# Create a Tableau Story: Baseball Performance

By Michaela Wonacott

**Overview**:
A data set containing 1,157 baseball players including their handedness (right or left handed), height (in inches), weight (in pounds), batting average, and home runs.
First version:
https://public.tableau.com/views/Baseball_Performance/HeightandWeightonPerformanceInsights?:language=en&:display_count=y&:origin=viz_share_link

Final version:
https://public.tableau.com/views/DifferencesinPerformanceAmongBaseballPlayers/DifferencesinPerformanceAmongBaseballPlayers?:language=en&:display_count=y&publish=yes&:origin=viz_share_link

**Summary**:
I used different visualization methods to display the insights on baseball player performance through the dataset. Performance variables included batting average (labeled as 'Avg') and home run count (labeled as 'HR'). Differing features include handedness (left, right, or both), height, and weight. Records who did not have values for batting average and/or home runs were filtered out from the visualization.

**Design**:
Before Feedback:
Overall design elements I implemented was using the colors for color blindness to make it accessible for everyone. The second change I made was to filter out players who did not have a value for home runs or batting average. I did this by using a filter for 'Avg' set to show players greater than 0.01 and a filter for 'HR' set to show players greater than zero.

- *Allocation of Handedness*
    - I used a pie chart to show how much each handedness (right, left, or both) contributed to the total for the baseball players in the set. This revealed that a majority (63.7%) of baseball players are right-handed in this dataset.
- *Distribution of Height, Weight, and Weight-to-Height Ratio*
    - Using a histogram gave me the best view of distribution for height, weight, and weight-to-height ratio. The most common values for height, weight, and weight-to-height ratio is as follows: 72 inches for height, 180 pounds for weight, 2.5 lbs/in for weight-to-height ratio.
- *Home Runs vs Batting Average*

    - I used a scatter plot to determine if there was a correlation with home runs, batting average, and handedness. Based on the distribution of data, it is unclear if there is a relationship between home runs, batting average, and handedness.
- *Height, Weight, Weight-to-Height Ratio vs Home Runs*
    - I used a line chart since there are many variables to examine for each feature. The most amount of home runs overall for height, weight, and weight-to-height ratio is as follows: 74 inches for height, 190 pounds for weight, 2.5 lbs/in for weight-to-height ratio.
- *Height, Weight, Weight-to-Height Ratio vs Batting Average*
    - I used an area chart unlike the previous chart since it was unclear with a line chart how the data moved over each feature. The highest batting average overall for height, weight, and weight-to-height ratio is as follows: 67 inches for height, 201 pounds for weight, 2.74 lbs/in for weight-to-height ratio.

After Feedback:

- Fixed misspelling, punctuation issues, and changed overall visualization name from “Baseball_Performance” to “Differences in Performance Among Baseball Players.”
- *Height, Weight, Weight-to-Height Ratio vs Batting Average*
    - I used a density chart instead of an area chart to give a better representation of the data

**Feedback**:

- Overall Story: Misspellings, punctuation issues, and overall visualization name.
- Issue with chart *Height, Weight, Weight-to-Height Ratio vs Batting Average*:
    - Hard to see distribution of data due to rapid spikes visually jarring and difficult to comprehend.

**Conclusion**:

There is no discernable relationship between home runs and battering average. There does seem to be relationships between height, weight, and weight-to-height ratio on performance (home runs and batting average). For better performance on batting average; being 67 inches tall, weigh 201 pounds, or have a weight-to-height ratio of 2.74 lbs/inch. For better performance on home runs; being 74 inches tall, weigh 190 pounds, or have a weight-to-height ratio of 2.5 lbs/inch.

**Resources**:
Create a Pie Chart with Percentages

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