

# Telco Customer Churn Analysis

## 1. Executive Summary

Analysis of customer churn patterns and recommendations

## 2. Key Findings

Total Customers: 7032

Churn Rate: 26.6%

Average Monthly Charges: \$64.80

### **3. Detailed Analysis**

Gender Analysis: No significant difference in churn rates between genders

Senior Citizens: Higher churn rate among senior customers

Internet Service: Fiber optic shows highest churn rate (40-45%)

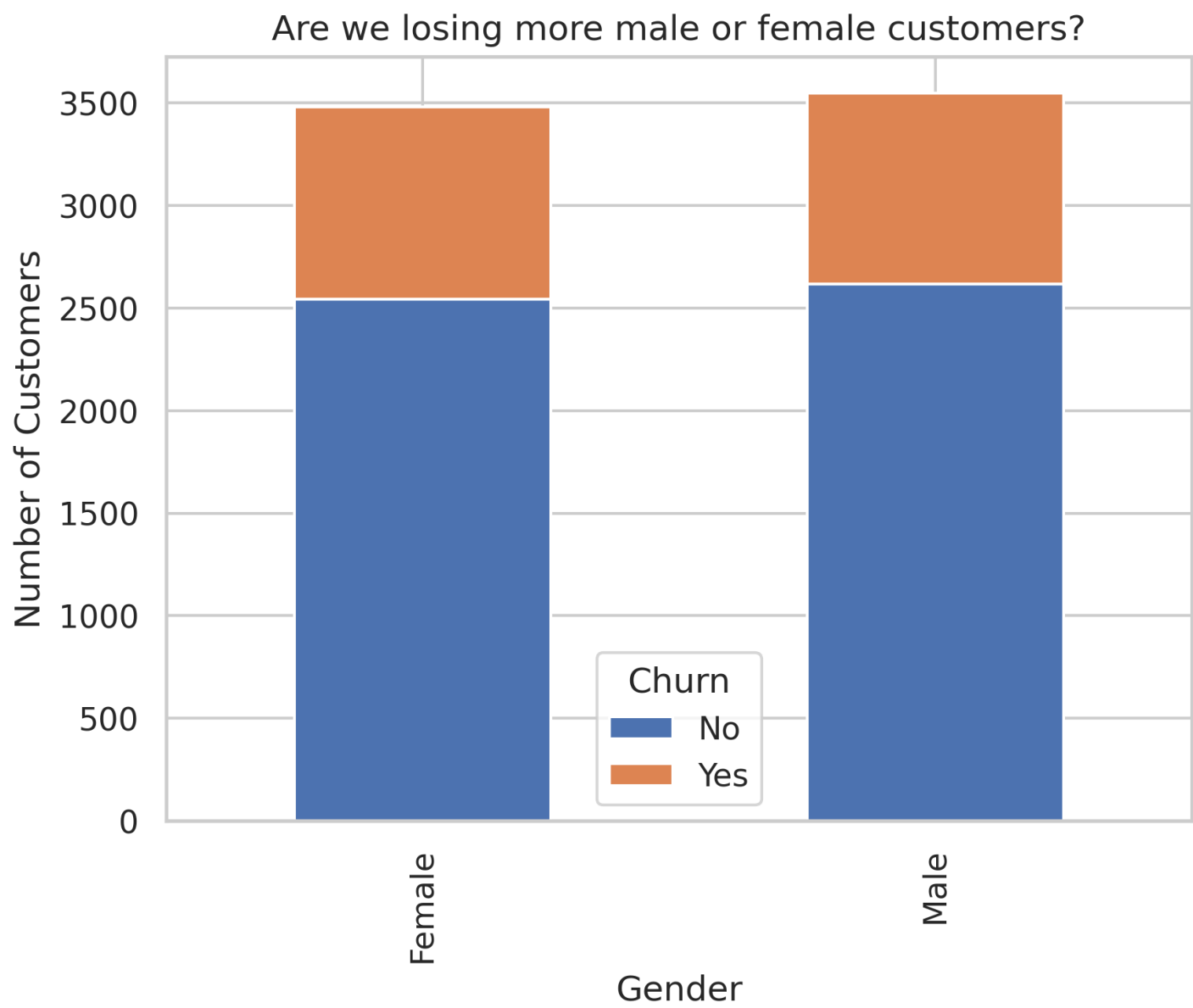
Contract Type: Month-to-month contracts have highest risk (55% churn)

