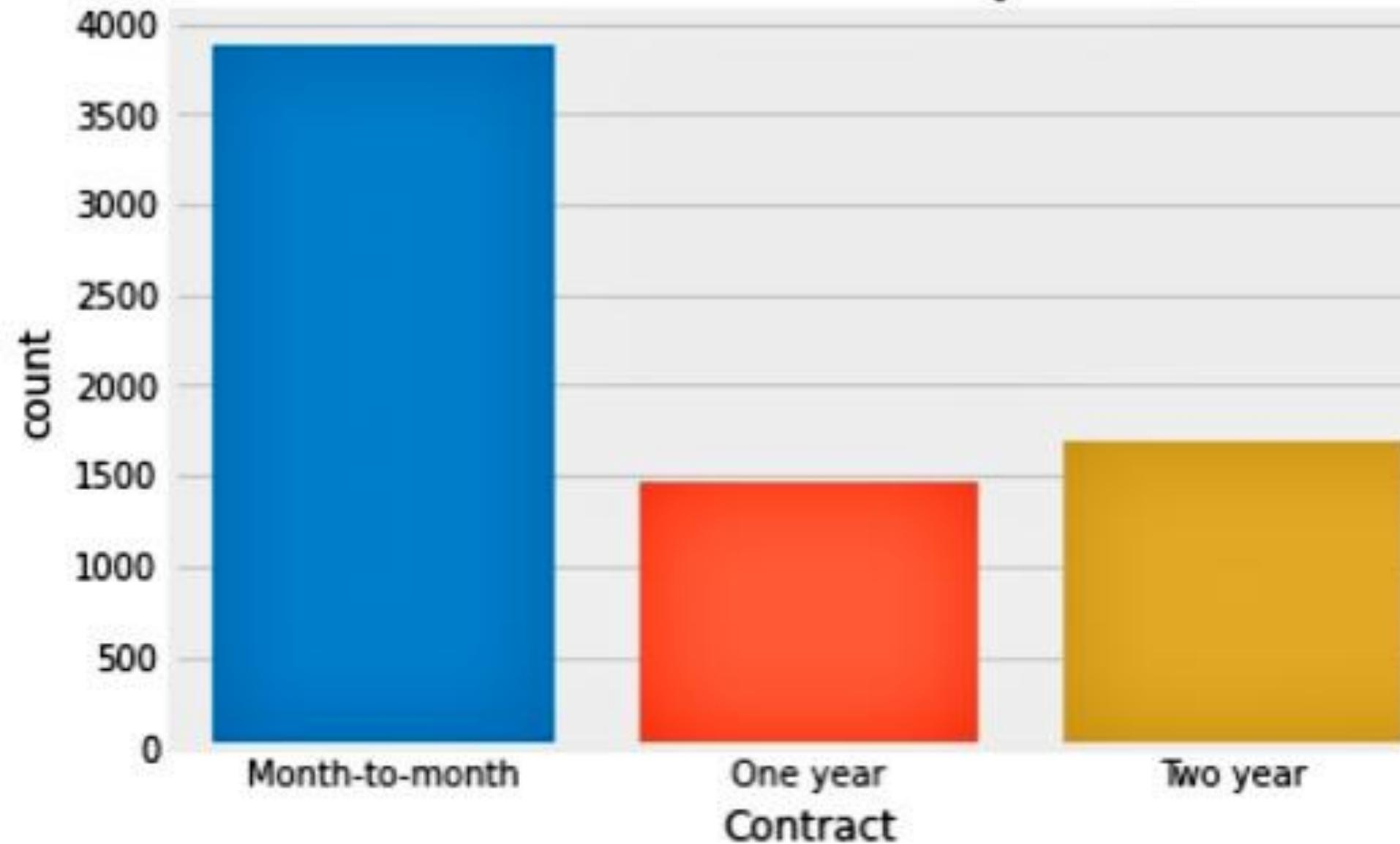
StreamingTV Distribution by Churn



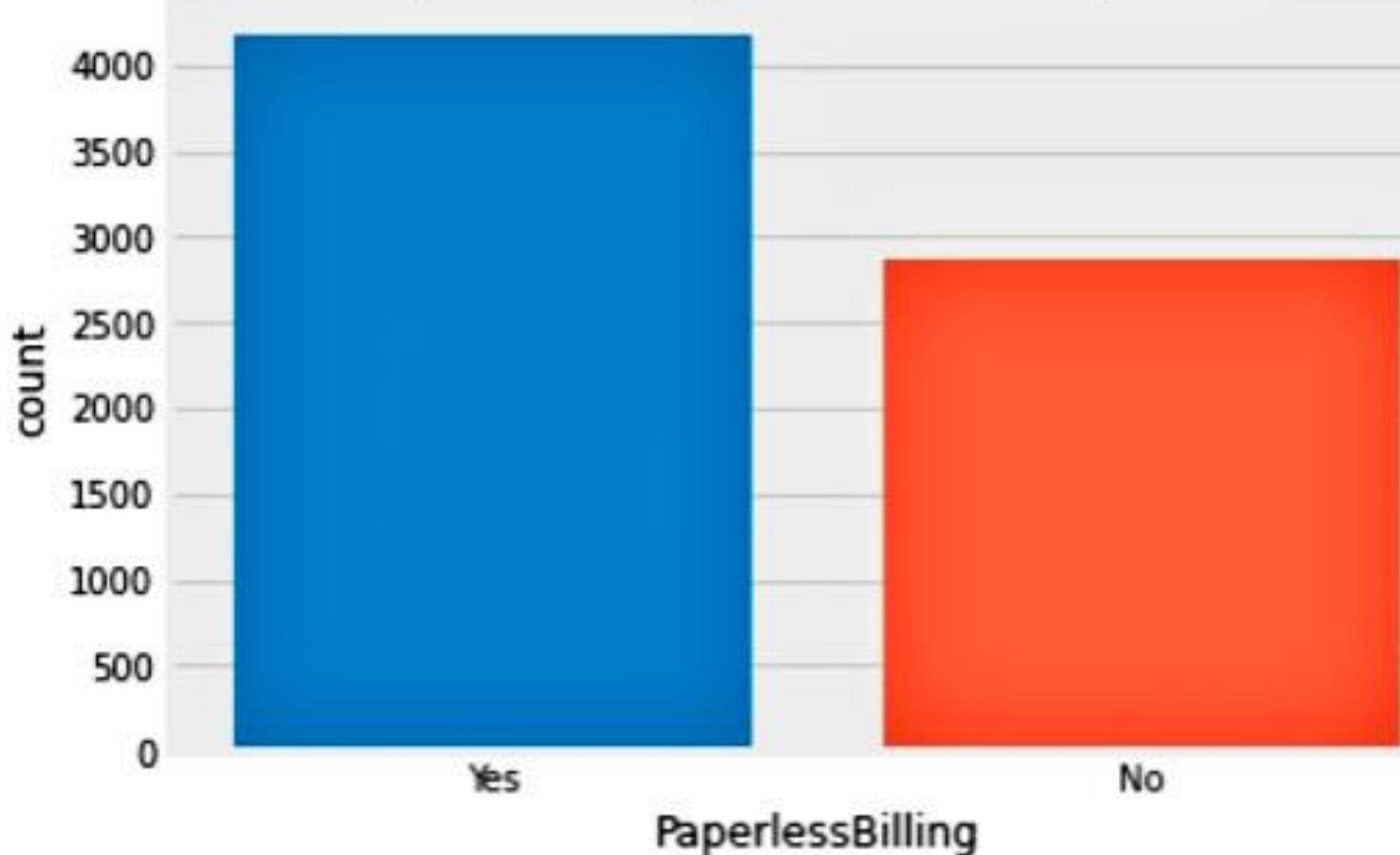
