

Baseball Story

Once Upon A Time	Top Career Batting Averages	Top Most Career Home Runs	Ouch !!!	Left or Right	BMI	Score Plot
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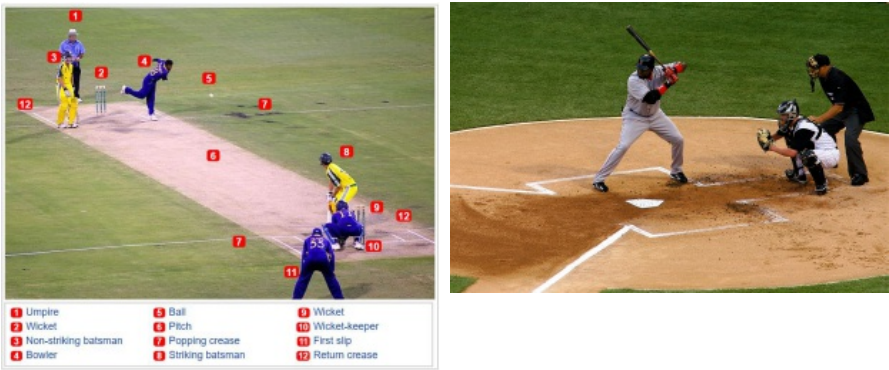
Once Upon A Time there lived a guy named Padmaraj (Me) who thought baseball game is a variation of Cricket game. He thought, unlike Cricket, you have bat to hit the ball, in baseball you use wicket to hit the ball. Since, you use wicket to hit the ball, you do not have wicket placed on the ground.

Fortunately, one day he found a task to Analyze Baseball Score Dataset which opened his eyes and could see that baseball as a entire different game. On the same day he also came to know that HR does not only stands for Human Resource but also stands for 'Home Run'. Having experience in Bengaluru Traffic, first he thought Home Run is all about running back home early to skip the traffic. He thought, he knows the game completely and can kick start analysis on the data set. And then the miracle happened, he saw the MLB videos to get the domain knowledge and he got know the actual game.

He then happily carried out the data analysis and visualization on the data set and his anlysis are shown in the next story slides. Please review and give feed back.

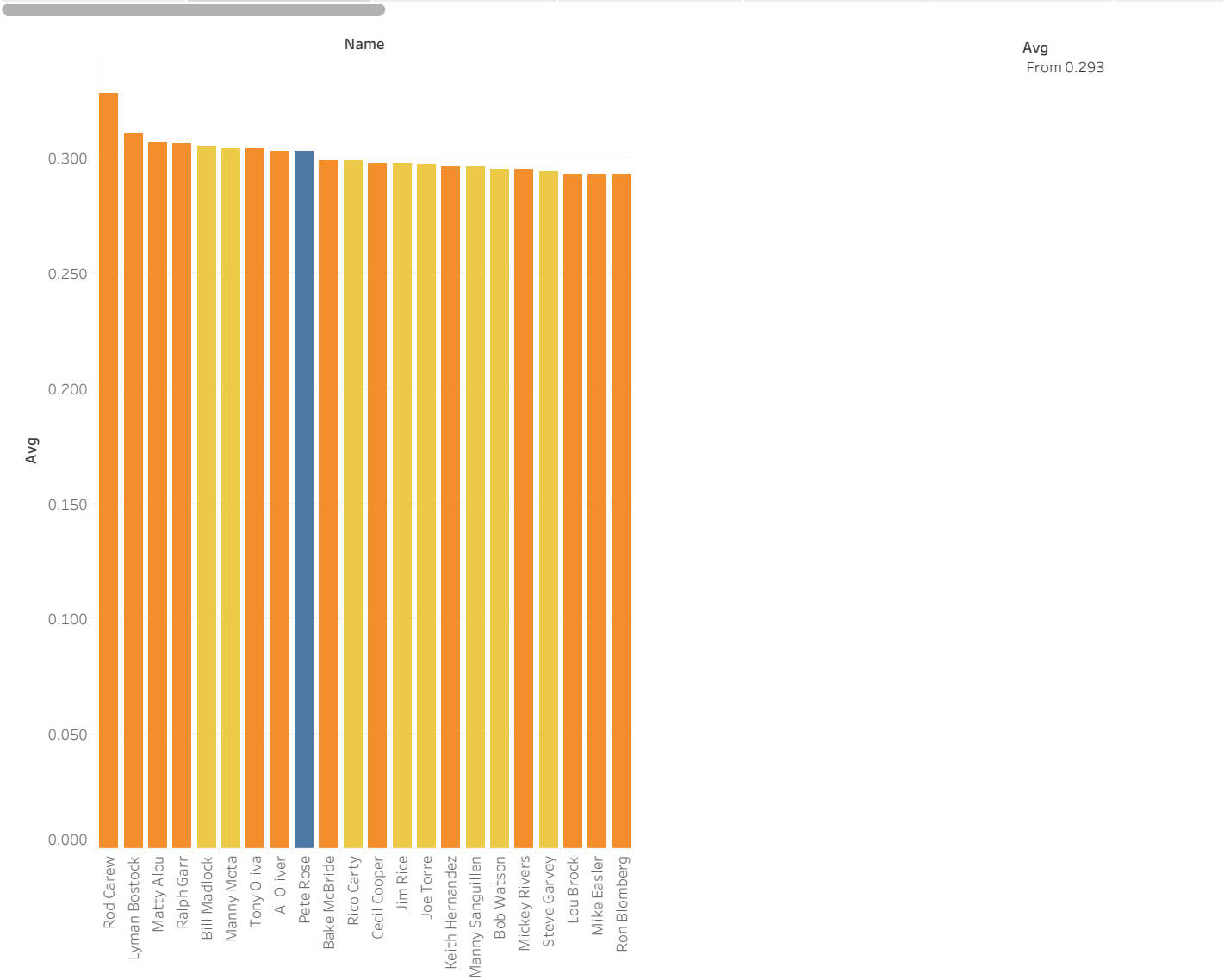
Baseball Picture credit: By SecondPrint Productions on Flickr - From Flickr; description page is (was) here, CC BY 2.0, <https://commons.wikimedia.org/w/index.php?curid=3083155>