Financial Impact: Higher charges correlate with increased churn risk

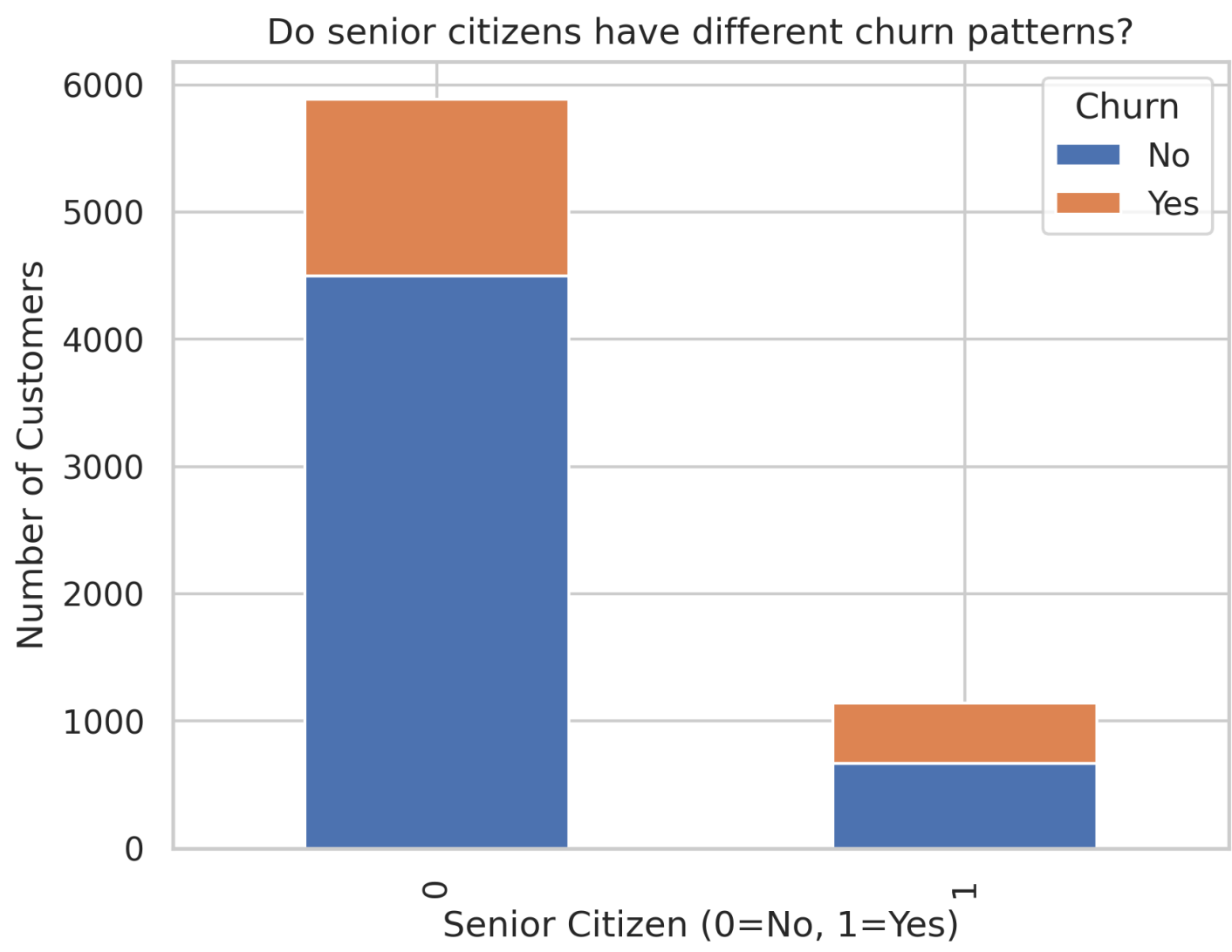
Tenure Impact: First year is critical for retention

