

Analysis of Telco Customer Churn



Overview

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Objective

What is our analysis looking to achieve?

2

Data

What information are we working with?

3

Results/Discussion

How can we implement these results in a meaningful way?

Objective

Customer churn is one of the most important metrics of any business. High rates of churn leads to reduced revenues and higher costs of customer acquisition. With our analysis we seek to:

- Determine which factors are most related to churn**
- Implement statistical tests to see how significantly these factors affect churn**
- Provide suggestions to enhance customer retention and proactively prevent churn**

Data

We will analyze a dataset of 7043 customers.

Included in the set are details ranging from customer demographics, services subscribed to, and charges made to their accounts.

This dataset is available online.



Overall Churn

Out of 7043 customers, 1869 of them churned. This results in a total churn rate of **26.54%**.

3 Key Factors Related to Churn

Tenure

The **majority** of churn is coming from customers who have a short tenure with Telco.

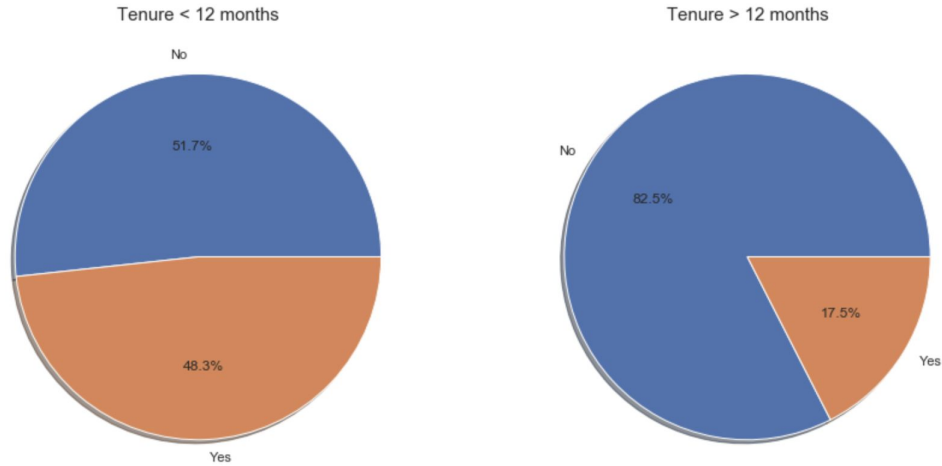
Monthly Charges

Customers who churn have, on average, monthly charges that are ~**\$13 more** than those who did not.

Age

The churn rate for senior citizens is an astounding **71.5%**.

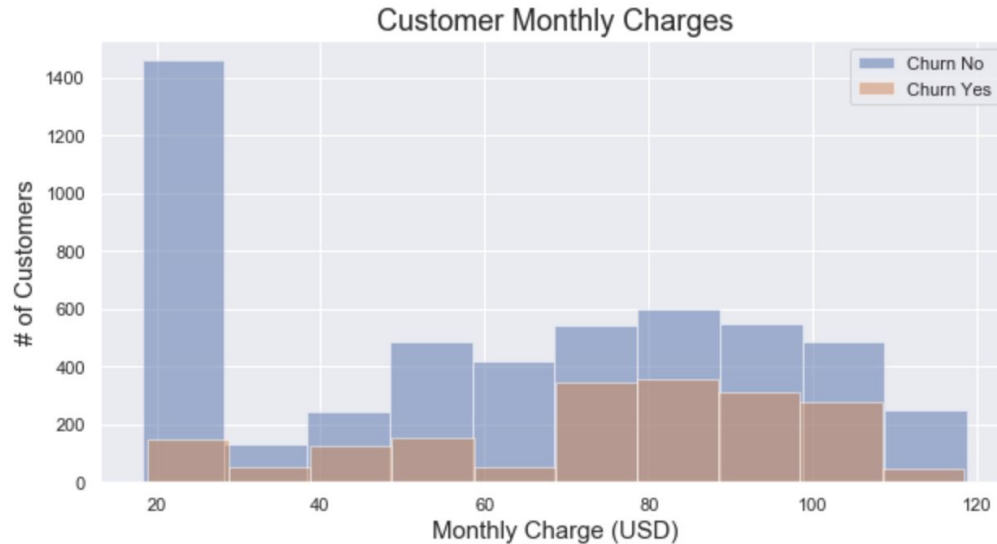
Churn Based on Tenure



TENURE ANALYSIS

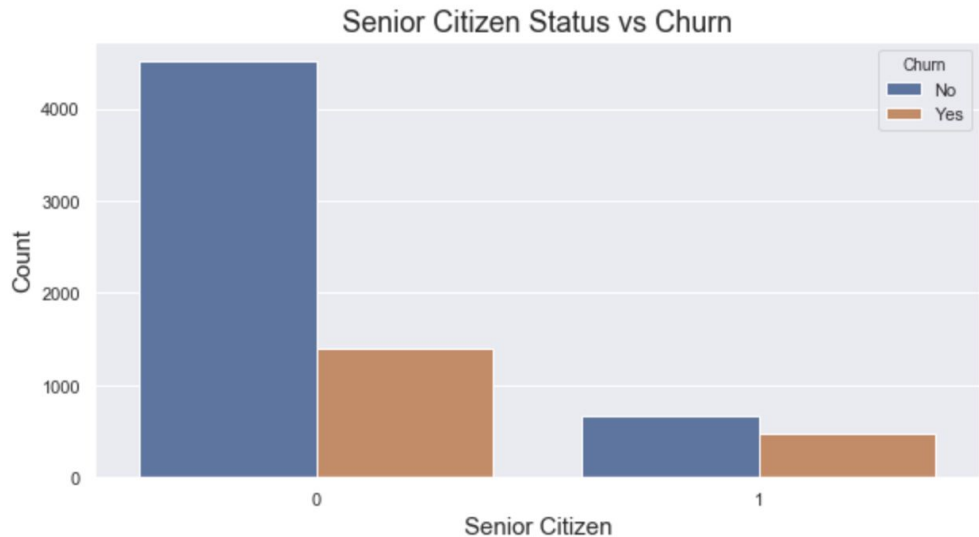
-Nearly half of customers who have been with Telco for under a year end up churning.

-Customers who did not churn had a tenure that, on average, was between 18 and 21 months longer than those who did churn. (95% confidence)



MONTHLY CHARGE ANALYSIS

- Customers on both the extreme low and extreme high end are at low risk of churning.
- Customers who did churn have monthly payments on average between \$15 and \$12 more expensive than those who did not churn.



AGE ANALYSIS

-Senior citizens churn at a rate over double that of those with. non-senior citizen status (71.5% vs 30.9%)

-If this distribution was due entirely to chance, then you would have a <.001% chance of finding a discrepancy between the observed and expected distributions that is this extreme. In other words, senior citizen status has a very significant connection to churn!

Suggestions

Tenure

A **loyalty program** may incentivize customers to stay longer, reducing their chances of churning early.

Monthly Charges

Promotional deals can lock-in users to a lower price for a short period of time, alleviating the costs associated with starting service.

Age

A **senior discount** as well a **simplified UI** can help retain the largest group of customers who churn.

Thanks!

Does anyone have any questions?

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