Cricket Image: Wikipedia



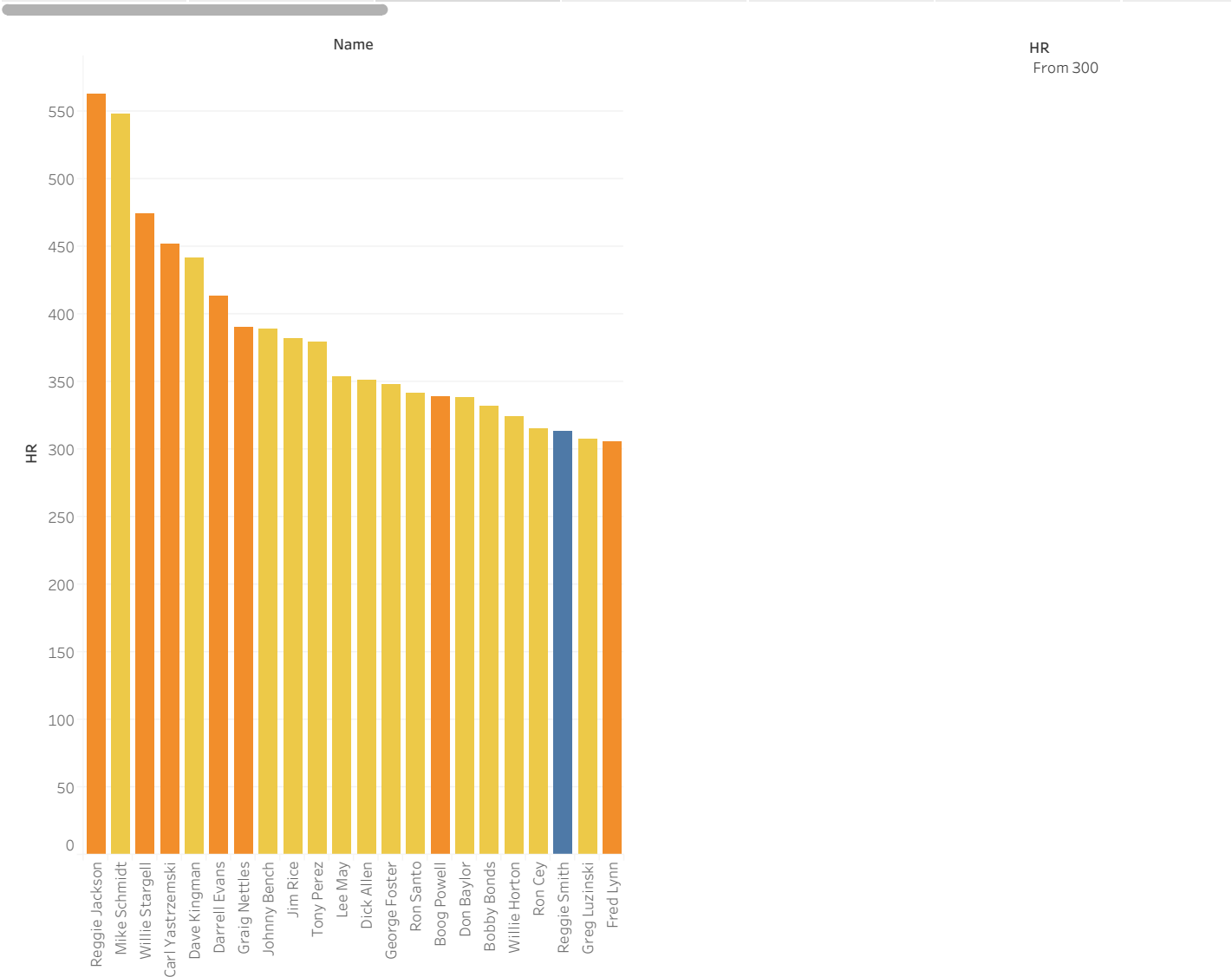
Baseball Story

Once Upon A Time	Top Career Batting Averages	Top Most Career Home Runs	Ouch !!!	Left or Right	BMI	Score Plot
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Once Upon A Time	Top Career Batting Averages	Top Most Career Home Runs	Ouch !!!	Left or Right	BMI	Score Plot
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If you had an eagle eye, you might have already said "ouch" by now.

1. In both the previous visualizations, we see that topper is left handed batsman.
2. Most of the Top 20 Avg scorer are left handed batsmen.
3. Most of the top 20 HR scorer are right handed batsmen.

The 'ouch' factor is that the above values tend to bias towards the left handed batsmen because they have the high score. High score is going to pull average towards left handed batsman.

