

Scenario 2: Task 3 Telecommunications Market Basket (Churn)

In the telecommunications industry, customers can choose from multiple service providers and actively switch from one provider to another. Customer “churn” is defined as the percentage of customers who stopped using a provider’s product or service during a certain time frame. In this highly competitive market, some telecommunications industries can experience average annual churn rates as high as 25 percent. Given that it costs 10 times more to acquire a new customer than to retain an existing one, customer retention has now become even more important than customer acquisition.

For many providers, retaining highly profitable customers is the number one business goal. To reduce customer churn, telecommunications companies need to predict which customers are at high risk of churn.

You are an analyst on a team of analysts in a popular telecommunications company, which serves customers in all regions of the United States. One plan to reduce churn is to offer customers discounts on items of interest. The executive team is not sure which items customers typically buy together and has reached out to you for help. You have been asked to analyze the data set to explore data on the purchase habits of customers.

Data File Being Used:

teleco_market_basket.csv

Data Dictionary:

The data set includes the following information:

- Items purchased from previous customers (prior 2 years) as based on historical data
- Purchase history reflects all historical purchases (not just at a single moment)
- Data is limited to items related to technological areas
- Data might need some cleaning and preparation (depending on tools used)

The data set consists of 7,501 customer purchase history and 20 columns/variables:

- **Item01-Item20:** Item that customer bought