

Results

Descriptives

Descriptives

	Churn	gender	Partner	SeniorCitizen	Dependents	PhoneService	MultipleLines	InternetService	OnlineSecurity	OnlineBackup	DeviceProtection	TechSupport	S
N	No	5174	5174	5174	5174	5174	5174	5174	5174	5174	5174	5174	
	Yes	1869	1869	1869	1869	1869	1869	1869	1869	1869	1869	1869	
Missing	No	0	0	0	0	0	0	0	0	0	0	0	
	Yes	0	0	0	0	0	0	0	0	0	0	0	

Frequencies

Frequencies of gender

gender	Churn	Counts	% of Total	Cumulative %
Female	No	2549	36.2 %	36.2 %
	Yes	939	13.3 %	49.5 %
Male	No	2625	37.3 %	86.8 %
	Yes	930	13.2 %	100.0 %

Frequencies of Partner

Partner	Churn	Counts	% of Total	Cumulative %
No	No	2441	34.7 %	34.7 %
	Yes	1200	17.0 %	51.7 %
Yes	No	2733	38.8 %	90.5 %
	Yes	669	9.5 %	100.0 %

Frequencies of SeniorCitizen

SeniorCitizen	Churn	Counts	% of Total	Cumulative %
0	No	4508	64.0 %	64.0 %
	Yes	1393	19.8 %	83.8 %
1	No	666	9.5 %	93.2 %
	Yes	476	6.8 %	100.0 %

Frequencies of Dependents

Dependents	Churn	Counts	% of Total	Cumulative %
No	No	3390	48.1 %	48.1 %
	Yes	1543	21.9 %	70.0 %
Yes	No	1784	25.3 %	95.4 %
	Yes	326	4.6 %	100.0 %

Frequencies of PhoneService

PhoneService	Churn	Counts	% of Total	Cumulative %
No	No	512	7.3 %	7.3 %
	Yes	170	2.4 %	9.7 %
Yes	No	4662	66.2 %	75.9 %
	Yes	1699	24.1 %	100.0 %

Frequencies of MultipleLines

MultipleLines	Churn	Counts	% of Total	Cumulative %
No	No	2541	36.1 %	36.1 %
	Yes	849	12.1 %	48.1 %
No phone service	No	512	7.3 %	55.4 %
	Yes	170	2.4 %	57.8 %
Yes	No	2121	30.1 %	87.9 %
	Yes	850	12.1 %	100.0 %

Frequencies of InternetService

InternetService	Churn	Counts	% of Total	Cumulative %
No	No	1413	20.1 %	20.1 %
	Yes	113	1.6 %	21.7 %
DSL	No	1962	27.9 %	49.5 %
	Yes	459	6.5 %	56.0 %
Fiber optic	No	1799	25.5 %	81.6 %
	Yes	1297	18.4 %	100.0 %

Frequencies of OnlineSecurity

OnlineSecurity	Churn	Counts	% of Total	Cumulative %
No	No	2037	28.9 %	28.9 %
	Yes	1461	20.7 %	49.7 %
No internet service	No	1413	20.1 %	69.7 %
	Yes	113	1.6 %	71.3 %
Yes	No	1724	24.5 %	95.8 %
	Yes	295	4.2 %	100.0 %

Frequencies of OnlineBackup

OnlineBackup	Churn	Counts	% of Total	Cumulative %
No	No	1855	26.3 %	26.3 %
	Yes	1233	17.5 %	43.8 %
No internet service	No	1413	20.1 %	63.9 %
	Yes	113	1.6 %	65.5 %
Yes	No	1906	27.1 %	92.6 %
	Yes	523	7.4 %	100.0 %

Frequencies of DeviceProtection

DeviceProtection	Churn	Counts	% of Total	Cumulative %
No	No	1884	26.7 %	26.7 %
	Yes	1211	17.2 %	43.9 %
No internet service	No	1413	20.1 %	64.0 %
	Yes	113	1.6 %	65.6 %
Yes	No	1877	26.7 %	92.3 %
	Yes	545	7.7 %	100.0 %

