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Team 12
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46885 - Data Exploration and Visualization
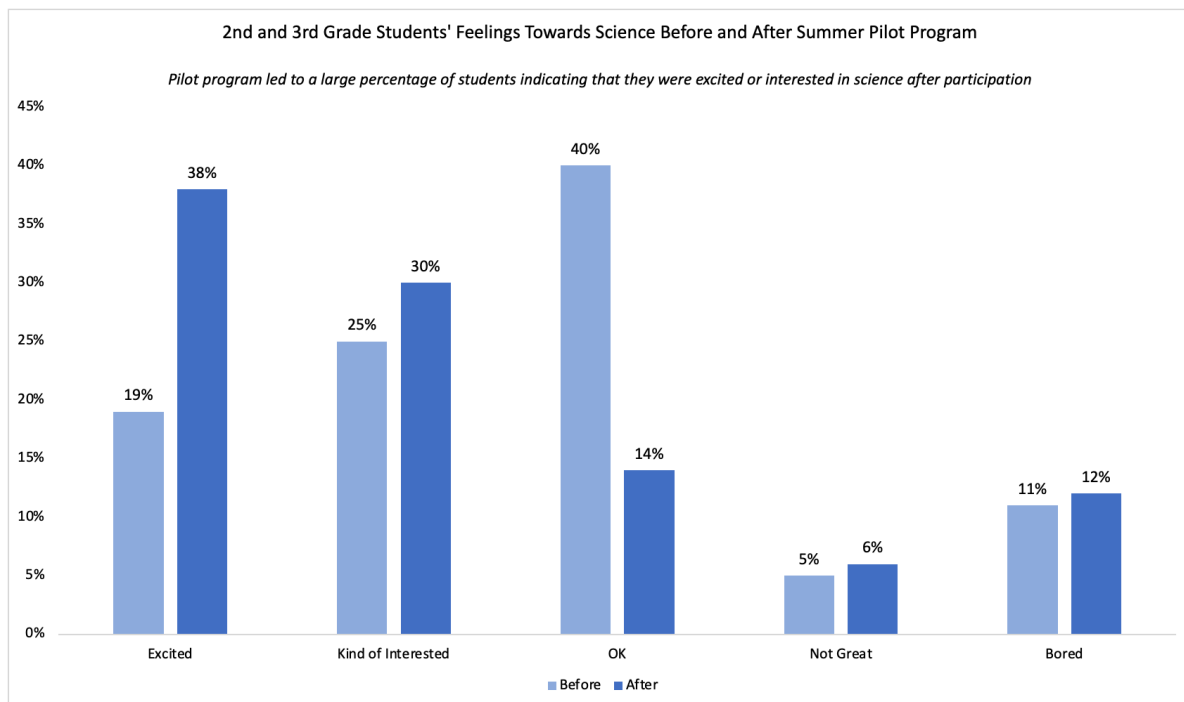# Homework 1

Question 1

Figure 1.1. Original Figure

Figure 1.2. New Figure

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Question 2

Graph 1: Action Movies emerge as one of the more profitable movie genres.

The graph below was used in a sample business proposal to highlight Action Movies, as well as similar genres that fall under this domain, as a possible avenue for investment in the movie industry.
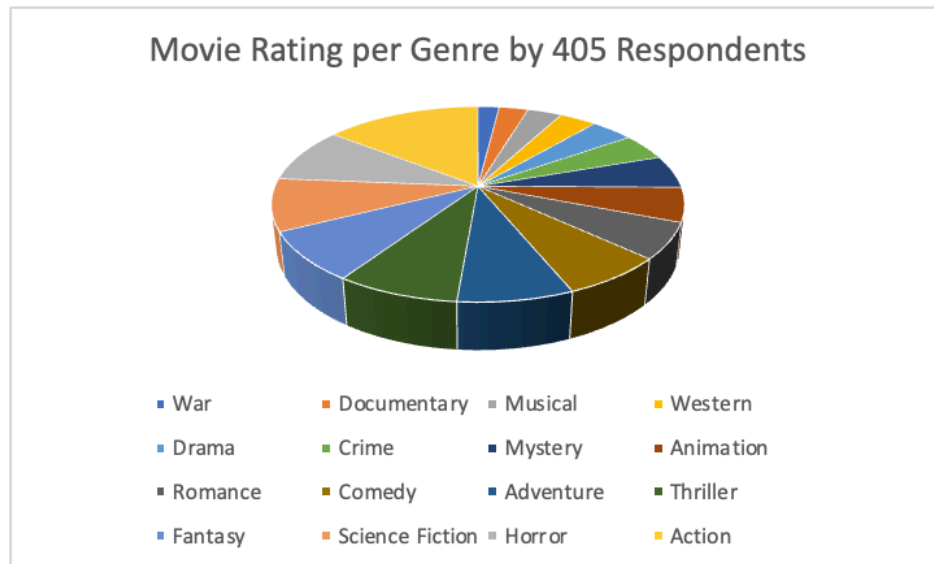

