

BIA CAPSTONE PROJECT

CHURN ANALYTICS

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INTRODUCTION

The data consisted of existing users of a Telecommunication Company wherein we had numbers on their product usage, number of calls made, charged and it's duration.

Also, we had the count of customer service call made by each user.

And finally the Churn data.

INTRODUCTION : CHURN ANALYTICS

It is the evaluation of a company's customer loss rate in order to reduce it. Also referred to as customer attrition rate, churn can be minimized by assessing your product and how people use it.

PROBLEM STATEMENT : WHY THE NEED FOR ANALYTICS

- High CAC (Customer Acquisition Cost)
- Less expensive to convert existing prospects/users
- Identify target audience for the next marketing campaign
- Identify existing audience for cross selling/retention.

PROBLEM STATEMENT : KPI

- ↓ Churn Rate
- ↑ Revenue
- ↑ Customer Satisfaction

PROBLEM STATEMENT : SOLUTION

- To Analyse the churn ratio by segregating user as per product usage, account length, earnings generated and customer service calls made.
- Group Users as per their churn patterns so we get an idea who are our most ideal users(high paying, high product usage), those who need to touch base(moderate product usage) and the ones who are "*churned*" (no product usage)

METHODOLOGY



1 Exploratory Data Analysis

Univariate
Visualization

Multivariate
Visualization



2 Statistical Tests

T – Test
Two-sample T-test
Chi Square



3 Machine Learning

Feature Importance
Feature Engineering
Splitting the data in training
and testing sets
Assessing algorithms
Algorithm selected:
Gradient Boosting
Hyperparameter tuning



4 Data Visualization

Establish Relationship
between tables
Set parameters to
achieve said KPI's



5 Dashboard

INSIGHT'S

\$1,783	86%	\$31.57K	\$65	West Virginia
Is the charge per customer per month	Retention Rate	Is the Total revenue in risk for the users churned	Is the Average Loss per day when a customer is Churned.	is the state with the highest revenue, that is, \$6.08k
4%	95%	4 & Above	36	California
New Jersey has the Highest churn risk compared to overall.	Customers who are only using voice plan has the highest retention rate compared to overall.	Customer service calls dropped after 4 & above w.r.t their revenue generated.	Are the customers which have churned who are using both Voice plan and International Plan , the least among the groups identified.	is the state with the lowest revenue, that is, \$2.03k

RECOMMENDATION

- Customer calls count at **3** has a higher churn rate w.r.t revenue. Data via CRM needs to be analysed further.
- **New Jersey** has the highest churn risk rate which needs to be looked into further.
- **145 Customers** churned are using either of the plans, these are prospects that can be tapped further with new marketing campaigns.
- Customers who are only using voice plan have a retention rate of **95%** with the lowest churn rate. This group needs to be retained by offering them the upcoming offers and discounts.



THANK YOU

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