Frequencies of TechSupport

TechSupport	Churn	Counts	% of Total	Cumulative %
No	No	2027	28.8 %	28.8 %
	Yes	1446	20.5 %	49.3 %
No internet service	No	1413	20.1 %	69.4 %
	Yes	113	1.6 %	71.0 %
Yes	No	1734	24.6 %	95.6 %
	Yes	310	4.4 %	100.0 %

Frequencies of StreamingTV

StreamingTV	Churn	Counts	% of Total	Cumulative %
No	No	1868	26.5 %	26.5 %
	Yes	942	13.4 %	39.9 %
No internet service	No	1413	20.1 %	60.0 %
	Yes	113	1.6 %	61.6 %
Yes	No	1893	26.9 %	88.4 %
	Yes	814	11.6 %	100.0 %

Frequencies of StreamingMovies

StreamingMovies	Churn	Counts	% of Total	Cumulative %
No	No	1847	26.2 %	26.2 %
	Yes	938	13.3 %	39.5 %
No internet service	No	1413	20.1 %	59.6 %
	Yes	113	1.6 %	61.2 %
Yes	No	1914	27.2 %	88.4 %
	Yes	818	11.6 %	100.0 %

Frequencies of Contract

Contract	Churn	Counts	% of Total	Cumulative %
Month-to-month	No	2220	31.5 %	31.5 %
	Yes	1655	23.5 %	55.0 %
One year	No	1307	18.6 %	73.6 %
	Yes	166	2.4 %	75.9 %
Two year	No	1647	23.4 %	99.3 %
	Yes	48	0.7 %	100.0 %

Frequencies of PaperlessBilling

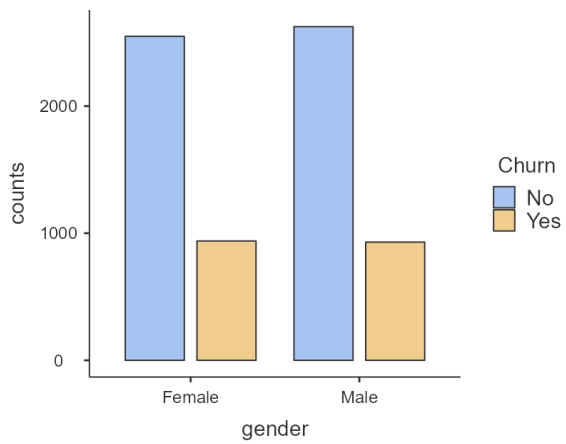
PaperlessBilling	Churn	Counts	% of Total	Cumulative %
No	No	2403	34.1 %	34.1 %
	Yes	469	6.7 %	40.8 %
Yes	No	2771	39.3 %	80.1 %
	Yes	1400	19.9 %	100.0 %

Frequencies of PaymentMethod

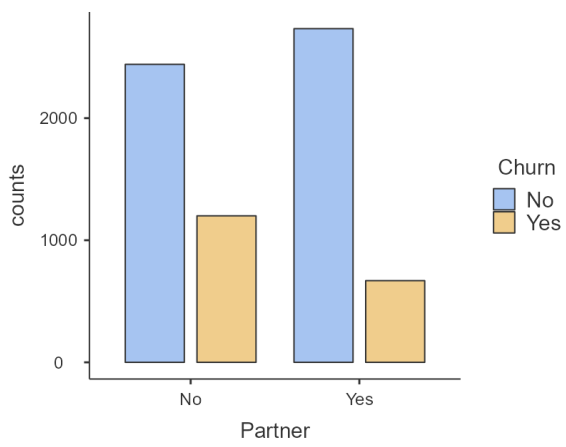
PaymentMethod	Churn	Counts	% of Total	Cumulative %
Bank transfer (automatic)	No	1286	18.3 %	18.3 %
	Yes	258	3.7 %	21.9 %
Credit card (automatic)	No	1290	18.3 %	40.2 %
	Yes	232	3.3 %	43.5 %
Electronic check	No	1294	18.4 %	61.9 %
	Yes	1071	15.2 %	77.1 %
Mailed check	No	1304	18.5 %	95.6 %
	Yes	308	4.4 %	100.0 %