**4. Visual Insights**

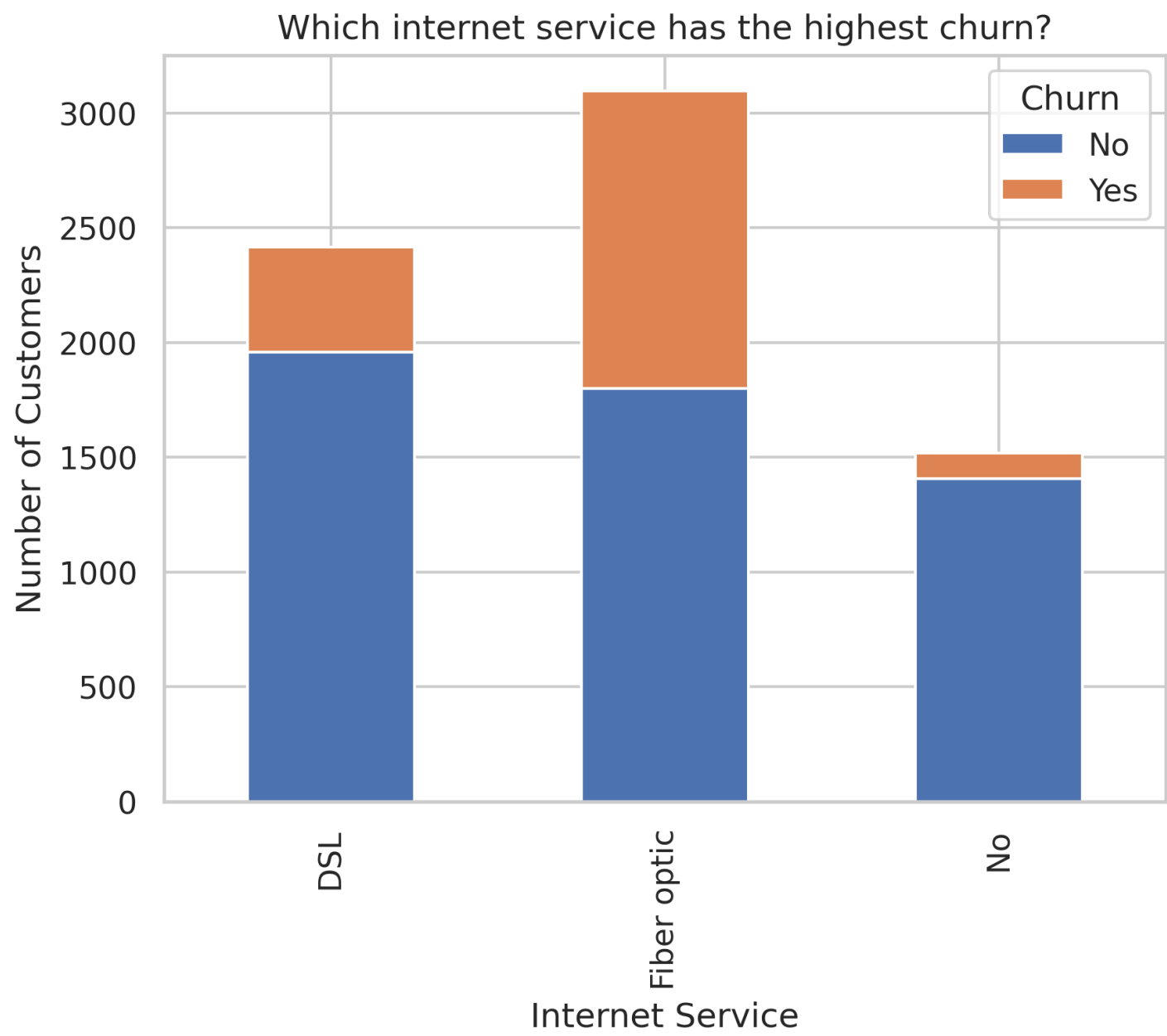
Gender Distribution



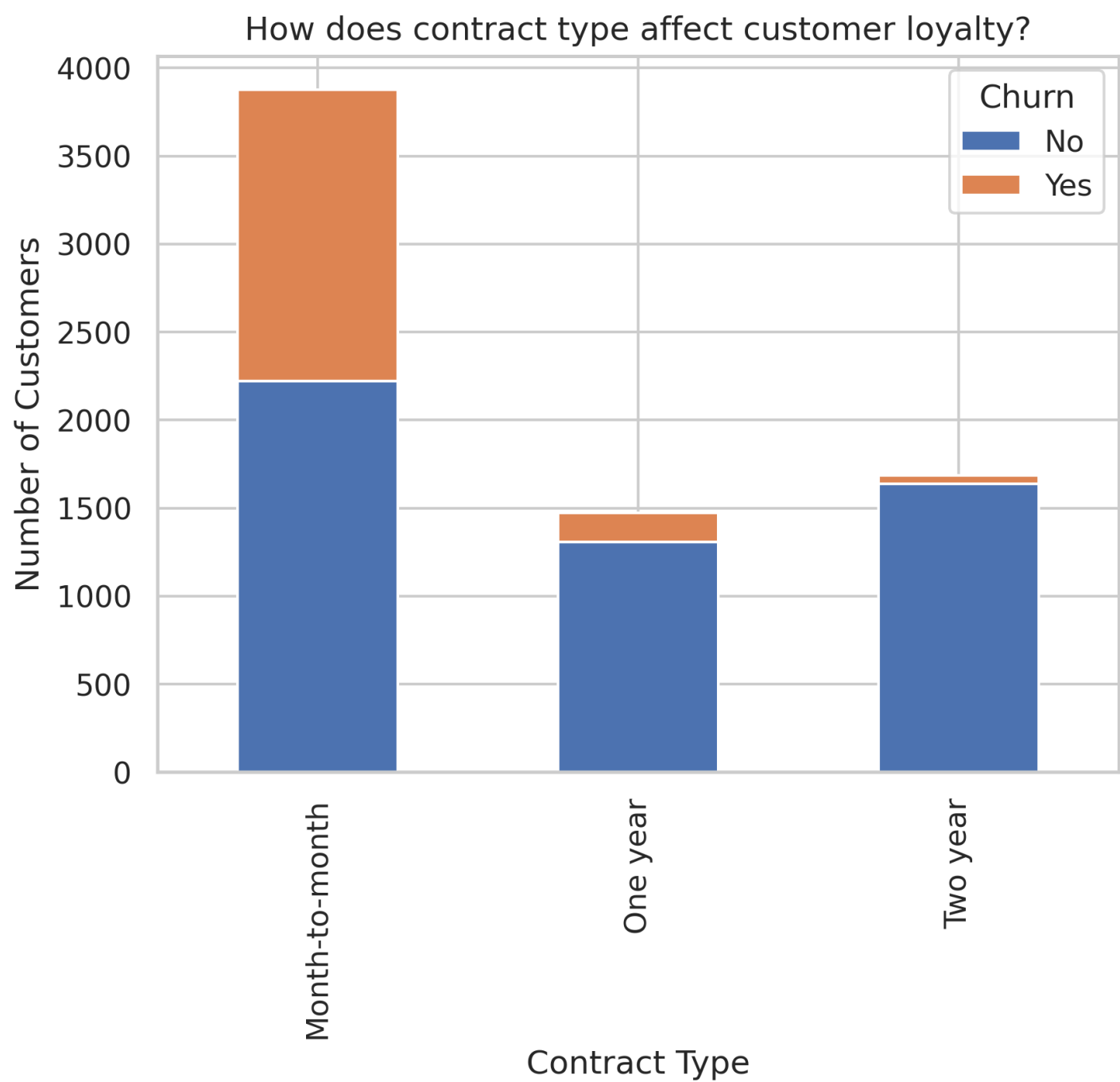
Senior Distribution



Internet Service

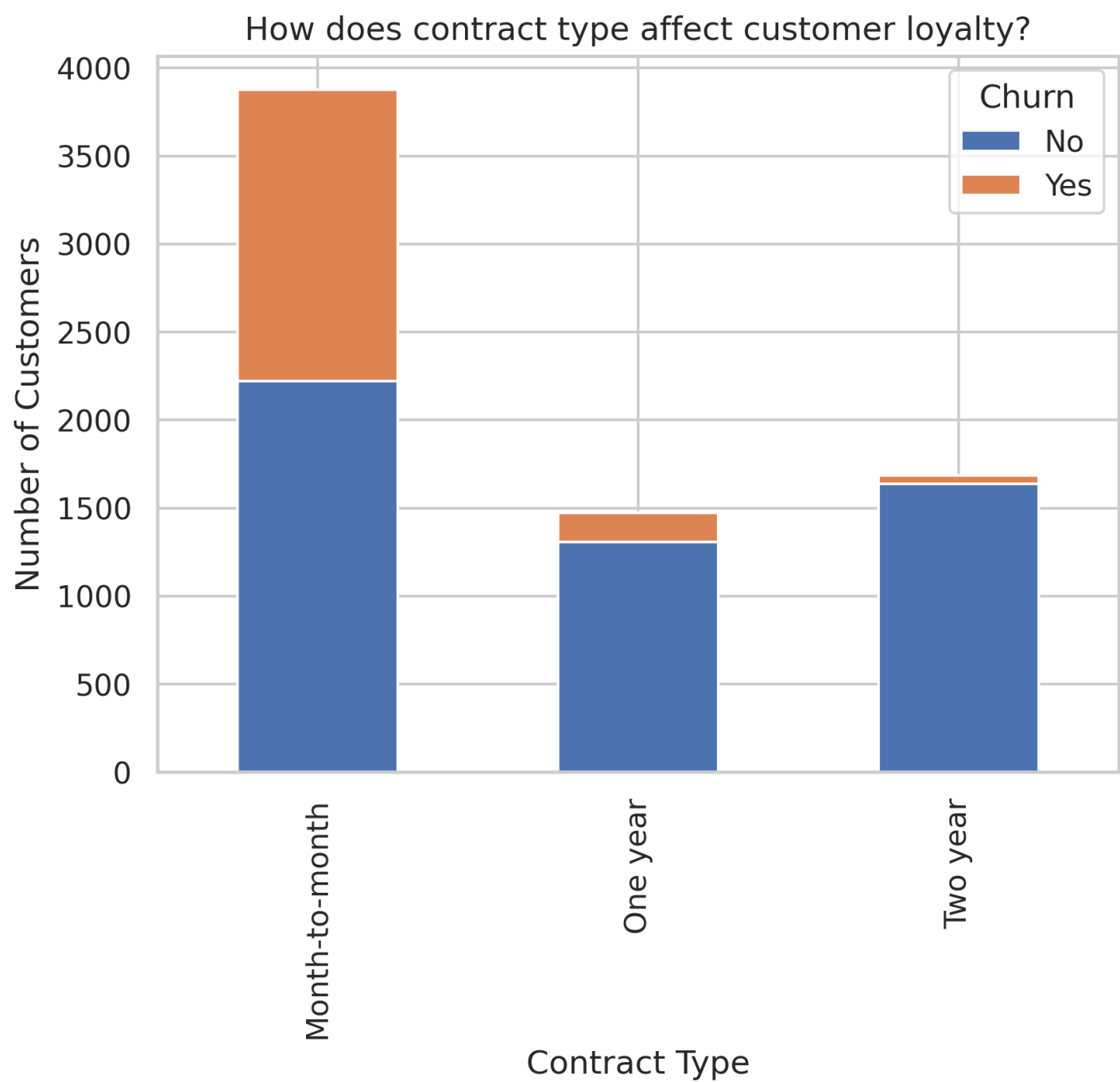


Contract Type

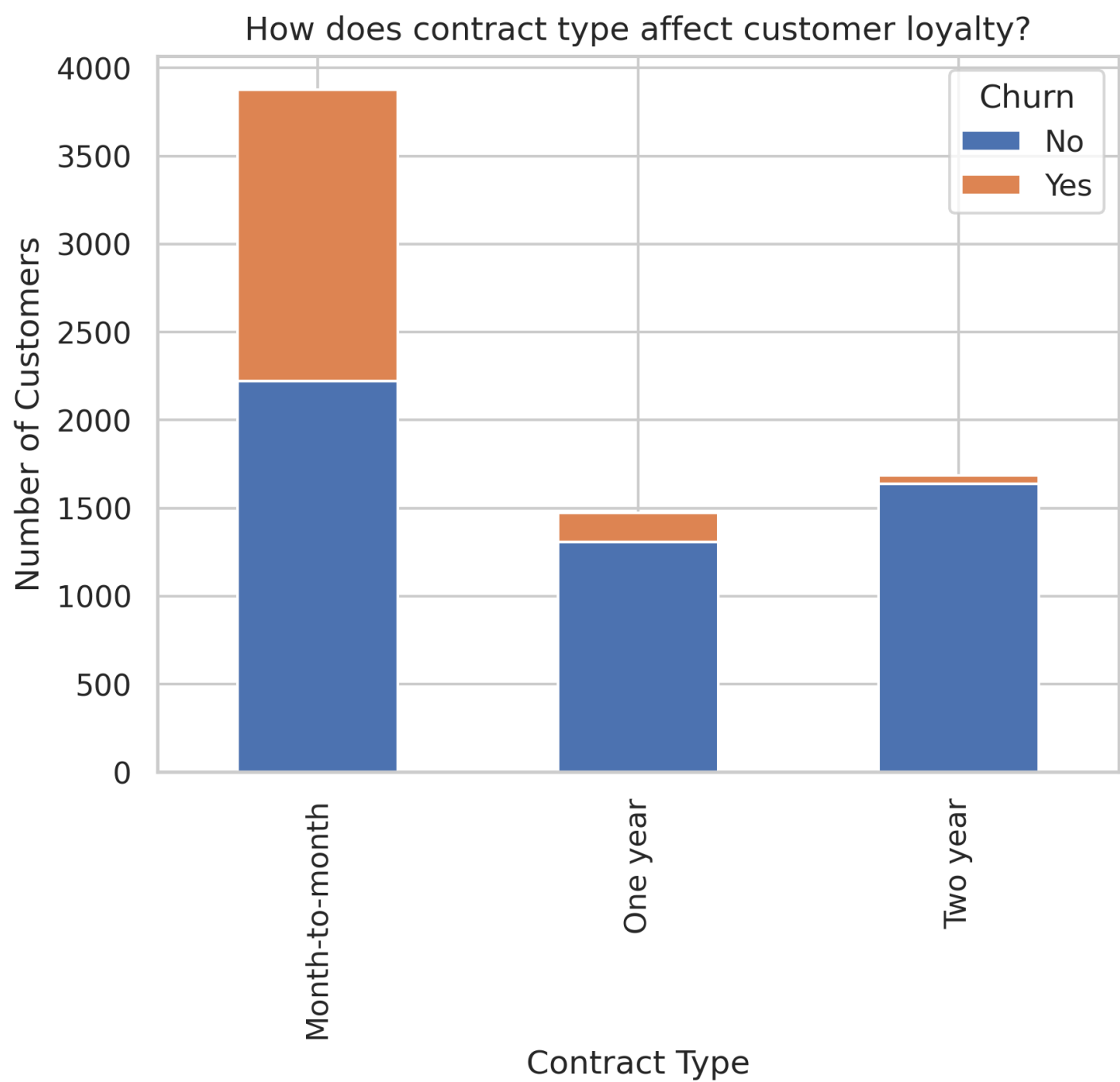




