Customer Churn Analysis Report

Statistical Summary:

```
       tenure  MonthlyCharges  TotalCharges
count  7031.000000     7031.000000   7031.000000
mean     32.425971       64.796715   2283.590471
std      24.544497       30.087853   2266.802090
min       1.000000       18.250000     18.800000
25%       9.000000       35.575000    401.675000
50%      29.000000       70.350000   1397.650000
75%      55.000000       89.875000   3794.975000
max      72.000000      118.750000   8684.800000
```

Model Evaluation:

Confusion Matrix:

[[957 79]
[206 167]]

Classification Report:

precision   recall f1-score   support

No   0.82   0.92   0.87   1036
Yes   0.68   0.45   0.54   373

accuracy   0.80   1409
macro avg   0.75   0.69   0.70   1409
weighted avg   0.78   0.80   0.78   1409

Distribution of Churn

Histograms of Numerical Features

Scatter Plot of tenure vs MonthlyCharges

Correlation Matrix of Numerical Features