Figure 2.1.1. Previously Used Figure

The initial visualization for this data was conducted via a Pie Chart. As witnessed, this data visualization did not provide adequate information regarding the data collected, such as number of respondents per genre. In addition, not only was the chart title very generic in its explanation to the general audience, but also chart colors were not very effective in distinguishing some of the different genres as the color yellow, for example, was used 3 different times in varying shades. Overall, this pie chart/data visualization was very crude and ineffective at portraying the intended message of action movies being the highest rated movie genre according to respondents.
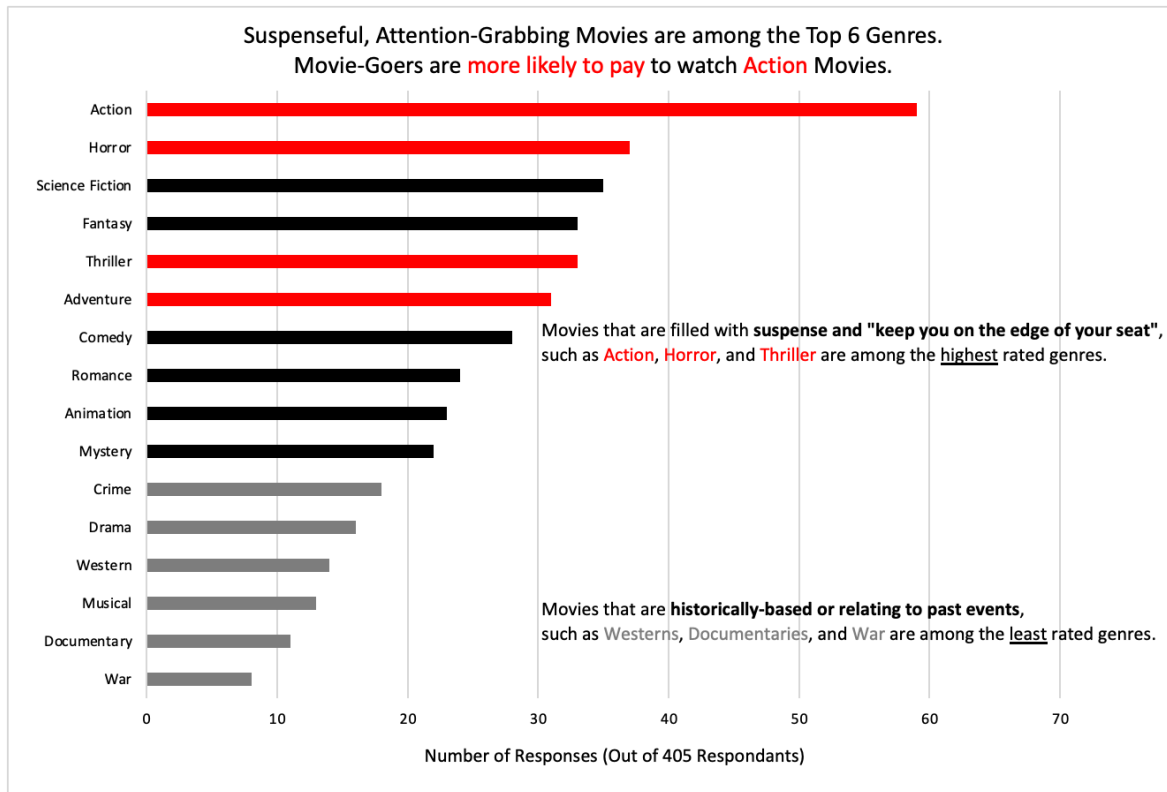
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Suspenseful, Attention-Grabbing Movies are among the Top 6 Genres.
Movie-Goers are more likely to pay to watch Action Movies.

