

Balls, Strikes, and Controversies:
The Career of Angel Hernandez

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1 An Honest Review of MLB Umpires

Today was a historic day in the MLB. Angel Hernandez has finally retired. Hernandez has had quite the career as an umpire, I can't say it was a great career but for sure it was historic. However I wanted to look further beneath the surface to see if there's any truth to him being the "worst" umpire in the MLB. I will utilize data sourced from the UmpScorecards ([UmpScorecards 2024](#)) project to assess who is objectively the worst umpire in the MLB.

2 A note on UmpScorecards Methodology

For a better understanding of the UmpScorecards methodology here are some useful links to UmpScorecards resources:

- [Explainers](#)
- [FAQs](#)
- [Glossary](#)

3 Table of Variables

Table 1: Table of Variables

Variable	Description	Type
Date	Date of the game	Date
Umpire	Name of the umpire	Character
Home	Home team	Character
Away	Away team	Character
R [H]	Runs scored by the home team	Integer
R [A]	Runs scored by the away team	Integer
PC	Pitches called	Integer
IC	Incorrect calls	Integer
xIC	Expected incorrect calls	Integer
CC	Correct calls	Integer
xCC	Expected correct calls	Integer
CCAx	Correct calls above expected	Numeric
Acc	Accuracy	Numeric
xAcc	Expected accuracy	Numeric
AAx	Accuracy above expected	Numeric
Con	Consistency	Numeric
Fav [H]	Favor to home team	Numeric
totRI	Total run impact	Numeric

4 A Reflection on Notable Angel Hernandez blunders

As a Phillies fan, I have quite a few fond memories of him over the last 3 seasons.

In April 2022, my favorite funny moment in baseball happened when Kyle Schwarber had a tantrum after a missed Angel Hernandez call. In a game against the Brewers when the Phillis were losing by 1 run in

the bottom of the 9th Kyle Schwarber found himself in a full count. Josh Hader deals him a pitch low and outside which Hernandez incorrectly calls a ball. Hernandez had an inconsistent strike zone all night, and Schwarber could not contain himself anymore. With 2 hands he overhead spikes his bat on the ground, then throws his helmet, and starts yelling at Hernandez. He points to both sides of the plate referring to the outside zone Hernandez had been missing the whole night. This resulted in Schwarber's ejection but it will forever be burned into my mind as an example of what makes people desire automated umpires.

One I'll never forget is a confrontation with Bryce Harper from the 2023 season. It was 1-1 with a full count in the bottom of the 3rd against the Pittsburgh Pirates. Bryce is dealt a pitch low and out of the zone that he checks his swing on, and Angel Hernandez makes a notable blunder saying Bryce goes around. Harper lost his mind on Hernandez's terrible call, and was promptly ejected from the game as a result.

5 Cleaning the Data

I conducted the data cleaning process utilizing the `pandas` (McKinney 2010) package in Python (script - `report.py`). I then utilized the `reticulate` (Ushey, Allaire, and Tang 2024) package in R to access the objects featured in this RMarkdown report, while utilizing `tidyverse` (Wickham et al. 2019), `bookdown` (Xie 2024), and `kableExtra` (Zhu 2024) to format and produce the PDF of this report.

Table 2: Overall Umpire Data

Umpire	GC	PC	IC	xIC	CC	xCC	CCAx	Acc	xAcc	AAx	Con	Fav [H]	totRI
adam beck	101	14989	827	993.0	14162	13996.0	1.660	94.508	93.374	1.133	94.031	-0.022	1.089
adam hamari	275	40090	2673	3014.2	37417	37075.8	1.288	93.316	92.471	0.843	93.394	-0.034	1.262
adrian johnson	258	38114	2983	2852.9	35131	35261.1	-0.533	92.172	92.510	-0.340	92.975	0.050	1.570
alan porter	261	36587	2316	2744.0	34271	33843.0	1.806	93.690	92.495	1.192	93.644	-0.035	1.284
alex mackay	33	4978	286	329.0	4692	4649.0	1.303	94.212	93.379	0.830	93.109	0.119	1.179
alex tosi	85	13190	684	907.5	12506	12282.5	2.629	94.813	93.107	1.709	93.829	0.120	1.061
alfonso marquez	269	38380	2804	2882.1	35576	35497.9	0.317	92.698	92.488	0.209	93.313	0.086	1.513
andy fletcher	246	34983	2890	2634.6	32093	32348.4	-1.115	91.695	92.441	-0.747	92.597	-0.051	1.657
angel hernandez	247	34592	2766	2626.6	31826	31965.4	-0.631	92.000	92.396	-0.393	92.622	0.007	1.681
anthony johnson	1	161	13	13.1	148	147.9	0.100	91.900	91.900	0.100	93.800	1.150	1.550

The data displayed above in Table 2 is a snippet of the data downloaded from UmpScorecards, and is a summary of the overall game-by-game data. This includes totals for the columns PC through xCC, and averages for the columns CCAx through totRI.