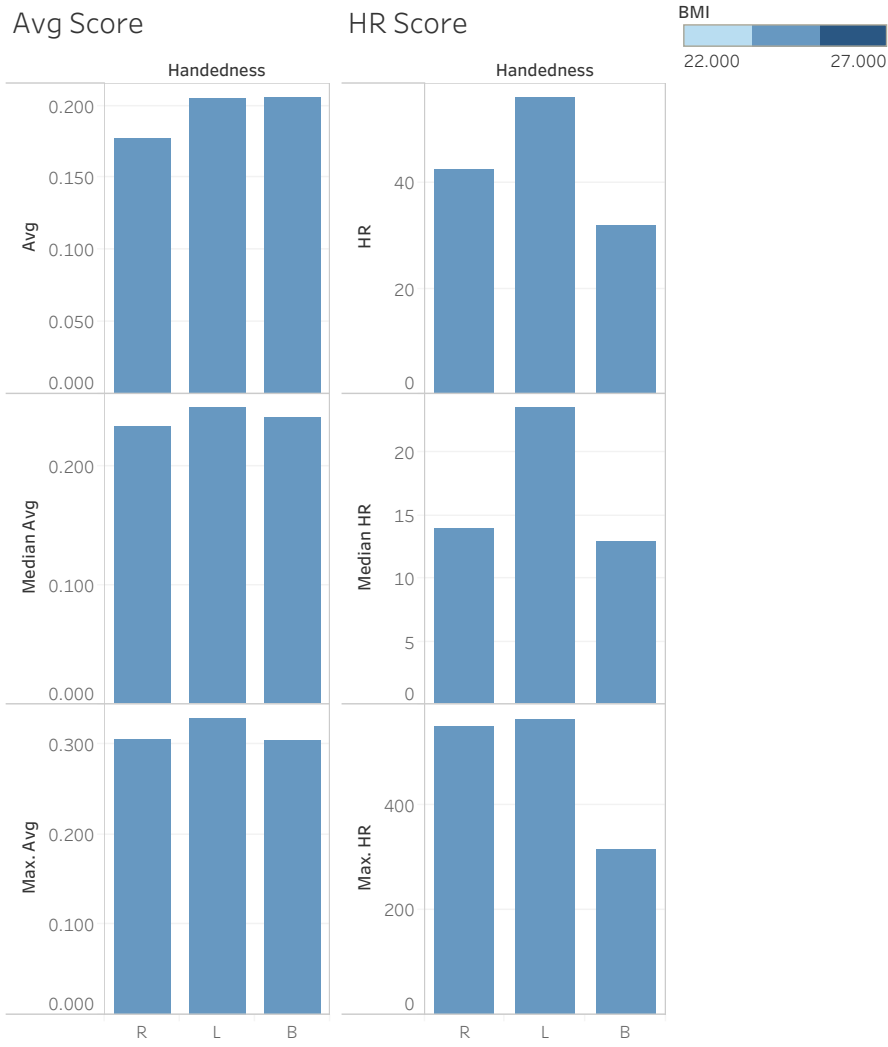
So....Who is going to rescue right handed batsmen yes... The Quartiles...especially IQR.

Let us first remove Outliers and then calculate IQR. Before that let us have quick look on the data samples with outlier and later we may compare this slide with the one does not have outliers.

Baseball Story

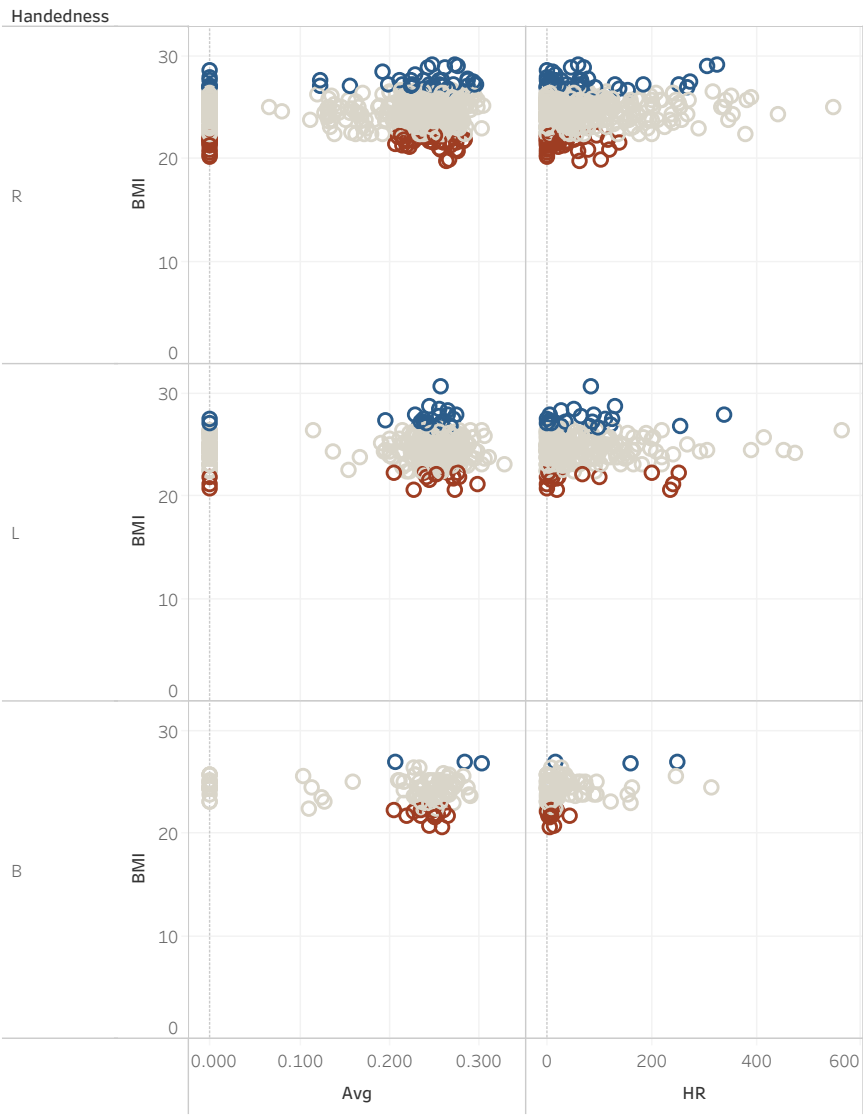
Top Career Batting Averages	Top Most Career Home Runs	Ouch !!!	Left or Right	BMI	Score Plot	Pitchers and Batters
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Wow.... Is Baseball meant for left handed batter ?