Movies that are filled with **suspense and "keep you on the edge of your seat"**, such as Action, Horror, and Thriller are among the highest rated genres.

Movies that are **historically-based or relating to past events**, such as Westerns, Documentaries, and War are among the least rated genres.

Number of Responses (Out of 405 Respondants)

Figure 2.1.2. Improved Figure

To better the initial visualization, we first identified a major flaw: the graph was simply showing the data rather than telling a comprehensive story with it. As evidenced in the updated data visualization, the chart title as well as the free-standing text boxes tell a more compelling data story about how suspenseful, attention-grabbing genres like 'Action' are amongst the most highly rated movies and is likely to be the most worthwhile avenue of investment from a business standpoint. In addition, we decided to harness the power of iconic memory by highlighting key pieces of information as pre-attentive attributes. For example, the highest rated movie genre, 'Action' as well as genres that are fundamentally similar to it, were denoted in a bright red color so the audience would gravitate towards it upon their first glance. Furthermore, the conclusions that are derived from the visualization are presented in a unique manner as to emphasize certain elements, such as bright colors for important claims, bolded statements for clarifying descriptions, and underlined words for contrast between ideas. A hierarchy of information was developed so that the data visualization would be easily interpreted and understood by a broad audience and works to not only guide their attention through certain elements, but also present a compelling data story.

Graph 2: Retention of a top earner in company X

The graph below was used in a data email to justify the retention and investment in a top earning employee within the sales team. The visualization used was a pie chart which was not the most effective way to do this storytelling. The colors (red for the focus point and shades of blue for all other points) help focus the attention of the reader, however there are a few flaws that stand out. The title does not give any concise information hence it is unclear what the takeaway of this visualization is. Additionally, the lines from each piece of the pie chart cause clutter thus confusing the reader.
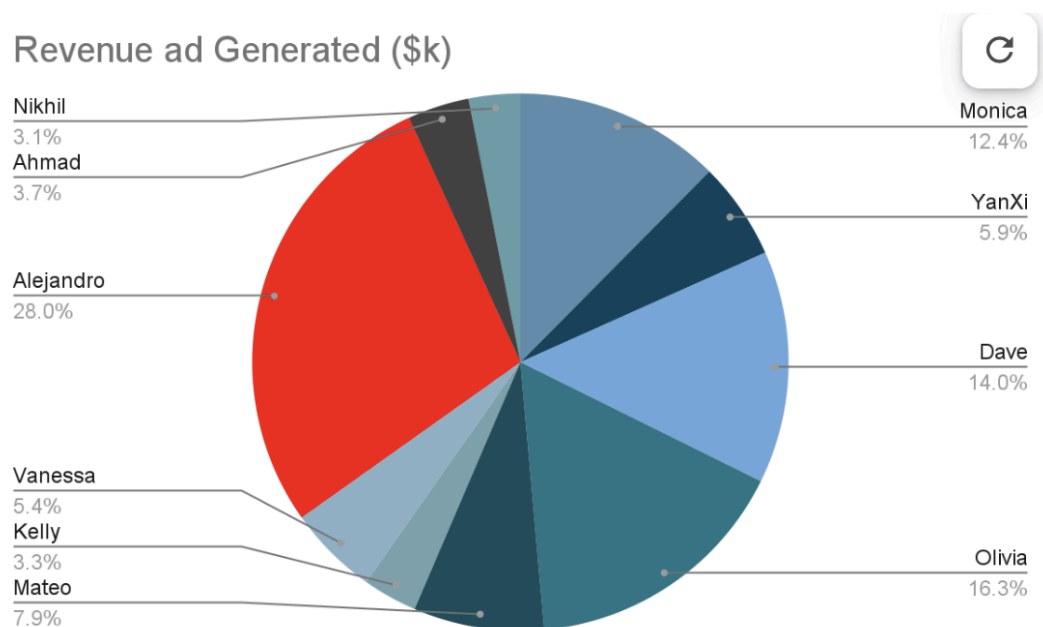