Plots

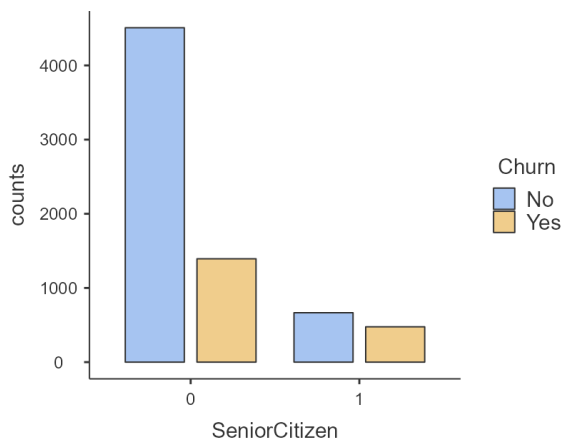
gender



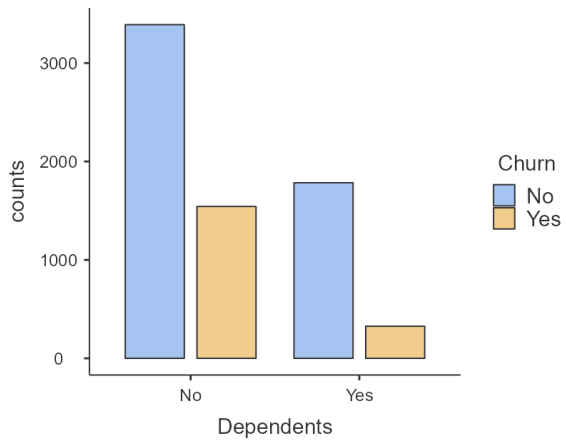
Partner



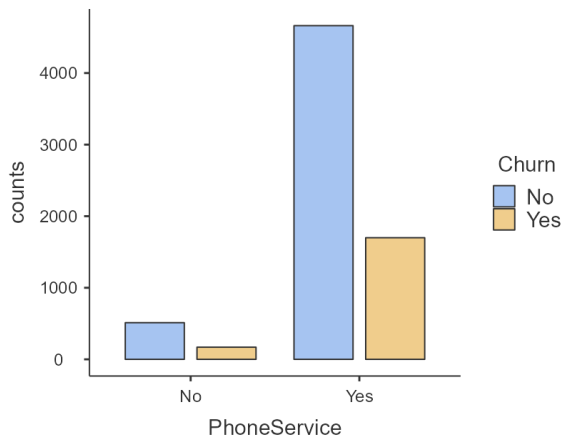
SeniorCitizen



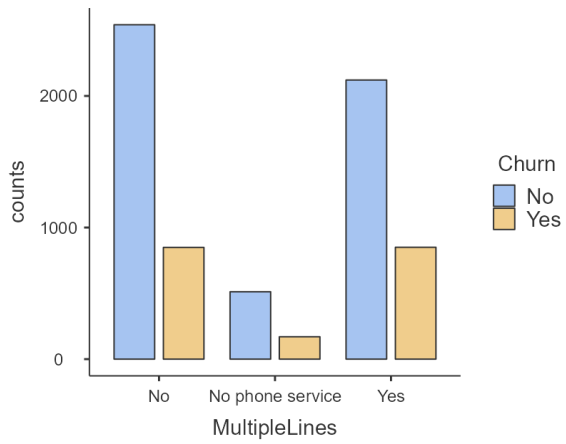
Dependents



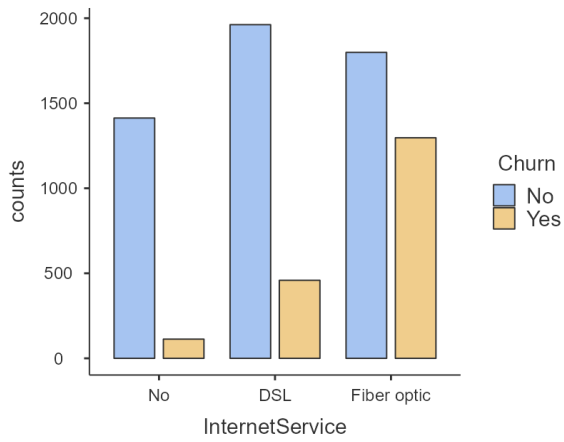
PhoneService



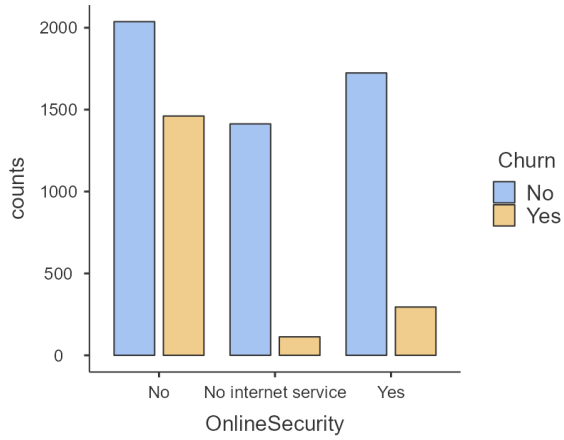
MultipleLines



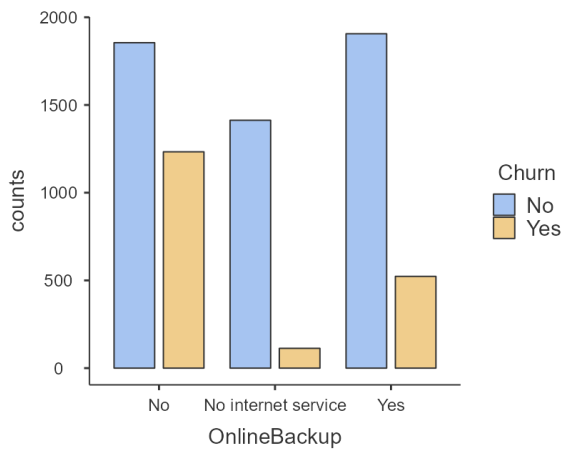
InternetService