Baseball Story

Top Most Career Home Runs	Ouch !!!	Left or Right	BMI	Score Plot	Pitchers and Batters	Pitcher per Handedness Counts
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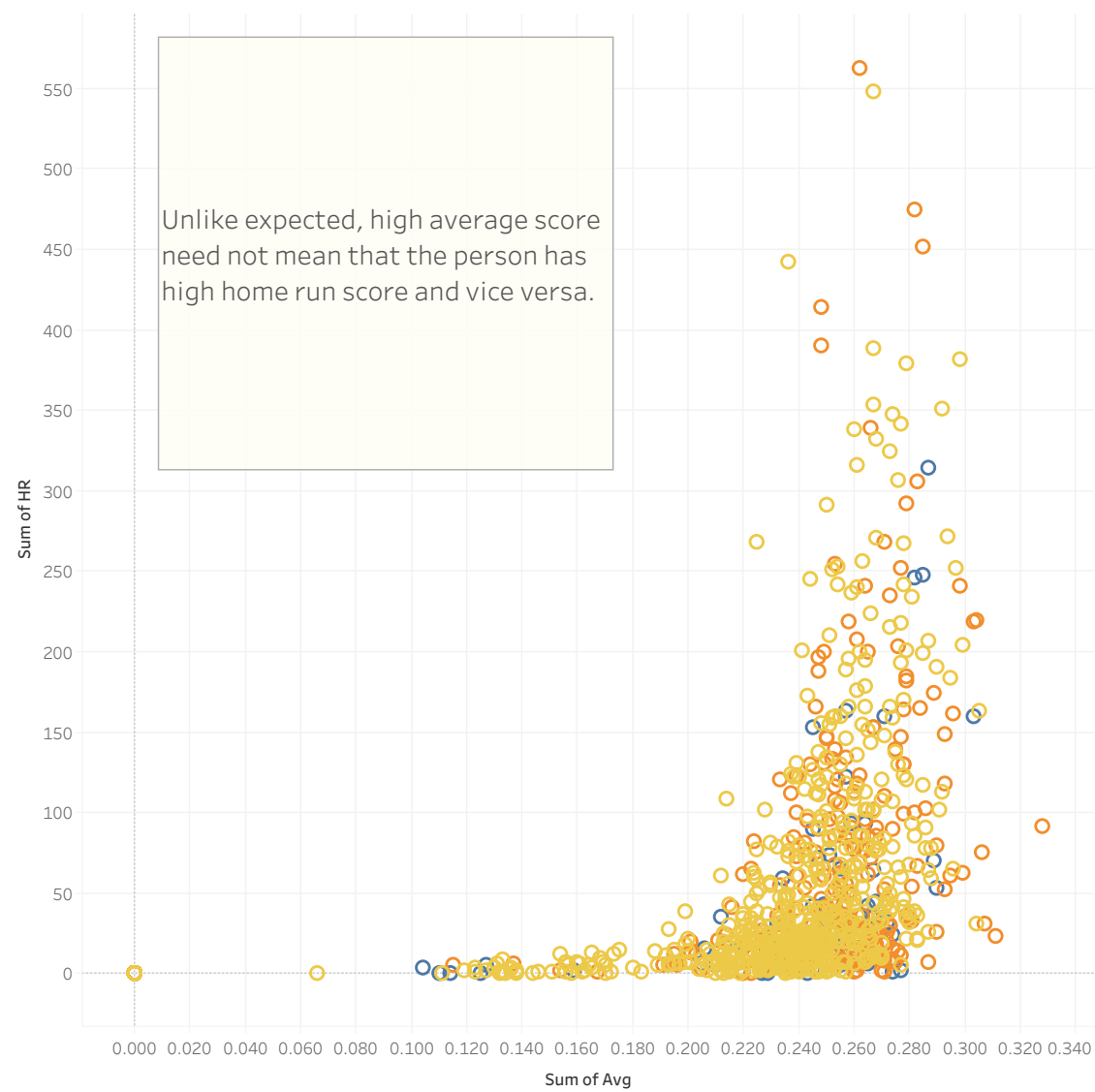
Let us look at the new word introduced in the previous slide, BMI.

Body Mass Index ($\frac{[Weight] \cdot 703}{[Height]^2}$) does help us to know the ideal height and weight ratio for a good player.

As indicated in the graph, 22-27 range (grayed out area) units for the BMI covers the top and major chunk of the dataset samples. Therefore, we had and will use 22-27 range in future story slides.

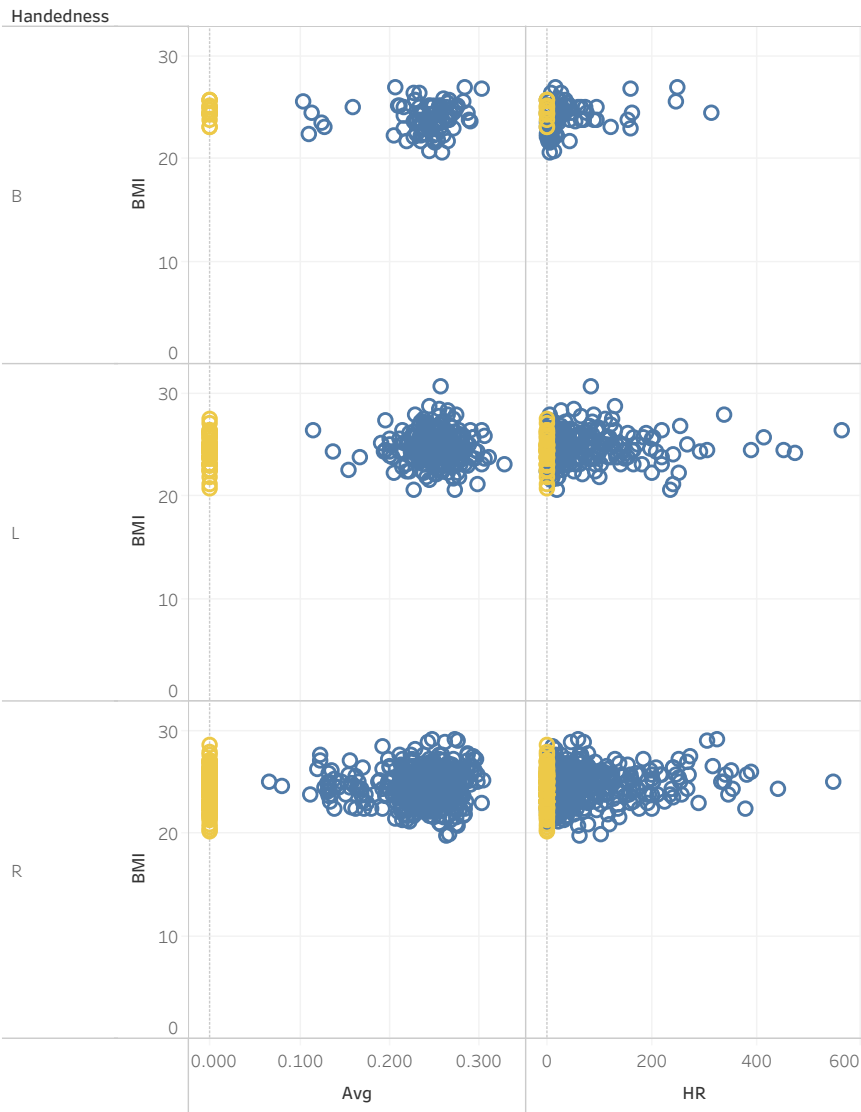
Baseball Story

Ouch !!!	Left or Right	BMI	Score Plot	Pitchers and Batters	Pitcher per Handedness Counts	IQR in Rescue operation
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Baseball Story