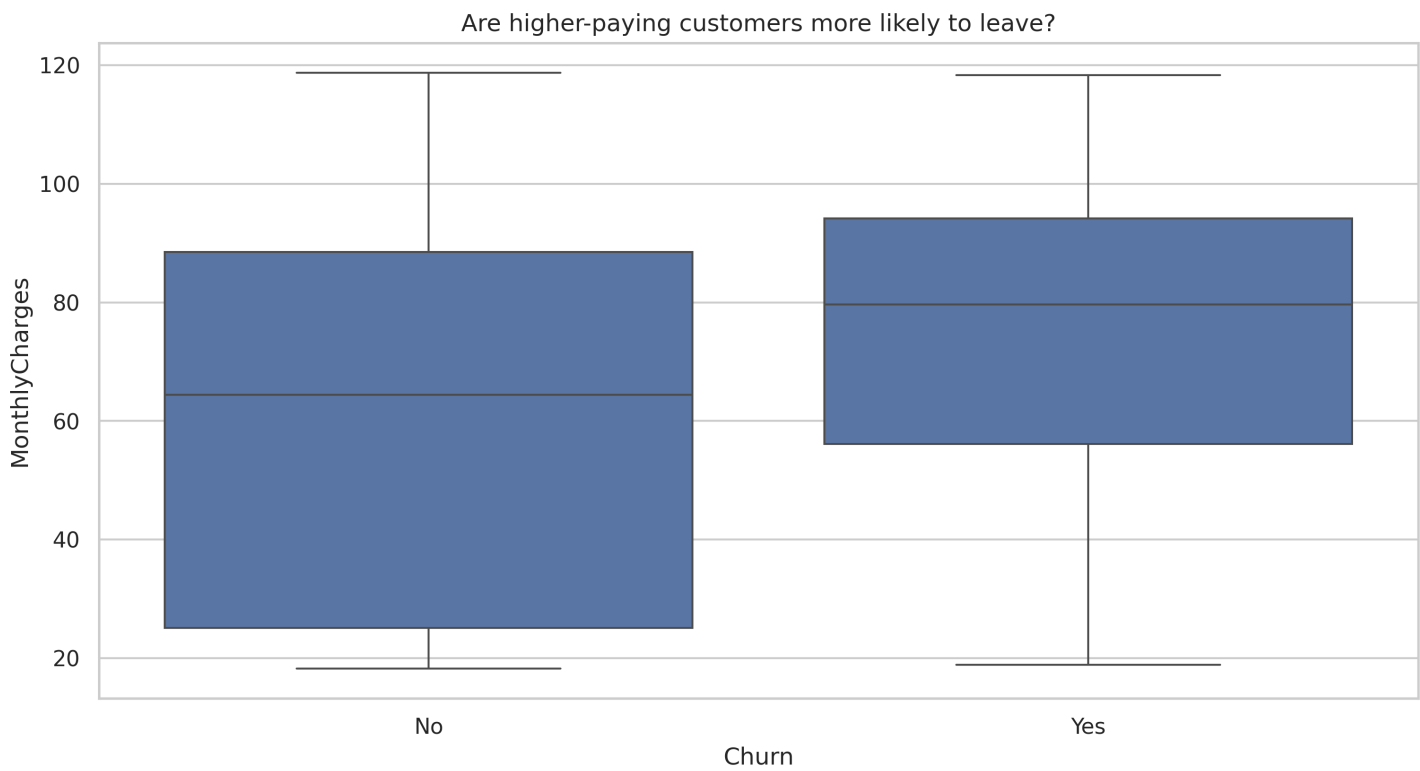
Contract Type



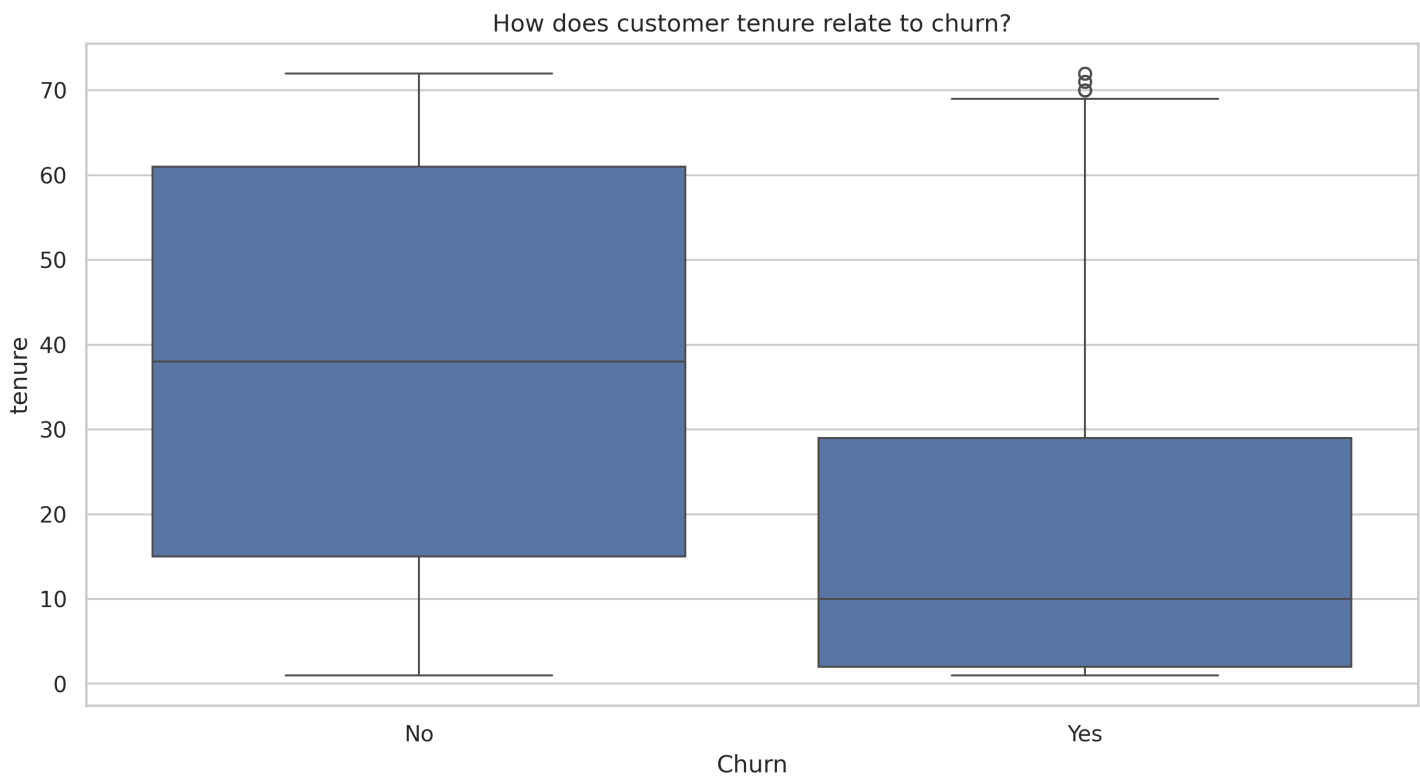
Contract Type



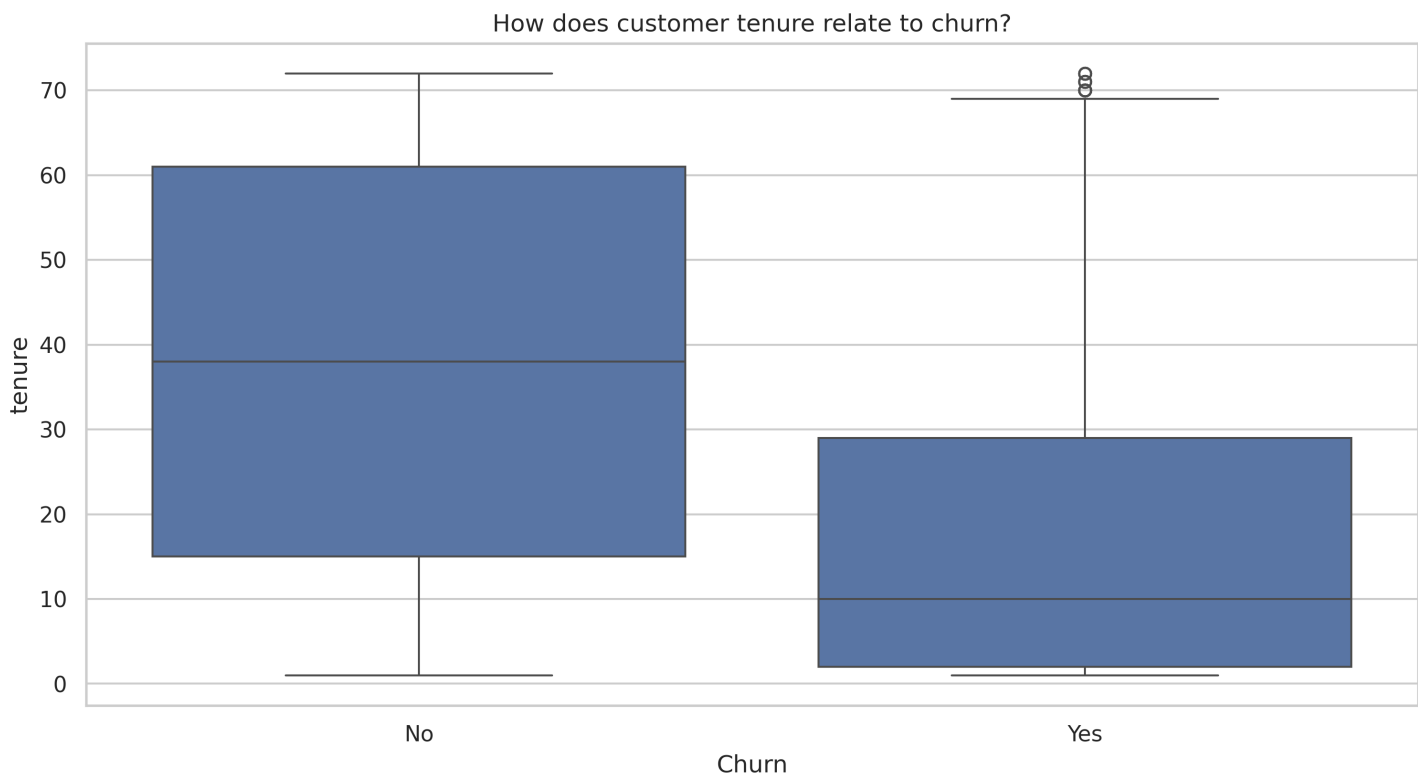
# Monthly Charges



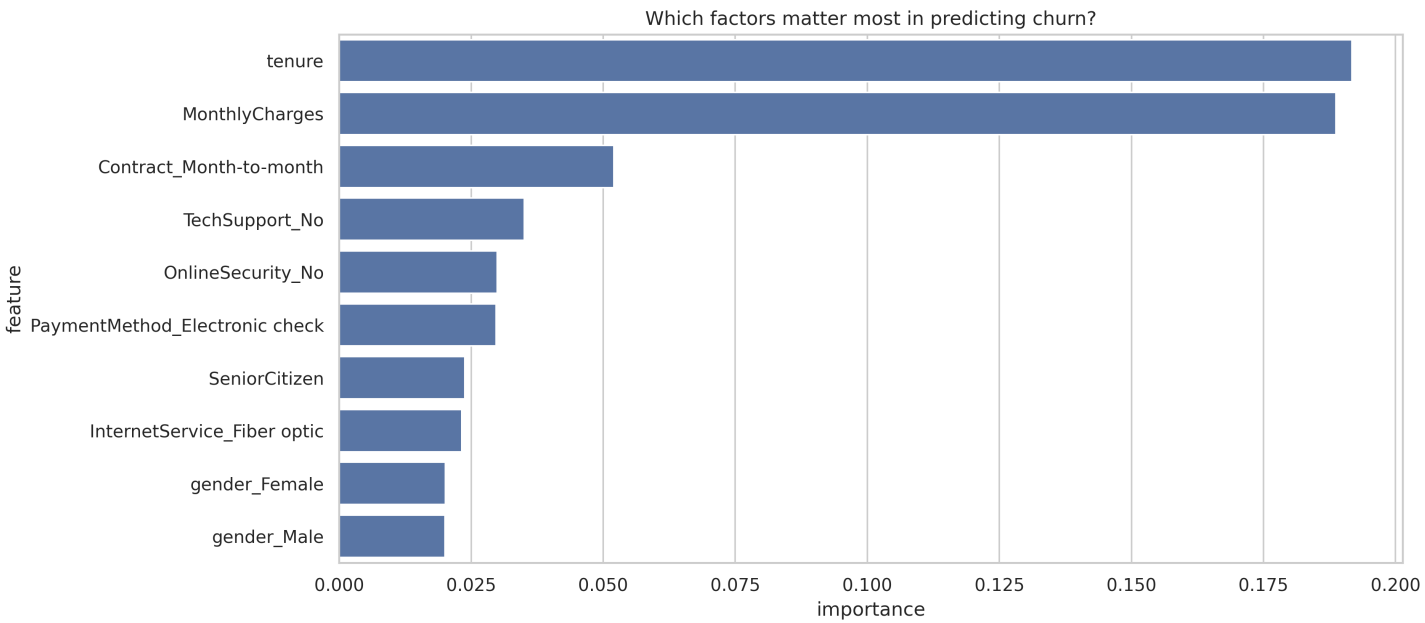
# Tenure Distribution



# Tenure Distribution



# Feature Importance



## 5. Recommendations

### Immediate Actions:

- Implement early warning system for at-risk customers
- Create specialized packages for senior citizens
- Improve fiber optic service reliability
- Develop first-year customer engagement program

### Pricing Strategy:

- Review pricing for high-charge segments
- Implement tiered pricing structure
- Create loyalty discount programs

### Service Improvements:

- Enhance technical support
- Regular service quality assessments
- Proactive customer support outreach

## **6. Future Work**

Advanced Analytics:

- Real-time churn prediction system
- Customer lifetime value analysis
- Automated reporting system

Data Collection:

- Customer satisfaction metrics
- Service quality indicators
- Competitor pricing information



7. Model Performance

precision   recall   f1-score   support

0      0.82      0.89      0.85      1033

1      0.59      0.44      0.51      374

accuracy                      0.77      1407

macro avg      0.70      0.67      0.68      1407

weighted avg      0.76      0.77      0.76      1407