6 Angel Hernandez's Stats

Table 3: Angel Hernandez Data

Umpire	GC	PC	IC	xIC	CC	xCC	CCAx	Acc	xAcc	AAx	Con	Fav [H]	totRI
8 angel hernandez	247	34592	2766	2626.6	31826	31965.4	-0.631	92	92.396	-0.393	92.622	0.007	1.681

As we can see in Table 3 Angel Hernandez called over 247 games since the 2015 season, when UmpScorecards data begins, and this includes 34,592 pitches called in these games.

As a result I will arbitrarily constrict this to Umpires who have called within about 5,000 pitches less than Angel Hernandez, so we will use only umpires with $PC \geq 29,500$

7 So how bad is Angel Hernandez truly?

The best part about Angel Hernandez’s possibly forced retirement from umpiring is seeing the rejoice from the fans of Major League Baseball, yet the fairly opposite reactions of other umpires. The best example is of fellow bad umpire Joe West who commented on a radio talk show, “I know the lawyer that handled his case, and I know that when they went through everything that he was graded on, he was in the top 20 percent [of umpires]”.

If I’m being honest I have no idea who is letting a lawyer speak on the matter of Umpire performance, that does not make any sense. I would love to know what the statisticians and data scientists who analyzed Hernandez’s calls came to a conclusion on. Another thing that bothered me is Joe West’s criticism of UmpScorecards and in general review of umpires calls utilizing technology after the game. West stated “I hate the fact that these people that sit behind a desk and get behind a computer and send out all these social media things, they don’t know what they’re talking about.”

I find this funny because Joe West sounds like every other scared, low-performance umpire because after years of ineptitude technology is beginning to elucidate his flaws to the baseball community. I will continue to focus primarily on Joe West and Angel Hernandez from here on out.

Below is the full list of umpires ranked upon a few selected columns ranked using percentiles:

- In all of these rankings a value closer to 1 indicates better performance by the umpire, while values closer to 0 indicates worse performance.
- The **avg_rank** column is an average of the other **_rank** columns with the exception of **Fav_rank**. This aims to measure overall performance of the umpires based on the average percentile of their rankings in the following categories:
 - Accuracy (% of Correct Calls)
 - Consistency
 - AAX (Accuracy above Expected Accuracy)
 - IC_per_100 (Incorrect Calls per 100 pitches called)
 - totRI (total Run Impact)

Table 4: Experienced Umpires Data

Umpire	GC	IC_per_100	Acc_rank	Con_rank	AAX_rank	IC_per_100_rank	totRI_rank	avg_rank	Fav_rank
will little	238	19.95	1.000	0.964	1.000	0.982	0.982	0.986	0.286
pat hoberg	250	21.10	0.982	1.000	0.982	0.946	1.000	0.982	0.830
ben may	224	19.42	0.964	0.982	0.893	1.000	0.964	0.961	0.875
lance barksdale	266	23.15	0.911	0.929	0.946	0.839	0.929	0.911	0.321
alan porter	261	23.16	0.929	0.911	0.964	0.821	0.893	0.904	0.643
tripp gibson	264	23.48	0.946	0.821	0.911	0.750	0.911	0.868	0.571
john tumpane	255	23.44	0.839	0.946	0.857	0.768	0.875	0.857	0.259
quinn wolcott	243	22.50	0.821	0.839	0.875	0.875	0.804	0.843	0.759
nic lentz	226	21.33	0.893	0.714	0.795	0.929	0.821	0.830	1.000
sean barber	207	20.22	0.857	0.875	0.643	0.964	0.786	0.825	0.089

In Table 4 we see a dataframe containing the Percentile rankings for the columns with the exception of the **Fav_rank** which is simply the numerical rank in the Favor of calls for an umpire. A higher **Fav_rank** indicates the absolute value of the **totalRI** of the umpire was closer to a perfect favor of calls which is equal to 0.