Left or Right	BMI	Score Plot	Pitchers and Batters	Pitcher per Handedness Counts	IQR in Rescue operation	Detailed look on Avg Score in IQR
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Pitchers are the ones who have average score and home runs score as zero in the given dataset (as shown in plot).

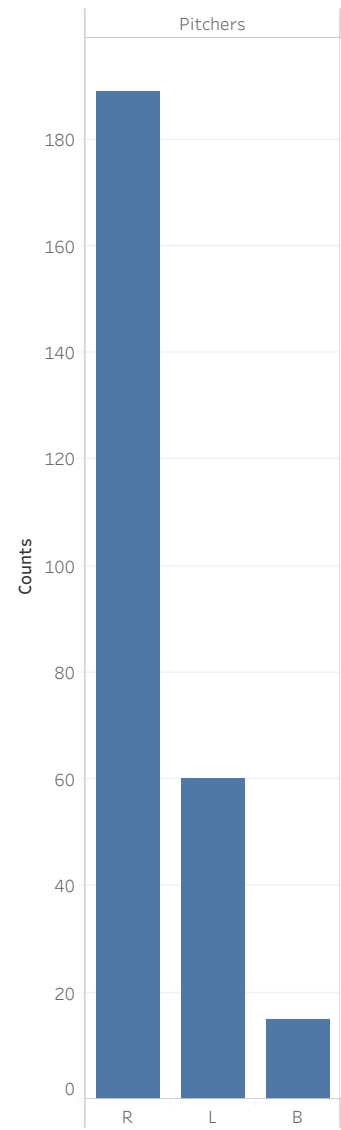
Our analysis is focussed on batting score and hence we need to take the pitchers out of the dataset. There are 266 Pitcher samples in the 1157 total dataset samples.

Moreover, as tableau aggregates the variable values, these pitchers values would bring down the average AVG or HR calculations.

Let us have the closer look on the pitcher in the next slide.

Baseball Story

BMI	Score Plot	Pitchers and Batters	Pitcher per Handedness Counts	IQR in Rescue operation	Detailed look on Avg Score in IQR	Avg IQR Study
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188 - Right handed pitchers
60 - Left handed pitchers
15 - right handed pitchers

Once we remove these outliers, the Quartile ranges are as indicated below:

Quartile 1 (Q1) has all the samples with less than 0.230 career batting averages.

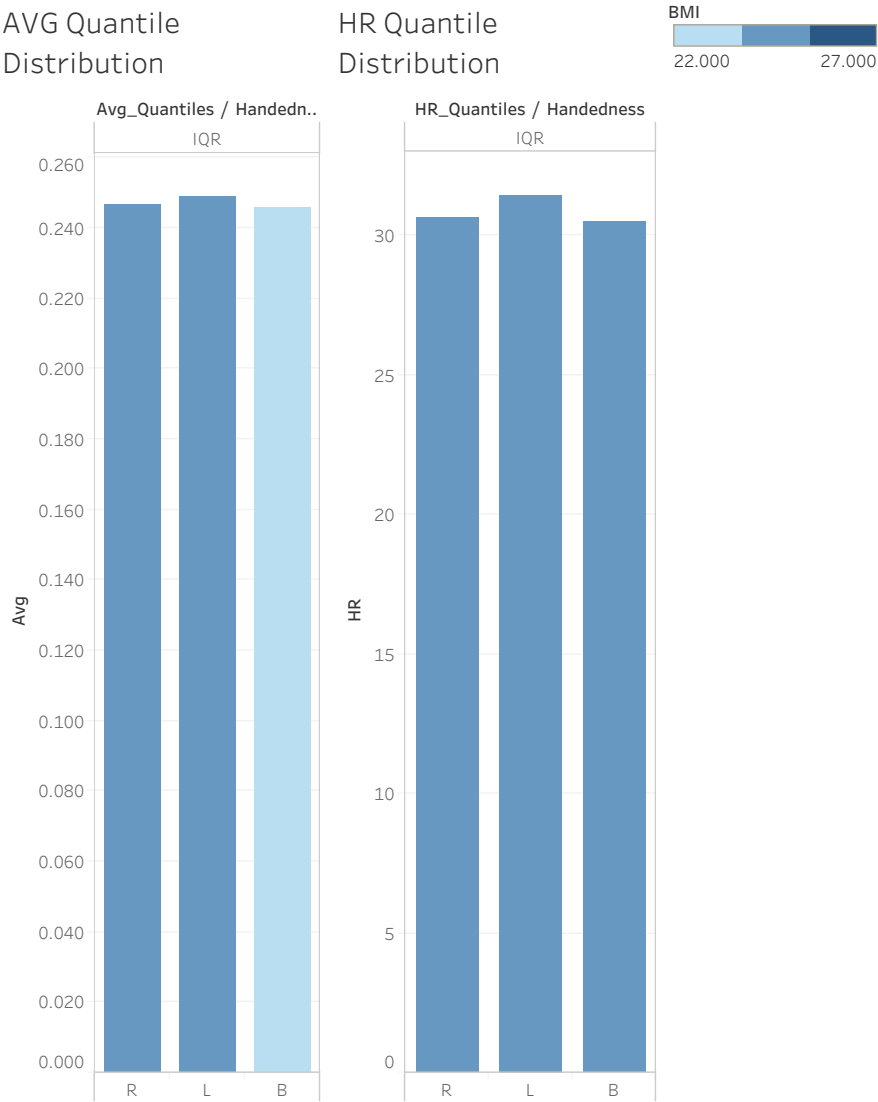
Inter Quartile Range (IQR) has all the samples in between 0.230 to 0.263

Quartile 4 (Q4) has all the samples greater than 0.263 career batting averages.

