

Workbooks

Version 1

<https://public.tableau.com/profile/justin.smith4821#!/vizhome/BaseballsStoryVersion1/BaseballsStoryVersion1?publish=yes>

Version 2

<https://public.tableau.com/profile/justin.smith4821#!/vizhome/BaseballsStoryVersion2/BaseballsStoryVersion2?publish=yes>

Summary

This project explores a baseball dataset that contains information from players such as name, handedness, height, weight, batting average, and number of home runs.

The primary focus of my investigation is to see the differences in player performance between players of different handedness – right-handed, left-handed, and both. Based on the limited data, these differences will be evaluated by comparing home run counts and batting average values.

Design

Version 1

Player Handedness Dashboard:

I wanted to display the counts of players with each type of handedness. I chose to use a bar chart to get a feel for the initial counts. I then used a pie chart to show the percentages for each handedness category. I color coded each category so the visual was easy to distinguish across both charts. We can see the majority of players are right-handed.

Elite Club Membership Dashboard:

I defined two arbitrary 'clubs' of those batters with a career average above .300 and with players who had hit at least 250 career homeruns. I again used a bar chart to show the differences between players for both clubs. I followed the same color scheme used before to distinguish the handedness of the players in these distinguished clubs. We see a higher distribution of left-handed hitters in both the .300

average and 250 home run clubs when compared to the actual percent of left-handed players in the overall player population.

Batting Average vs Home Runs Dashboard:

I created a scatterplot to create a comparison between batting average and career home runs for each player in the dataset. I color coordinated this using the same color scheme as before to indicate the handedness of the batter. Each point also shows who the specific player is, and we can see most players hit less than 50 career home runs and had a batting average around .250.

Player Height and Weight Dashboard:

To get a better feel for the dataset, I created a histogram for both the height and weight variables to get an indication of the most common heights and weights. I defined a bin size of 5 pounds for the weight variable to better group weight distributions. We can see the most common height is 72 inches and the most common weight is about 180 pounds.

Median HR/BA by Weight and Height Dashboard:

I wanted to create a display that showed the median number of home runs hit by players with specific heights and weights. I then did the same for batting average. I chose a line chart since both height and weight are continuous variables and I thought it would better display differences in batting average or home run numbers. We can see that the height of 67 inches had the highest median for both home run numbers and batting average. A weight of 201 pounds also had the highest median for both home runs and batting average.

Batting Average and Home Run Distribution by Handedness Dashboard:

I wanted to show median, mean, and the 90th percentile numbers for both batting average and home run numbers of players of all three types of handedness. I again used a bar chart to show differences among groups. We can see that overall, left-handed hitters had a higher batting average and more home runs than their counterparts. It seems being a left-handed hitter leads to more overall success, which I believe is attributed to there being more right-handed pitchers in baseball and left-handed hitters have historically been better against right-handed pitching.

Version 2

Player Height and Weight Dashboard:

I updated this section to include the suggested improvements from my reviewer. I added the same color coordination that was used in previous sections and I removed the quantity labels from each individual bar.

Batting Average and Home Run Distribution by Handedness Dashboard:

I changed the color scheme to reflect the theme for handedness from the rest of the story. I also modified the axis label to be Top 10% of Batting Averages and Top 10% of Home Run Count.

Batting Average vs Home Runs Dashboard:

I also decided to add a highlight action to the scatterplot so that each individual point can be brought into focus. I thought this was useful for areas of high plot density.

Feedback

The initial feedback I received for my first attempt was mostly positive but had some critiques. The reviewer was able to understand that the focus of my visualization was to show the differences between handedness of players, and she was even able to identify the trend that left-handed players seem to have more success.

Areas of suggested improvement were for the following areas:

Player Height and Weight Dashboard:

Upon initial inspection she was confused by the distribution of my chart, the x-axis label is above the graph and what was being measured was not clear. The quantity labelling for each bar caused some confusion for what was being measured. It was hard for her to distinguish if the values above the bar were weights/heights (since the axis label was directly above the values) or were they labels for the actual quantities in each category. She suggested I reposition the axis labels or remove the individual bar quantities. The bar alone can show which weight/height has the most members in the group and having the quantity label next to the axis label is confusing. She also suggested I continue with the handedness color scheme since that is a variable I have been tracking.

Batting Average and Home Run Distribution by Handedness Dashboard:

The axis labelled Percentile (90) of Batting Averages and Percentile (90) of Home Run Count were incredibly confusing to my reviewer. I had to explain what that section of the graph was showing before

it became clear to her. She was able to see the trend that left-handed batters have more home runs and higher batting averages than their other handed counter parts. She suggested I just rename the percentile section and continue with my color coordination for each different handedness group.

Resources

https://help.tableau.com/current/pro/desktop/en-us/calculations_bins.htm

<https://kb.tableau.com/articles/howto/creating-a-pie-chart-with-percent-of-total-of-variable-sized-bins>

https://help.tableau.com/current/pro/desktop/en-us/publish_workbooks_tableaupublic.htm