

MLB Most VALUABLE Players of the 2024 Season

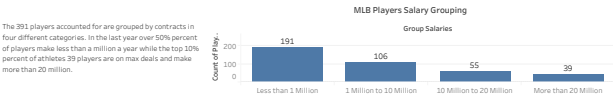
In this 2024 baseball season, we watched amazing athletes like Aaron Judge of the New York Yankees and Shohei Ohtani of the Los Angeles Dodgers play outstanding on the field. Both of these players have been rewarded with MVP awards and signed massive contracts in return for their past performances. These players deserve the value of the contract and are worth every penny for their team. Rather than looking at the top players who are most likely to win the award instead, I want to showcase players who have been underrated, underestimated, and of course, undervalued by the rest of the league.

To understand what players must analyze their contracts to view how much they are making on a per year basis using [Salary.com](#). Also analyzing their statistic this 2024 season so far looking at how well they performed and how the team is performing this season using [Baseball.com](#). I will be analyzing players who are that are minimum contract of \$720,000 a year and had 100 plate appearances. The number of players collected in this study is over 400 players, contracts, and table.

Collecting and Cleaning the Data

When gathering player contracts data from [Sportrac.com](#), downloading files for all 454 players, ranging from Shohei Ohtani's \$700 million contract to contracts with a minimum value of \$720,000. Next, we will collect data on player salaries from FanGraphs. On FanGraphs, I can filter results to include only players who have had at least 100 plate appearances in the Major Leagues, which reflects approximately 20 percent of the season. I collected standard statistics, win probability values, and Statcast statistics for 455 players.

I will export the data to Excel for examination and basic data cleaning. The first step is to remove columns that are unnecessary for my analysis. Then, I will search for and eliminate any duplicate entries from both spreadsheets. While reviewing the mlbplayercontract sheet, I noticed some contracts that have not yet started, so I will remove six contracts that are signed to begin in the 2025 season. Another discrepancy I encountered was between the "Player" column in the mlbplayercontracts sheet and the "Name" column in the mlbplayerstatistics sheet. The names in the statistics sheet included diacritical marks from various languages. To resolve this issue and ensure accurate matching of player names, I used the Find & Replace function to replace characters such as á, é, and ñ with their English counterparts a, e, and n. Once all the data is cleaned in Excel, it will be time to transfer the spreadsheets to Tableau.



Players Contribution and Value on the Field to their Team

Best Player's Contribution: Offense vs. Defense

To evaluate the most valuable player in the league, it's essential to examine how well-rounded a player is in contributing to their team's performance, without being restricted to either the offensive or defensive side of the field. This can be illustrated by plotting the values from various calculations provided by FanGraphs that measure a player's overall value.

Offense: This combines batting metrics, specifically Weighted On-Base Average (wOBA), and baserunning, particularly looking at stealing percentage in relation to the league average.

Defense: This combines fielding metrics, including Ultimate Zone Rating (UZR), and factors in positional adjustments compared to the league average.

Players Contribution among Offense vs Defense

Player's Contribution among Offense vs Defense (positive contribution and make less than 10 Million a Year)

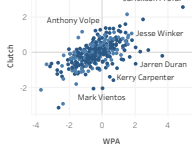
Players Contribution to Most Team Winning

In looking at the most significant players to their team in increasing the winning probability of the team in high leverage situations. FanGraphs have multiple calculations to measure a player's win value.

Win Probability Added (WPA): quantifies the percent change in a team's chances of winning from one event to the next. It does so by measuring the importance of a given plate appearance in the context of the game.

Clutch: measuring how well a player performed in high-leverage situations.

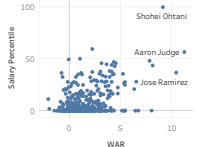
Player's Contribution to Team Wins



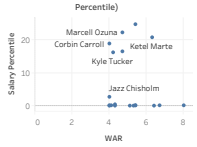
Player's WAR value vs their Salary

Finally looking at the WAR (Win Above Replacement) measuring a player's overall value in all facets of the game in how many more wins he's worth than a replacement-level player at his position. For position players: (The number of runs above average a player is worth in his batting, baserunning, and fielding + adjustment for position + adjustment for league + the number of runs provided by a replacement-level player) / runs per win. When comparing WAR value to their structure of contract when being compared to the rest of the league...

WAR versus Salary Percentile



WAR versus Salary Percentile (filter down to 4 plus WAR and less than 25 Percentile)

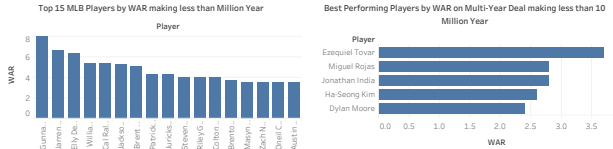


Among the 44 players evaluated, four stand out in particular. First is Red Sox outfielder Jarren Duran, who brings exceptional value as a batter, baserunner, and fielder. Next, Padres rookie outfielder Jackson Merrill and Brewers catcher William Contreras provide similar contributions as hitters and in their respective positions. Additionally, Reds shortstop Elly De La Cruz, a rising star for the franchise, is recognized as the top baserunner and fielder in the league. Honorable mentions for players who greatly contribute to their teams but may not excel in one specific area. Mariners catcher Cal Raleigh is noted as one of the best fielders in the league, while Gunnar Henderson is highlighted as the Orioles most significant offensive contributor.