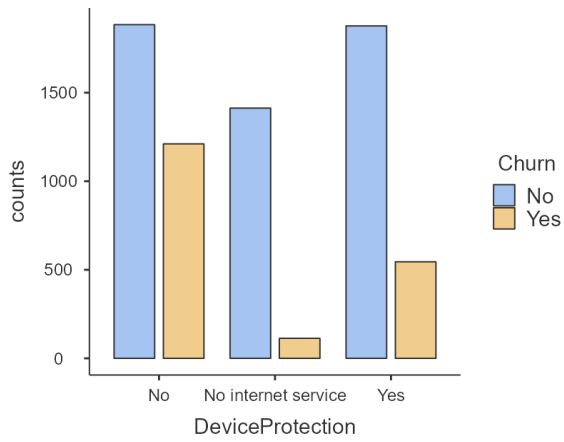
OnlineSecurity



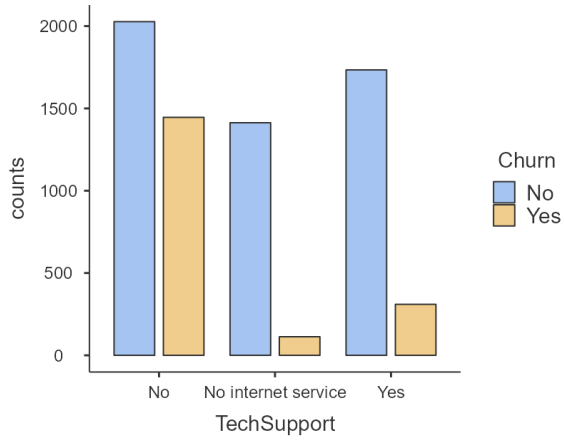
OnlineBackup



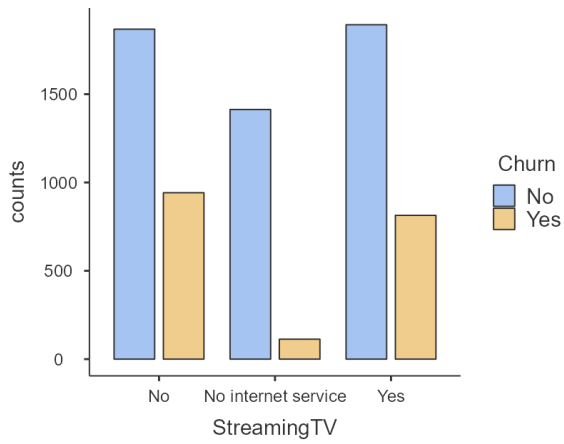
DeviceProtection



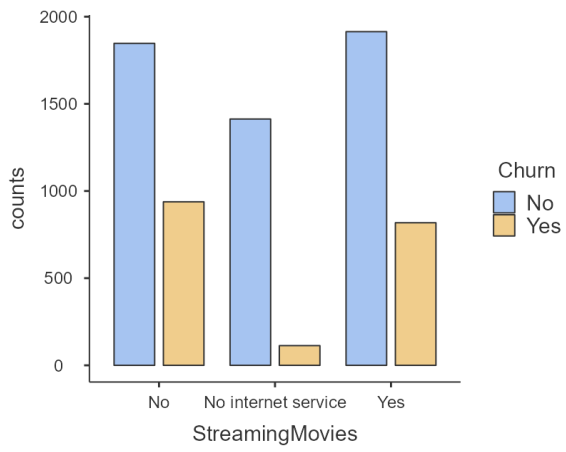
TechSupport



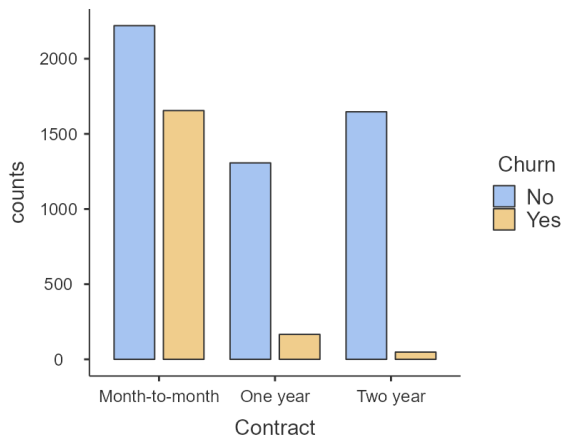
StreamingTV



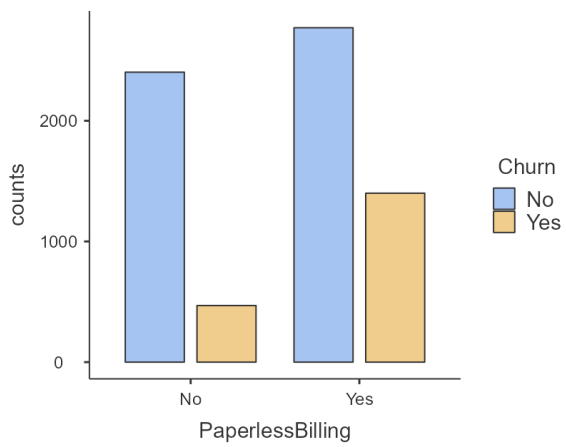
StreamingMovies



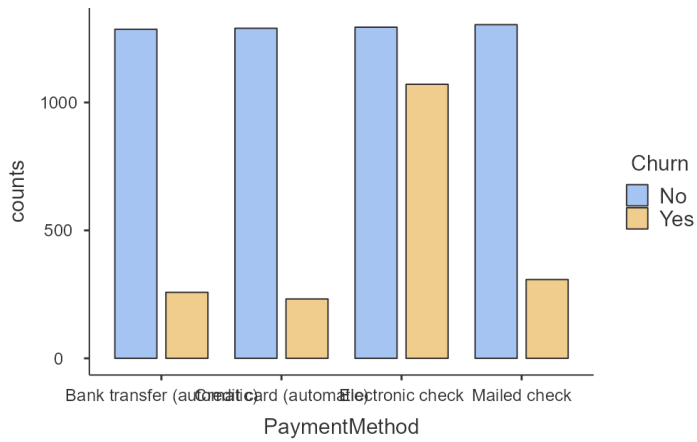