Similarly, for HomeRuns we have the Quartiles as Q1 (< 10), 10 <= IQR < 77 and Q4 (>77).

Baseball Story

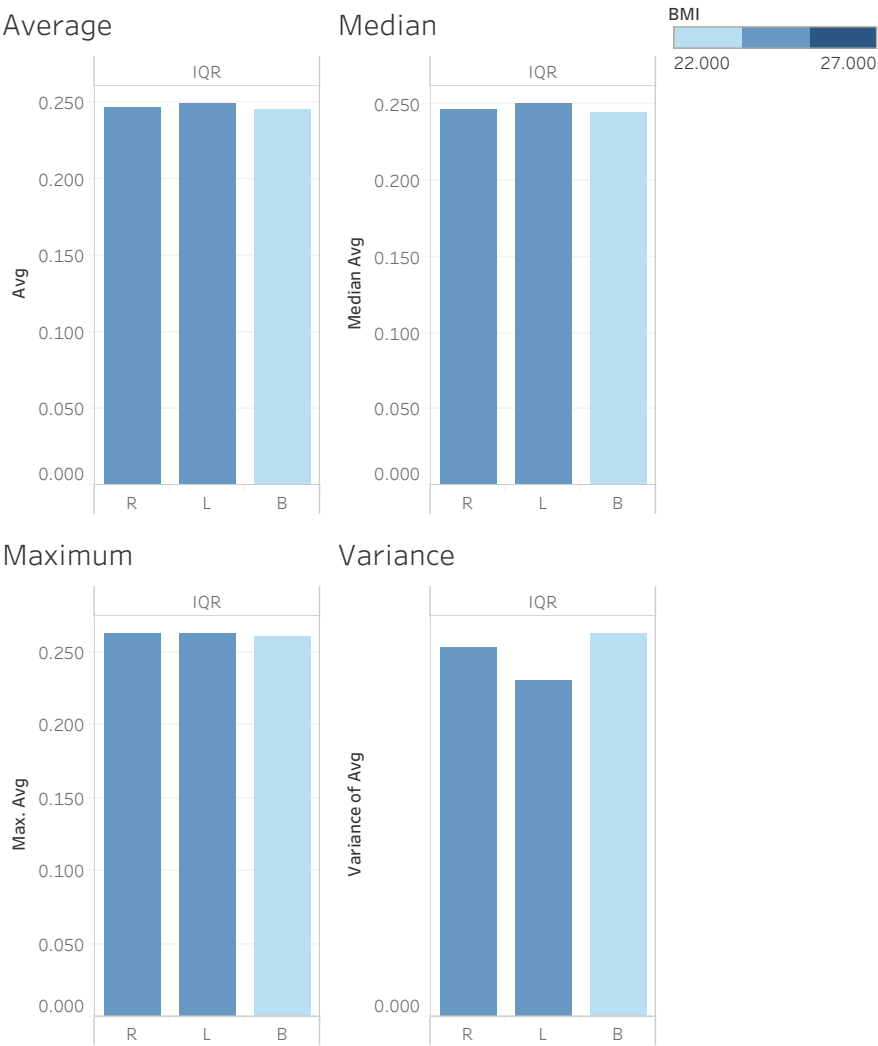
Score Plot	Pitchers and Batters	Pitcher per Handedness Counts	IQR in Rescue operation	Detailed look on Avg Score in IQR	Avg IQR Study	Detailed look on Avg Score in Q4
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Baseball Story

Pitchers and Batters	Pitcher per Handedness Counts	IQR in Rescue operation	Detailed look on Avg Score in IQR	Avg IQR Study	Detailed look on Avg Score in Q4	Avg Q4 Study
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Avg Score in IQR



Baseball Story

Pitcher per Handedness Counts	IQR in Rescue operation	Detailed look on Avg Score in IQR	Avg IQR Study	Detailed look on Avg Score in Q4	Avg Q4 Study	HR in IQR
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Mean, Median and Maximum score comparison between left, right and both handed batsment indicates that Avg Score is only marginally different from each other.

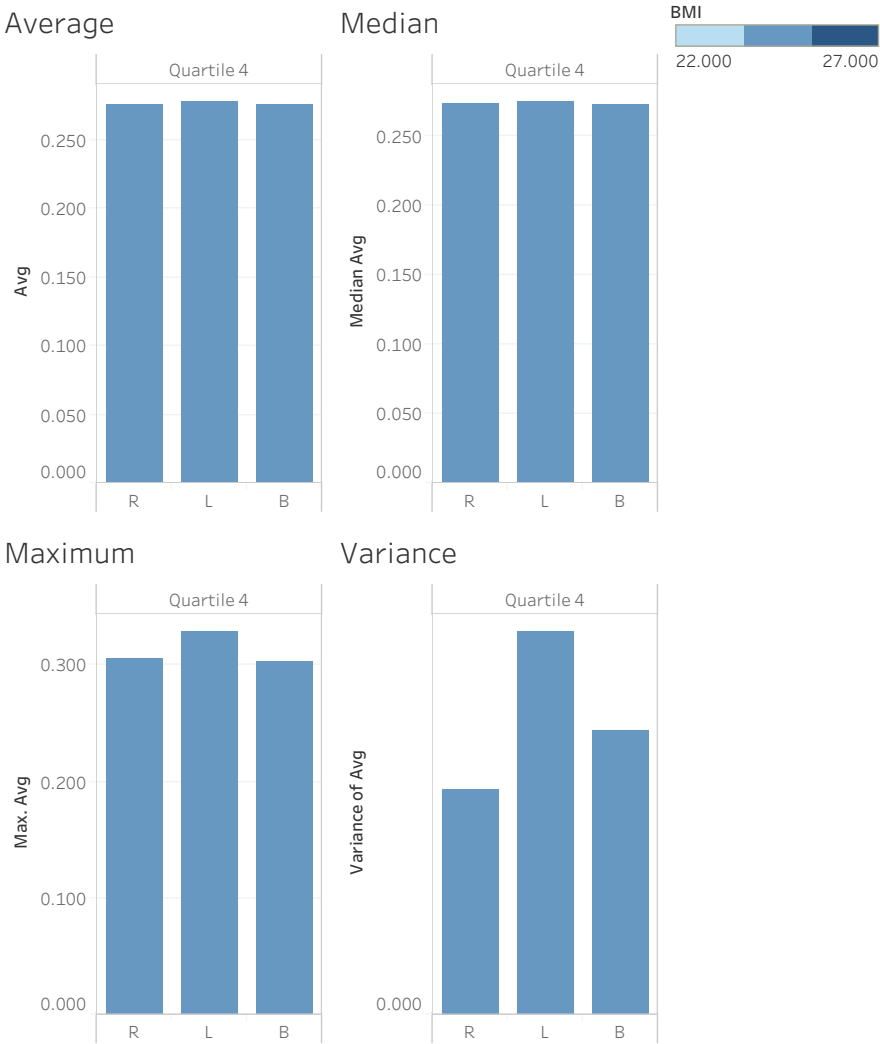
Here dip in the variance for Left handed batsmen indicates that left handed batsmen have (slightly) higher average when compared to other batsmen. Hence the difference between the max and the average reduces.