One standout player in the league is Padres outfielder Jurickson Profar. With a clutch percentage of 2.98, he ranks second in the league. Additionally, his added win probability of 4.84 puts him fourth in the league, trailing only other All-Stars like Juan Soto, Aaron Judge, and Shohei Ohtani. Profar's exceptional batting and fielding skills in high-leverage situations are invaluable to his team. Other players, such as Blue Jays outfielder Dalton Varsho and Orioles rookie Jordan Westburg, also contribute significant value as hitters and outfielders in critical game moments.

There's a large transparency between players the chart between mid-level contracts and minimum contracts. For instance, Ozuna has a WAR value of 4.7 as a designated hitter, boasting a .925 OPS and hitting 29 home runs. Despite this, he is less valuable than Brent Rooker's 5.1 WAR, even though Rooker has a similar OPS and home run count while earning less than one percent of the high annual contract. Another comparison is between Ketel Marte, who has a WAR value of 6.3 as a second baseman, with a .952 OPS and above average defensive skills. In contrast, the Reds' Elly De La Cruz has a WAR value of 6.4, earns less than one percent of the high contract figures, and has a .829 OPS, but he excels as a baserunner and fielder in his category. These two players add more value to their teams this year compared to high-contract players who make multiple times more than their minimum salary.

Best Performing Players in terms of WAR (Wins Above Replacement)



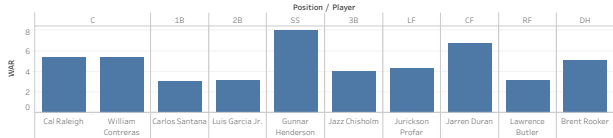
The result of One percentile of contracts being the lowest contracts in the league in 2024. The best performing player this 2024 season is Orioles Shortstop Gunnar Henderson. Henderson's 8.0 WAR performance is 5th overall in the league and significantly more than the second most valuable performance in Jarren Duran. Henderson's as a batter hitting .893 OPS with 37 Homers increase the Orioles Win Probability the most among the team..

Most significant players on multi-year deal with their team, there is one player that stands out the most from the 5 players that is Rockies Second Baseman Ezequiel Tovar. Tovar's 3.7 WAR is the highest among players with multiple years of control. Tovar making 9,071,429 this year and has 7 years left on his contract ending in 2031.

Team with the Ultimate Performances..

Identify the most valuable team accounting for their performance over the past year. Using WAR (win above replacement) again as the identifier and showcasing the top players in WAR by position...

Most VALUABLE Lineup in Baseball (Best Players accounting to WAR making less than 10 million)



In the lineup of players, we see some familiar faces who have consistently been among the most well-rounded contributors to their teams' win probabilities. A notable new face stands out as the best player at first, second, third base, and right field in the league, thanks to their Wins Above Replacement (WAR) and low-value contracts. Carlos Santana of the Twins is recognized as the top first baseman, with his value primarily stemming from his fielding ability. Next, we see Luis Garcia of the Nationals; Garcia does not stand out in any particular statistic category but does have high contribution towards win probability and runs created when he's on the field. Next, we see Jazz Chisholm of the Yankees, whose well-rounded performance has played multiple positions for different teams and provided high value in his bat at high-leverage situations. Lastly, Lawrence Butler of the Athletics emerges as the second-best value hitter on the team, following their designated hitter, Brent Rooker. This analysis is valuable as it highlights underrated players at their respective positions and showcases their contributions.

Conclusion of Discovering VALUABLE Players

In showcasing the value of certain players in their ability to get on base and contribute to their teams defensively, we find that some have been underrated, underestimated, and undervalued by the rest of the league. This year, one of the most underrated players has been Jarren Duran of the Boston Red Sox. Duran's performance has often been overshadowed by that of players like Aaron Judge of the New York Yankees, Juan Soto, and José Ramírez of the Cleveland Guardians, all of whom benefit from stronger team performances. Duran ranked fourth in extra-base hits and was in the top ten for runs created despite the lack of overall success by his team. When it comes to the most undervalued player, Ezequiel Tovar of the Colorado Rockies stands out. With a contract extending until 2031, Tovar's value is often overlooked in the league. He was among the top ten shortstops in Wins Above Replacement (WAR) and ranked in the top five for batting average on balls in play (BABIP) and runs created, yet he receives limited attention for his accomplishments at that position. Finally, regarding the most undervalued player, Jurickson Profar of the San Diego Padres deserves recognition for his contributions. Despite being on a relatively low-value contract compared to others, Profar has had an exceptional season, ranking as one of the best outfielders in runs created and weighted on-base average (wOBA). His performance in high-leverage situations has been among the best in the league, significantly boosting the Padres' winning percentage, second only to the likes of Aaron Judge, Juan Soto, and Shohei Ohtani. This analysis aims to highlight the impressive performances of these players and emphasize how deserving they are of recognition for their contributions to their teams.