D210 PA

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D210: Representation and Reporting

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## D210

## Part 1: Interactive Data Dashboard

A1. The datasets are attached.

A2. The dashboard is public and can be accessed online using a link that leads to the Tableau website. Link: https://public.tableau.com/app/profile/jon.is/viz/D210\_17014575861290/Story1?publish=yes

A3. The first tab is called Overview. Clicking on this tab will lead users to a page that displays a pie chart of the gender distribution of the customers. A color legend appears on top of it, and a gender filter that affects the pie chart also appears next to it. The second visualization is the map. The map that shows the average monthly charge of customers in each state. A legend appears on the right showing the color meaning. Under it, is the CLV table. It shows a table with the customer lifetime value of the WGU company and the competitor. Next to it, is a table named Churn Rate. This tab shows the churn rate for WGU and the competitor.

Clicking on the second tab called insights leads to another page. The top line chart is named Tenure and Monthly charge. It shows a line chart of churn and monthly charge. The right side shows a churn filter and a color legend. Under it is a chart called churn. It shows users to a histogram showing the count of churn. A filter appears on the right called gender filter that allows users to filter by gender only on the churn chart. The next tab is called action. This tab leads users to a page with a list of recommendations based on the insights from the dashboard.

## Part 3: Reflection Paper

C1. The gender pie chart in the dashboard provides a visual representation of customer demographics. This is relevant to the SVP because it’s helpful in understanding customer preferences and tailoring engagement strategies. The tenure and monthly charge chart shows the relationship between tenure and monthly charge. It aids the EVP on how different tenure groups and their corresponding charges influence customer retention, guiding recruitment and retention strategies. The churn frequency histogram shows the distribution of churned customers. It helps the SVP and EVP to understand customer churn rates and to support their efforts to improve engagement and optimize recruitment strategies. The customer lifetime value table provides insights into costumer lifetime value of the WGU company and the competitor. This is helpful in guiding the SVP to implement strategies to retain customers and increase loyalty. The churn rate table shows the churn rate of the WGU company and the competitor. This is helpful in guiding the EVP to implement strategies to improve customer engagement and understand how the company compares to the competitor.

C2. The addition of the additional data set enhances the insights that can be drawn from the data set. The additional data set aids in better understanding customer behavior. The data helps in understanding the value of our customers compared to the competitor. Furthermore, the churn rates show how the company is doing compared to the competitor. It also provides insights into customer loyalty.

C3. The tenure and monthly charge line chart displays the relationship between tenure and monthly charges. Executives can use the visualization to make decisions related to retention and pricing strategies. They can identify trends where customers with longer tenure exhibit specific spending patterns. For instance, if there's a trend of increased monthly charges over tenure, it could suggest potential strategies to retain long-term customers by offering personalized packages or loyalty rewards. Furthermore, they can evaluate if there's a correlation between tenure and fluctuations in monthly charges. This insight can guide decisions regarding pricing strategies, especially if there are patterns suggesting that long-term customers might be sensitive to price changes. The churn frequency histogram displays the churn frequency among customers. This can aid identifying churn trends and implementing retention strategies. Executives can use this histogram filters to spot trends in customer attrition. If there are peaks in specific tenure groups or associated with certain monthly charge brackets, it could highlight areas requiring further investigation or intervention. Furthermore, based on the frequency of churn within different customer segments, leaders can align their retention strategies. For instance, if a particular group shows higher churn, strategies to enhance retention within that segment can be formulated.

C4. The churn filter in tenure and monthly charge line chart allows users to selectively view data on the line chart based on churn status, enabling a comparative analysis between churned and retained customers. Users can focus on specific segments to observe differences in spending patterns over tenure. For example, by filtering to view only churned customers, executives can analyze whether there's a noticeable change in monthly charges leading up to churn. The gender filter in the churn frequency histogram enables users to segment churn frequency data in the histogram based on gender, allowing a gender-specific analysis of churn. Users can select different gender options to see how churn frequency differs between male, female, or nonbinary customers. This control facilitates a deeper exploration of whether churn patterns significantly vary among different genders.

C5. I built my dashboard to be accessible for individuals with colorblindness. I used color contrast to make the dashboard more accessible. For example, the map uses high contrast colors with a light background and high amount of steps in the gradient to ensure users can differentiate between the different colors. Furthermore, I avoid reliance on color alone by including the info in the tooltip.

C6. The tenure and monthly charge line chart visualization aids in depicting the relationship between tenure, monthly charges, and churn rates. The line chart showcasing tenure against monthly charges allows for an exploration of spending patterns over time. By applying the churn filter, the story continues to develop. The line chart, segmented by churn status, helps emphasize any noticeable trends in monthly charges concerning customer tenure before churn occurs. This representation also supports the narrative by highlighting if there's a correlation between changes in monthly charges and increased likelihood of churn, providing a story that links customer spending behaviors with churn likelihood. The churn frequency histogram displays the frequency of churn occurrences among customers and how it varies based on gender, offering a distinct perspective on churn patterns. By applying the gender filter, the narrative gains depth, allowing exploration into gender-based differences in churn frequency. This supports a storyline emphasizing the importance of understanding how churn varies across different customer segments. Furthermore, the histogram's utilization of the gender filter enables the narrative to delve into whether there are significant disparities in churn rates among male, female, or nonbinary customers, thereby enhancing the understanding of churn dynamics within each gender group.

C7. The message was adapted to emphasize key customer characteristics, behavior, and engagement metrics. Insights focused on factors that drive customer behavior and retention, aligning with the SVP's objective of enhancing customer engagement. The presentation highlighted broader categorizations of customers, including regional variations, and focused on the impact of demographics on customer behavior. It provided insights relevant to strategic recruitment and customer retention efforts, aligning with the EVP's responsibilities. Emphasis was placed on regional data, policies, and operational insights to cater to the Regional VPs' needs in setting regional strategies and aligning promotions with local preferences. The message was conveyed using intuitive visualizations that did not require technical data analysis expertise. The visuals were designed to be easy to interpret, allowing leaders without a technical background to derive meaningful insights effortlessly.

C8. The presentation was designed for universal access by all audiences. The presentation was created using a simple layout for easier navigation. High contrast colors and tooltips are used for accessibility. Filters are used to allow further exploration of data and simplify visualizations. The presentation limited the use of jargon and technical language.

C9. The presentation was structured around a story arc that unfolded through data exploration. It began with setting the stage by introducing key metrics and customer demographics, followed by a rising action revealing churn patterns, spending behaviors, and demographic influences. The climax occurred with actionable insights derived from the data, providing strategic recommendations to reduce churn and enhance customer engagement. This narrative structure aimed to captivate the audience's attention by leading them through a story-like progression. Starting with intriguing data points, gradually building momentum through visualizations, and culminating in impactful insights (Aadfero, n.d.). Another element of effective storytelling was the use of interactive graphics. Interactive visualizations, such as the tenure and monthly charge line chart with churn filter and the churn frequency histogram with a gender filter, were strategically utilized to tell a visual story. These interactive elements allowed the audience to actively engage with the data, uncover trends, and gain insights by toggling filters to explore specific segments or patterns. The intention behind employing interactive graphics was to foster audience participation and involvement. By allowing the audience to interact with the data, make comparisons, and derive personalized insights, it encouraged active engagement and a sense of involvement in the storytelling process.

D. Aadfero. (n.d.). *The Eight Elements of Effective Storytelling*. Adfero. Retrieved December 4, 2023, from <https://adfero.com/eight-elements-effective-storytelling>

E. https://wgu.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=06279bf8-9583-41b8-90dc-b0ce016af7a9