Figure 2.2.1. Previously Used Figure

To better this graph, we focused on a strategy that focused on capturing the iconic memory of the reader. We thus gave the reader preattentive attribute signals such as hue and size. As you can see below, part of the title is in bold - that is the main message of the chart. Additionally, the most important data point - Alejandro's percentage of revenue generated - has been put in a different color. This is done to further emphasize the difference between his performance and that of other employees. A hierarchy of information has been created by pushing the audience to look at first the conclusion of this data (bolded title), Alejandro's performance, and then everything else. We've also focused on eliminating clutter by erasing all non-necessary aspects such as grid lines and adding data points only for the relevant performers. This allows the reader to truly focus on the core of the matter.
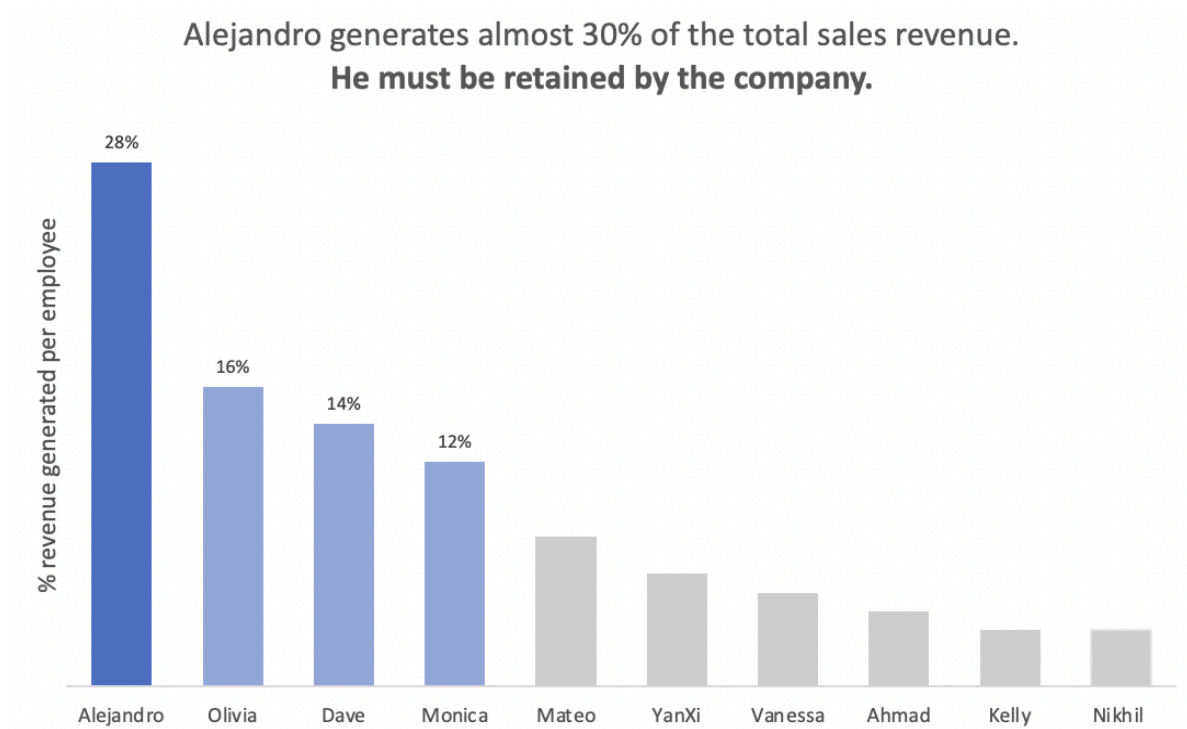
Figure 2.2.2. Improved Figure