As we can see from this Table of the Experienced Umpires with greater than 29,500 Pitches Called (PC), Will Little, Pat Hoberg, and Ben May have been the top 3 overall umpires based on Accuracy (Acc), Consistency (Con), Accuracy Above expected (AAX), Incorrect Calls per 100 Pitches Called (IC_per_100), and total Run Impact (totRI)

8 The Angel and Joe Show

Table 5: Angel Hernandez and Joe West

	Umpire	GC	IC_per_100	Acc_rank	Con_rank	AAx_rank	IC_per_100_rank	totRI_rank	avg_rank	Fav_rank
45	angel hernandez	247	27.66	0.232	0.071	0.250	0.286	0.107	0.189	0.938
51	joe west	209	26.88	0.018	0.161	0.036	0.411	0.018	0.129	0.536

Table 5 is a dataframe containing specifically the ranks of the umpires Angel Hernandez, and Joe West who we will be focusing on for analysis.

8.1 General Overview of their performance

As we can see from the above rankings Angel Hernandez and Joe West are low-performing umpires. To be clear, I'm utilizing the data available to the general public and this is not an opinion piece. From our rankings we are able to see that both of these umpires are in the bottom 20% of umpire performance.

Overall out of 56 MLB umpires with at least 29,500 Pitches Called (PC) since UmpScorecards data is available in 2015 MLB Season, Angel Hernandez and Joe West are the 46th and 52nd best performing MLB umpires respectively.

8.2 Discussing their Respectives Flaws

8.2.1 Angel Hernandez

Let's start with Angel Hernandez. Angel's worst traits when it comes to umpiring are his Consistency and his total Run Impact in the games he has umpired. He ranked in the 7th percentile for Consistency, and the 11th percentile for total Run Impact. These are both dreadful performances, and I believe these are the primary reasons why people were constantly on Hernandez's back and criticizing him more severely than other umpires.

Hernandez underperforms as an umpire but time and time again he does this in high leverage, and impactful situations within the games. As a fan this provides me a better understanding of why he's so widely disliked, recall the Phillies situations I mentioned earlier.

8.2.2 Joe West

As for Joe West, he is noticeably worst than Hernandez in every category with the exception of Consistency and incorrect calls per 100. The two statistics I want to highlight about West is that he is the 1st percentile for both Accuracy and total Run Impact. Since 2015, Joe West has been the least accurate umpire and the most negatively impactful umpire to terms in terms of runs. I don't believe there's much more needed to be said about Joe West to understand his poor performance.

8.3 Giving Credit where it's Due

I want to remark that the one thing I find statistically remarkable about Angel Hernandez during his umpiring career is that Hernandez ranks in the 95th percentile of umpires for the **Favor [H]** variable. This is good for 4th best amongst all umpires.

This variable measure the number of runs in favor of the home team where a positive value represents a benefit for the home team, while a negative value represents a benefit for the away team. The ranking was calculated using the absolute values of the **Fav [H]** column, where the closer a value is to 0 then the closer it's percentile is to 1.

I'm interested in this variable because despite Hernandez's lack of consistency and rather low accuracy on Pitch Calls he is usually hurting both teams about equally. While the impact of favor typically doesn't more

than around 0.1 runs per game in either direction, often times you will see umpires who favor the home/away teams consistently. I have to admit Angel Hernandez did a great job at being unbiased in his bad calls, a lot of respect for that.

Joe West I can't say the same for you, you were still mediocre at your best being in the 52nd percentile of umpires for Favor.

9 Conclusion

All in all Angel Hernandez has historically been a low-end performing umpire since 2015. There's no argument around it, from the objective data we have on umpires he has under performed compared to the rest of the MLB umpires. As for Joe West and the comments he made regarding Angel Hernandez, I have no idea what he is talking about or what statistics he is referencing. Obviously he is wrong in saying Angel Hernandez is top 20% of MLB Umpires perhaps he meant the bottom 20% and simply mispoke.

I would urge Joe West, regardless of his lengthy experience as an MLB umpire should probably remain quite on situations like this. Yes Joe West was an umpire for 43 seasons, but from the 6 years of games we have from him he should never discuss the performance of other umpires. Quite frankly he will probably only draw further criticism to himself with this statement, as in our rankings West was the 5th worst umpire in all of the MLB since 2015.

Furthermore, I hope that the data presented in this report could be utilized as a general ranking for monitoring the performance of umpires. The MLB Umpire Association is a controversial union, as they operate under near immunity from being fired due to performance. This promotes a "god complex" within the umpire community, and I believe they should be held responsible for their performance. Perhaps it could promote a possible model of Umpire relegation similar to soccer leagues. For example, if you are at or below the 20th percentile of overall umpire performance like Hernandez and West for an individual then you will be relegated for the next season to the Minor League Baseball (MiLB) system, and an MiLB umpire would be promoted likewise.

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