**Reflection Paper: Telecommunication’s Churn Data**

This paper aims to show data analytics by using the customer churn rate for the telecommunication industry. I will be performing these analyses by utilising captured information provided by the project and another from an external source downloaded from Kaggle. These analyses will be performed by understanding the raw data, creating dimensions, creating visualisations that will provide business stakeholders insights into how to decrease the churn rate market utilisation and increase profit for the company.

The dashboards in Tableau are designed to answer specific questions laid out in the associated data dictionary. They analysed the data to identify trends related to the churn rate of customers to show differences on who is most likely to churn between gender? Whether the price of ownership goes high or low depending upon where the client lives? And does the customer who has been with the company tend to stay? It also compares the metric with a secondary data set to provide another perspective. It is important to answer these questions as they help business stakeholders and decision-makers adjust the process and policies accordingly.

The external data set was sourced from the Kaggle website with a couple of things in mind. First, the data set must be captured from a different source than the data provided by WGU to provide a different perspective to the business. In a way, it helps validates our baseline captured from the first data set. Second, it provides validity to the proposed suggestions.

There are two different data representations dashboards that executive leaders can use to support decision-making. These dashboards use filters/highlighters located in the ‘Category Menu’; clicking on ‘Left’ will show customers who have churned, and ‘Stayed’ will show the rest. It will assist in manipulating the visualisation and provide greater insight.

1. The ‘Packages v. Churn’ dashboard shows that the company needs to offer many services to their customers to retain them in the eco-system, leading to a lower churn rate. The decision-maker also needs to continuously invest in upcoming technologies so they can be offered to their customer and the company will keep its competitive edge in the market.
2. The ‘Monthly Charge v. Churn’ dashboard further conveys the idea by focusing on the churn rate of the customer with their monthly charges. The decision-maker needs to work with the marketing and advertising team to create a narrative that shows that the company offers the best price for the customers who are part of its ecosystem and stay for a long time.

There are two interactive controls in the dashboard that enable users to modify the presentation of the data.

1. The ‘Tenure and bandwidth v. Churn’ dashboard has an interactive filter on the ‘Churn’ to allow users to modify the presentation to show the customer’s reliance on the services like the internet and their churn rate. It implies that customers who have been with the company for a while tend to use much bandwidth and have a low churn rate.
2. The ‘Client location v. Churn dashboard interactively shows the users all the places where the company needs to expand. This will help stakeholders with market capitalisation and where they need to expand to increase their customer base.

All the dashboards were built using the following rules to be accessible for individuals with colour blindness. I selected Tableau’s ‘colour blind’ palette to meet the requirements. These three rules were laid out by Tableau (Tableau, 2022) on their website:

1. The data-viz rule: “Don’t use red & green together.”
2. The issue: "Ten per cent of men are colour-blind, mostly with red/green issues."
3. Reaction: "Don't use red and green together."

Two data representations in the Tableau presentation support the story I wanted to tell.

1. The ‘Packages v. Churn’ tells a story about customers who sign up with the company’s ecosystem will have a lower churn rate. Once the customers have all the services they need in one place, they will not try to move away due to the difficulty and stress related to the migration from one company to another. Once the company keep investing in Research and development, the customer will not look to the competitors and become loyal customers.
2. ﻿The ‘Monthly Charge v. Churn’ tells the story of customers who have a lower churn rate and have a competitive price advantage over the one left. The marketing team can utilise this advantage in their strategies to increase companies’ footprint in the business sector.

My primary audiences are functional leads, managers, and department heads of telecom organisations. To ensure they were engaged and the essential points were sent across, anything that could be ambiguous was redacted from the visualisation. Extreme care was put toward keeping visuals simple and to the point. All the dollar amounts percentages were rounded up, and decimals were dropped to make the information palatable for the decision-makers.

The ‘Best Practices for Designing Accessible Views’ laid out by Tableau were followed to ensure the visual designs layout are optimised for accessibility. Simple graphic elements like bar charts or line charts allow you to use text, colour and shapes to add additional context to the view. (Tableau, 2022) were used. Extra care was taken to avoid jargon, acronyms, or abbreviations to remove complexity in the Title and Caption.

Storytelling is an art and brings the store to life, combined with well-presented visual data. I used the ‘contrast’ element to drive the comparison of two datasets. The narrative was enforced with the easy to understand bar charts with a filter on the churn. It showed how the two datasets are different following the Tableau principle (Tableau, 2021). Additionally, I used the ‘Keep it simple’ element to ensure all the visuals in the presentation were easy to understand.

Bibliography:

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