Udacity Project: Create a Tableau Story

Baseball Data Analyst

By Yasmeen Mubarak

About the project:

For the final project, we will create an explanatory data visualization from a data set that communicates a clear finding or that highlights relationships or patterns in a data set. And our work should be a reflection of the theory and practice of data visualization, and our final deliverable will be a write up along with a Tableau Public workbook.

About the data:

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.

Link for the first version of my story

https://public.tableau.com/profile/yasmeen.mubarak#!/vizhome/AnalyzingBaseballData_0/Story?publish=yes

And this link for the final version of my story

https://public.tableau.com/profile/yasmeen.mubarak#!/vizhome/AnalyzingBaseballDatatableau/Story?publish=yes

Summary

First we began to investigate one variable at time, then the relationship between two variables, after that we investigate three variables to fully understand the dataset.

We used a bar chart for category data type, then boxplot for summary statistics, and we also used a scatter plot to show correlation and understand the relationship between variables.

We observe after visualization that handedness is important factor and that makes us dig deeper and search more and more on this subject.

Then we decide the main story it should be about the left-handed baseball players.

We added a new column to the dataset:
Body mass index (BMI): is a simple calculation using a person's height and weight.
The formula is BMI = kg/m2, healthy BMI range: 18.5 - 25 kg/m2.

Conclusions:

- The left-handed median for batting average is larger than right-handed.
- We can see the best home run average is the left-handed players.
- Batting averages show that left-handed batters have a slight advantage over right-handed batters.
- Most body mass index values between 21 and 27, there's a slight positive relation with home run.
- Body mass index does not show significant effect on batting avg.
- The relationship between home run and batting average is positive relationship, when the batting avg increase home run will increases.
- 60% of the top10 Batting Avg are Left-handed.
- 50% of the top10 Home Run are Left-handed.

Why lefties have an advantage in baseball ?

- Right field in most parks is shorter than left field.
- The left-handed batter facing the right-handed pitcher has the ball coming to him, so he has a much clearer view of pitches.
- The left-handed batter has a 5-foot advantage over the right-handed batter. And that means the lefty travels the 90 feet to first roughly one-sixth of a second faster than the righty. That translates to more base hits for the left-hander.
- The left-handed pitcher generally is much more difficult to steal off. From his stretch, he peers directly at the runner; the right-hander must look over his shoulder and wheel to first base, giving the runner more of a warning of the pitcher's intent.
- First base and right field favor lefties. The favorable angles lefties allow them to throw the ball more quickly across the diamond to second, third and home.

Design

We plot four bar chart for category data type, because we have comparative data that we would like to represent through a chart then a bar chart would be the best option.

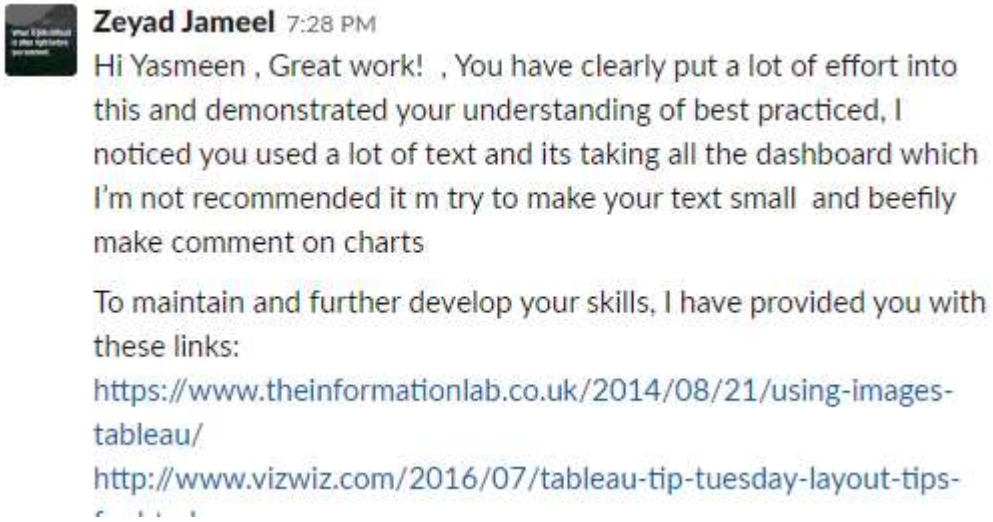
We plot four scatter plot to show correlation and understand the relationship between variables, And how much one variable is affected by another.

And there’s two boxplot for visual representation of the statistical five number summary of a given data set.

And there’s no change were made after the feedback.

Feedback

We have received one feedback from our monitor, and this is the feedback:



Zeyad Jameel 7:28 PM

Hi Yasmeen , Great work! , You have clearly put a lot of effort into this and demonstrated your understanding of best practiced, I noticed you used a lot of text and its taking all the dashboard which I'm not recommended it m try to make your text small and beefily make comment on charts

To maintain and further develop your skills, I have provided you with these links:
https://www.theinformationlab.co.uk/2014/08/21/using-images-tableau/
http://www.vizwiz.com/2016/07/tableau-tip-tuesday-layout-tips-

Resources

- https://www.livescience.com/2665-baseball-rigged-lefties.html
- https://en.wikipedia.org/wiki/Handedness
- https://onlinehelp.tableau.com/current/pro/desktop/en-us/story_best_practices.htm
- https://onlinehelp.tableau.com/current/pro/desktop/en-us/story_best_practices.htm
- https://www.newsweek.com/science-why-lefties-make-better-baseball-players-92783
- http://www.vizwiz.com/p/tips.html
- http://www.vizwiz.com/2016/07/tableau-tip-tuesday-layout-tips-for.html
- https://www.theinformationlab.co.uk/2014/08/21/using-images-tableau/