Contract



PaperlessBilling



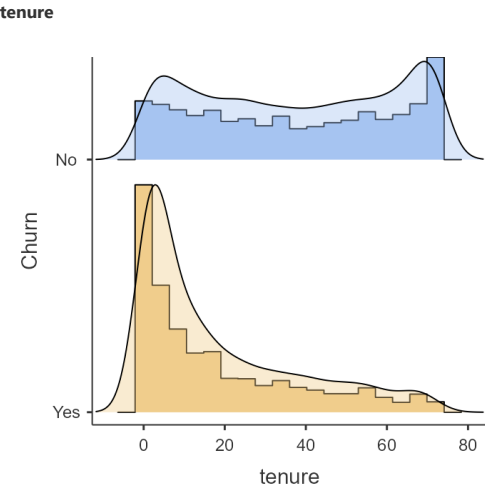
PaymentMethod

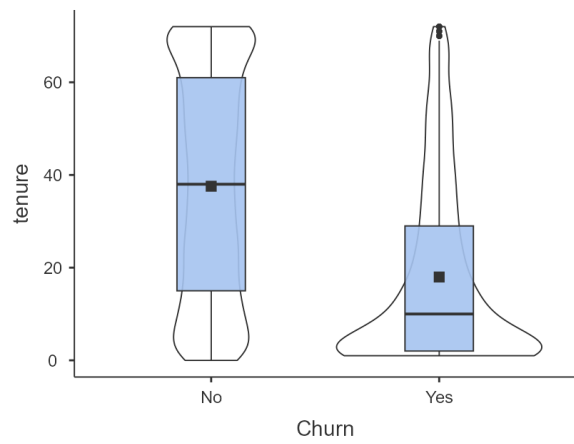


Descriptives

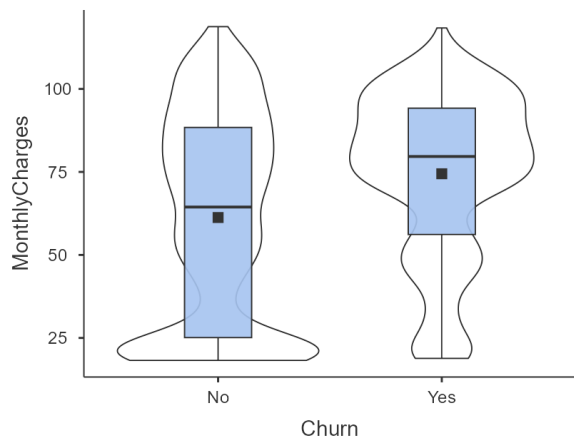
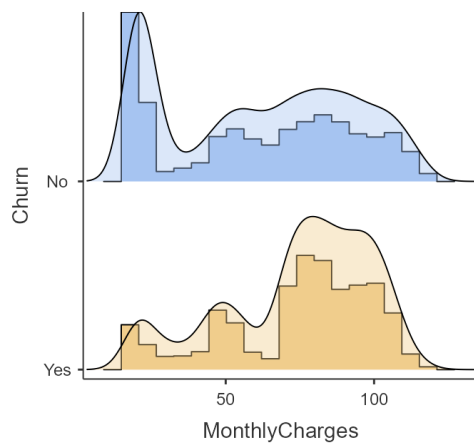
Descriptives				
	Churn	tenure	MonthlyCharges	TotalCharges
N	No	5174	5174	5163
	Yes	1869	1869	1869
Missing	No	0	0	11
	Yes	0	0	0
Mean	No	37.6	61.3	2555
	Yes	18.0	74.4	1532
Median	No	38.0	64.4	1684
	Yes	10	79.7	704
Standard deviation	No	24.1	31.1	2329
	Yes	19.5	24.7	1891
Variance	No	581	967	5.43e+6
	Yes	381	608	3.58e+6
Minimum	No	0	18.3	18.8
	Yes	1	18.9	18.9
Maximum	No	72	119	8672
	Yes	72	118	8685
25th percentile	No	15.0	25.1	578
	Yes	2.00	56.1	135
50th percentile	No	38.0	64.4	1684
	Yes	10.0	79.7	704
75th percentile	No	61.0	88.4	4264
	Yes	29.0	94.2	2331

