

## 6. Interpretation and Reporting:

### 6.1) Discuss the features that are most indicative of churn.

#### Feature Importance and Interpretation

##### Top Features Indicative of Churn

Based on feature importance analysis, the following features were found to be most indicative of customer churn:

- **Total day minutes (Importance: 0.1414):** Customers with higher total day usage minutes are more likely to churn. This suggests that customers who frequently use the telecom services during the daytime are at a higher risk of churning.
- **Total day charge (Importance: 0.1265):** The total charges incurred during the daytime also play a significant role in predicting churn. Customers with higher daytime charges may consider switching to other providers.
- **International plan (Importance: 0.0834):** The presence of an international plan is another important factor. Customers with international plans are more likely to churn. This could indicate that the international plan may not be meeting customer expectations or needs.

#### Insights into Feature Significance

These top features suggest that customers who make frequent service calls, have higher total day usage, and those with international plans are more likely to churn. This insight can inform retention strategies, such as improving customer service, optimizing daytime usage plans, and reviewing the effectiveness of international plans to enhance customer satisfaction and reduce churn.

6.2) - Provide recommendations to the telecom company on how they can reduce customer churn based on your findings.

## Recommendations to Reduce Customer Churn

Our analysis has identified several key factors that contribute to customer churn. To address this issue and improve customer retention, we recommend the following strategies:

### 1. Optimize Daytime Usage Plans

**Insights:** Total day minutes and total day charges are strong predictors of churn. Customers with higher daytime usage are more likely to churn.

**Recommendation:** The telecom company should explore tailored daytime usage plans that cater to the needs of different customer segments. Consider offering packages with competitive pricing for customers with high daytime usage. By providing cost-effective plans, the company can incentivize customers to stay and make the most of their daytime usage.

### 2. Review International Plans

**Insights:** The presence of an international plan is another important factor in predicting churn. Customers with international plans are more likely to churn.

**Recommendation:** Conduct a thorough review of international plans to ensure they meet customer expectations and offer competitive rates. Consider conducting customer surveys or feedback sessions to understand their international calling needs better. Offering customized international plans or discounts to frequent international callers can help retain these valuable customers.

### 3. Implement Retention Offers

**Insights:** Customers with a high likelihood of churning may benefit from retention incentives.

**Recommendation:** Identify customers who exhibit churn-related behaviours, such as high customer service call frequency or patterns of increased daytime usage and consider offering them retention incentives. These incentives could include discounts on international plans, contract extensions with special offers, or loyalty rewards. By proactively engaging with at-risk customers and providing attractive retention offers, the telecom company can increase customer loyalty and reduce churn.