

Capstone

Background

The company Telco has been experiencing a large amount of customers leaving. Over a quarter of their customer base has left the company within the last month. Of the 1869 customers that have left 1297 of them were using our fiber-optic internet. I believe that customers are leaving because they are unhappy with the fiber-optic services. I am proposing an experiment in which we include online backup with our fiber optic network to decrease churn. 70 percent of customers that left did not have this service and including it may lead to increased customer satisfaction.

Experiment stage 1

Regardless of gender or age many customers are terminating service. Over 30 percent of the customers that did churn used our services for three or less months. By adding online backup and increasing customer satisfaction we may keep them. For this experiment we will be offering 25 percent of both our new customers and customers who have been with us for less than three months access to free online backup. Our control group is our customer base that does not have access to free online backup. Our test group does have free online backup.

We will revisit the churn rate two months into this experiment. At this point we will compare the two groups to the data before the experiment. We also want to make sure there are no negative effects. To ensure that we will make sure the company is not losing money for offering this free service. At this point we will conduct a t-test to see if churn has decreased. We would like our p-value to be less than 5 percent. If it is we will move on in the experiment. However if the p-value is more than that but less than 10 percent we will observe more another month before deciding to continue.

Experiment Stage 2

For the next stage in the experiment the number will increase to fifty percent of new customers combined with the customers who already have the free service from part one of the experiment. We will further observe for two months to see if the upward trend continues in that we retain more customers. Our success metric for this experiment is churn rate. We would like for our churn rate to decrease due to our new improved service. A secondary metric to look at would be contract conversions, people going from monthly service to yearly or two year contracts. At the end we will do a null-hypothesis significance test, where we want our p-value to be less than five percent. If the company is going to forego charging extra for a service we would like to be confident that the churn decreased because of the service and not a random factor.