Plots

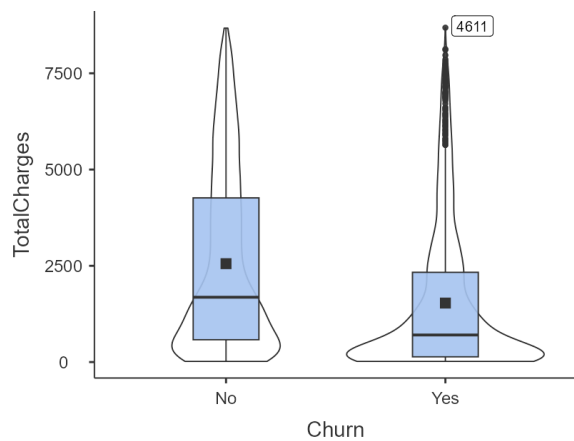
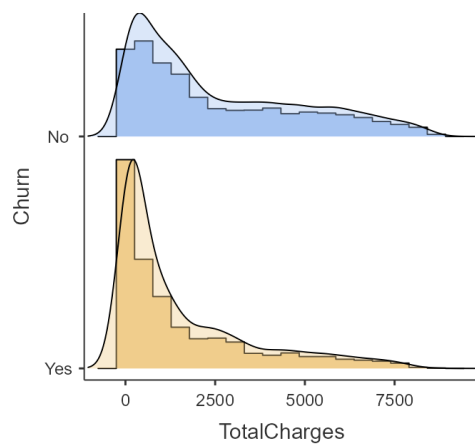




MonthlyCharges



TotalCharges



Rj Editor

Cell Contents	
	N
Chi-square contribution	
N / Row Total	
N / Col Total	
N / Table Total	

Total Observations in Table: 7043

data\$Partner	data\$Churn		Row Total
	No	Yes	
No	2441	1200	3641
	20.434	56.568	
	0.670	0.330	0.517
	0.472	0.642	
	0.347	0.170	
Yes	2733	669	3402
	21.870	60.542	
	0.803	0.197	0.483
	0.528	0.358	
	0.388	0.095	
Column Total		5174	1869
		0.735	0.265
			7043

Statistics for All Table Factors

```
Pearson's Chi-squared test
-----
Chi^2 = 159.4145    d.f. = 1    p = 1.519037e-36

Pearson's Chi-squared test with Yates' continuity correction
-----
Chi^2 = 158.7334    d.f. = 1    p = 2.139911e-36
```

References

[1] The jamovi project (2024). *jamovi*. (Version 2.5) [Computer Software]. Retrieved from <https://www.jamovi.org>.

[2] R Core Team (2023). *R: A Language and environment for statistical computing*. (Version 4.3) [Computer software]. Retrieved from <https://cran.r-project.org>. (R packages retrieved from CRAN snapshot 2024-01-09).