To conclude, we can safely say that there is no difference in the performance of the batters irreseective of their handedness.

Baseball Story

IQR in Rescue operation	Detailed look on Avg Score in IQR	Avg IQR Study	Detailed look on Avg Score in Q4	Avg Q4 Study	HR in IQR	HR in Q4
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Avg Score in Quartile 4



Baseball Story

Detailed look on Avg Score in IQR	Avg IQR Study	Detailed look on Avg Score in Q4	Avg Q4 Study	HR in IQR	HR in Q4	Conclusion
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Quartile 4 contains all the top scorer in the Dataset. Again in Quartile 4, we see that mean and median are almost the same.

Here, Max and Variance chart complement each other. Since average is comparable(almost the same) as that of other handed batsmen and we have highest score from left handed batsman ; we have variance high for left handed batsmen.

Yet Again, the charts indicate that the performance of the batters are independent of handedness.

Similar conclusion can be taken from the next two slides which talk about Home Run comparison between right, left and both handed batsmen in both IQR region and Quartile 4 region.

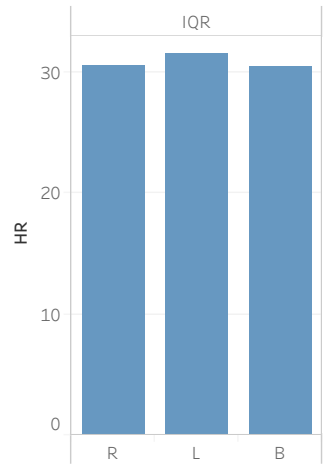
Please note that unlike we saw in case of Avg score, HR score comparison indicates right handed or both handed player have higher score than that of left handed batsmen.

Baseball Story

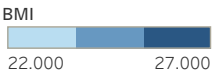
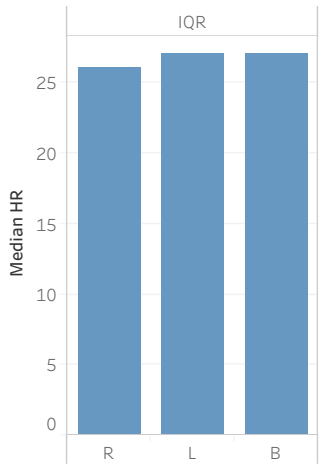
Avg IQR Study	Detailed look on Avg Score in Q4	Avg Q4 Study	HR in IQR	HR in Q4	Conclusion	Best Pitcher
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HR Score in IQR