StreamingMovies Distribution by Churn



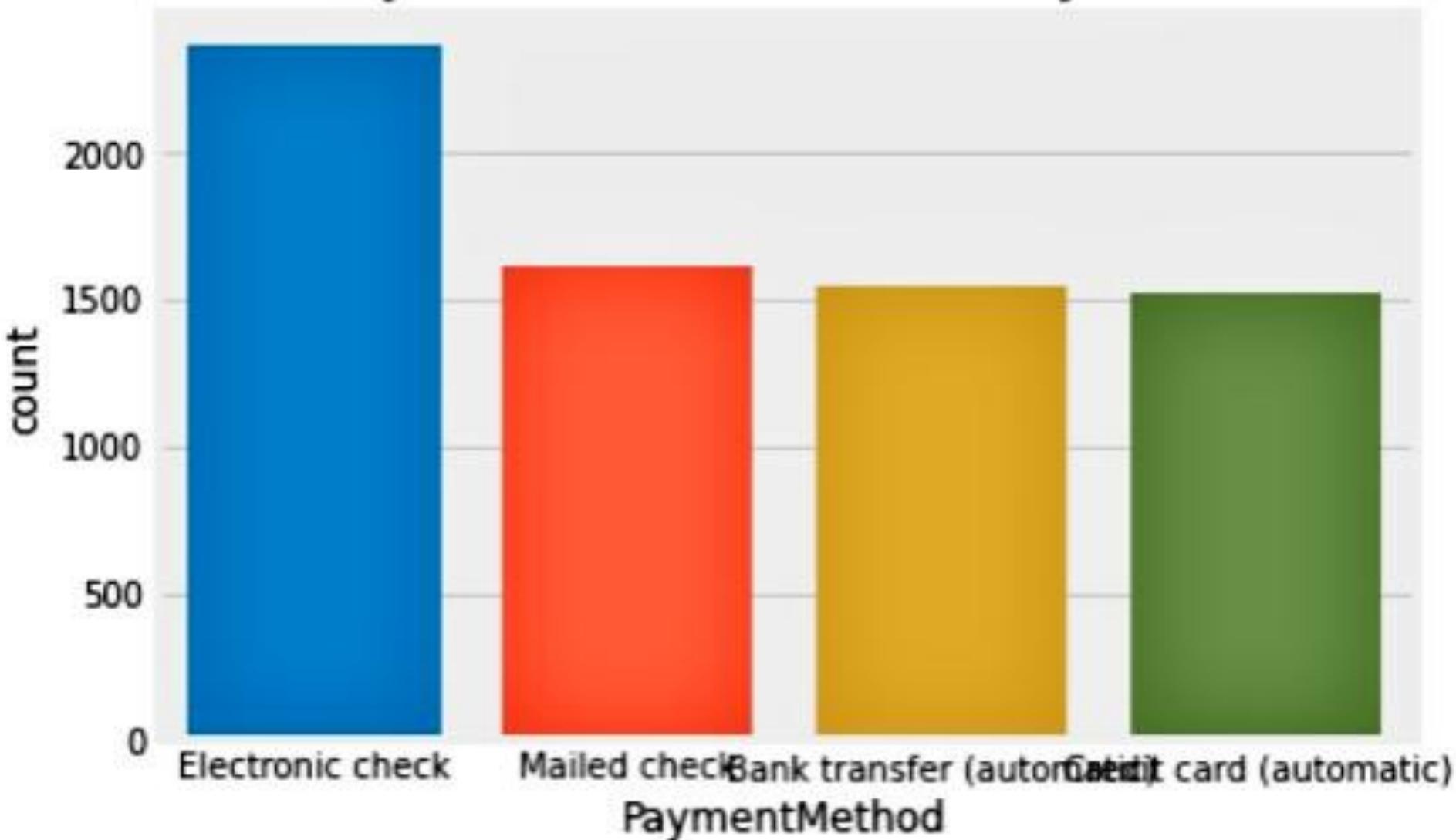
Contract Distribution by Churn



PaperlessBilling Distribution by Churn



PaymentMethod Distribution by Churn



SeniorCitizen Distribution by Churn