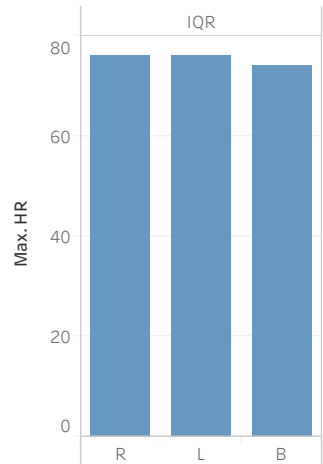
Average



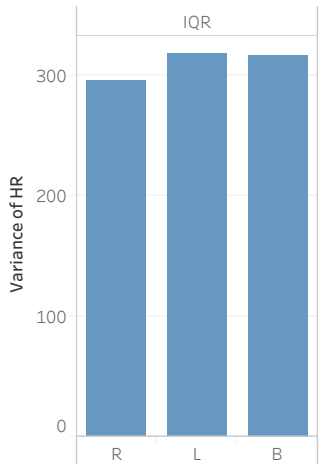
Median



Maximum



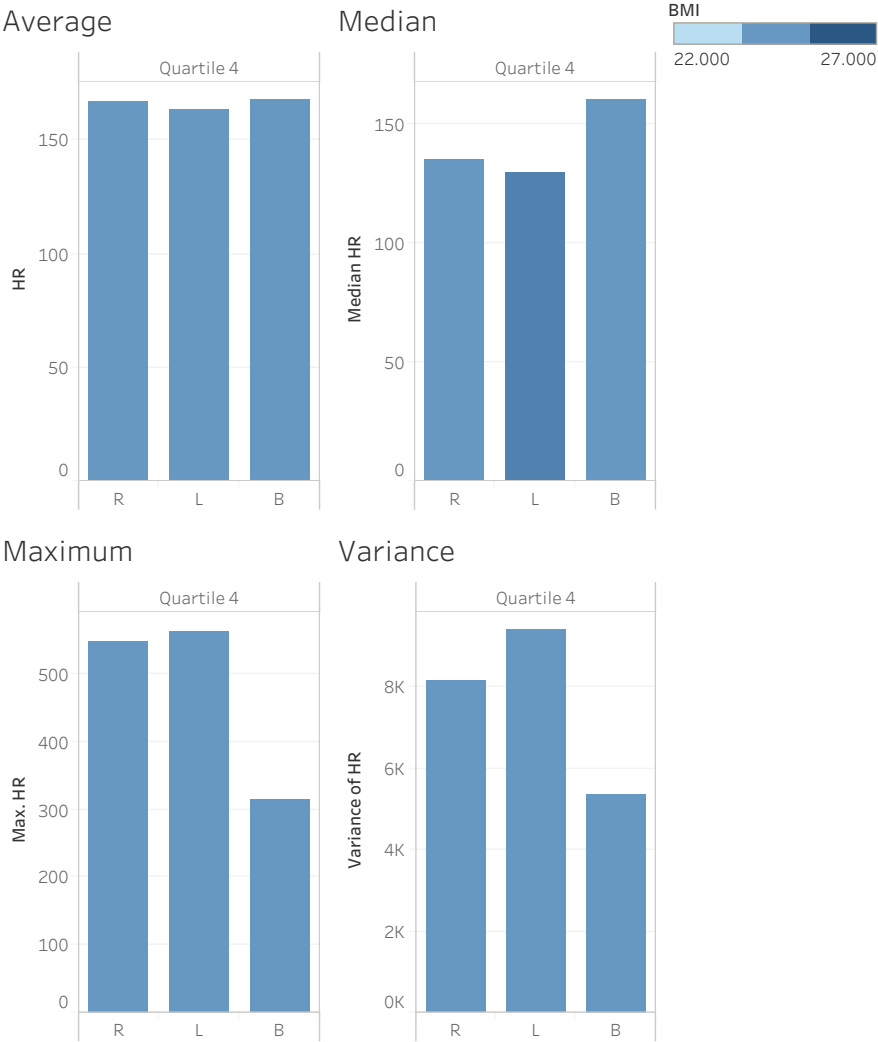
Variance



Baseball Story

Detailed look on Avg Score in Q4	Avg Q4 Study	HR in IQR	HR in Q4	Conclusion	Best Pitcher	Best Left Handed Batsman
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HR Score in Quartile 4



Baseball Story

Avg Q4 Study	HR in IQR	HR in Q4	Conclusion	Best Pitcher	Best Left Handed Batsman	Best Right Handed Batsman
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Conclusion

Both (left and right) handed battting score analysis indicates that there are no valid evidences to prove any one of them is better. The only thing we can derive out of the analysis is the BMI range. All the players in IQR and Q4 fall under the range of 23.5 - 24.89. And around 24.5 units being the top performer’s BMI.

It seemed like a left handed person has created this data set to win over right handed folks. Well, at least post this analysis, we agree that it not true. So, we shake hand !!! (of course, with right hand :P)

Baseball Story

HR in IQR	HR in Q4	Conclusion	Best Pitcher	Best Left Handed Batsman	Best Right Handed Batsman	Thank You
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Best Pitcher :

Over the course of this project, I have watched lot of baseball game snippets and kind of gained respect for it too. I have googled about couple of players from the dataset. The Dataset talks about batting score but includes Pitcher batting score too. Pitcher stat info was not there in the Dataset, so I took the all time best pitcher (as indicated by Google search result) snap here. Picture credit goes to Wikipedia and Google. As a minor tribute to the game and great players, I am putting snaps of key players I have Googled. A Grand Salute !!! :)



Baseball Story

HR in IQR	HR in Q4	Conclusion	Best Pitcher	Best Left Handed Batsman	Best Right Handed Batsman	Thank You
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Best Left handed Batsmen (from the Dataset)

[More images](#)

Rod Carew

Baseball first baseman

Rodney Cline Carew is a former Major League Baseball first baseman, second baseman and coach of Panamanian descent. [Wikipedia](#)

Born: 1 October 1945 (age 72 years), Gatún, Panama

Hits: 3,053

Batting average: .328

Home runs: 92

Hall of fame induction: 1991

Spouse: [Rhonda Carew](#) (m. 2001), [Marilynn Levy](#) (m. 1970–2000)

[More images](#)

Reggie Jackson

American baseball athlete

Reginald Martinez Jackson is an American former professional baseball right fielder who played 21 seasons for the Kansas City / Oakland Athletics, Baltimore Orioles, New York Yankees, and California Angels of Major League Baseball. [Wikipedia](#)

Born: 18 May 1946 (age 72 years), Wyncote, Pennsylvania, United States

Height: 1.83 m

Home runs: 563

Spouse: [Jennie Campos](#) (m. 1968–1973)

Number: 44 (New York Yankees), 9 (Oakland Athletics / Outfielder), 9 (Baltimore Orioles), 44 (Los Angeles Angels)

Baseball Story

HR in IQR	HR in Q4	Conclusion	Best Pitcher	Best Left Handed Batsman	Best Right Handed Batsman	Thank You
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Best Right Handed Batsmen (from the Dataset)



Bill Madlock

Baseball player

Bill "Mad Dog" Madlock, Jr. is a former Major League Baseball player. From 1973 to 1987, Madlock was a right-handed hitter who won four National League batting titles. [Wikipedia](#)

Born: 2 January 1951 (age 67 years), Memphis, Tennessee, United States

Height: 1.8 m

Bats: Right-handed

Weight: 86 kg

Runs batted in: 860

Batting average: .305



Mike Schmidt

Baseball third baseman

Michael Jack Schmidt is an American former professional baseball third baseman who played 17 seasons in Major League Baseball for the Philadelphia Phillies. [Wikipedia](#)

Born: 27 September 1949 (age 68 years), Dayton, Ohio, United States

Home runs: 548

Spouse: Donna Wightman (m. 1974)

Batting average: .267

Number: 20 (Philadelphia Phillies / Infielder)

Hall of fame induction: 1995

Baseball Story

HR in IQR	HR in Q4	Conclusion	Best Pitcher	Best Left Handed Batsman	Best Right Handed Batsman	Thank You
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Thank You :)