Baseball Stats Analysis

(COMP3125 Individual Project)

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*Abstract*—This project goes in depth about Shohei Ohtani’s swing and batting stats compared to other players including Aaron Judge, Giancarlo Stanton, and Oneil Cruz. These stats are also compared between the Yankees and Dodgers. There was also analysis done on certain pitch types and different how different stats differ.

Keywords—Baseball, Swing, Batting, Sports, Statistics

# Introduction

Baseball is a precise sport where small changes in technique can create an entirely new swing, or pitch. Looking deep into these statistics can figure out the key to achieve the best outcome for players and coaches. Shohei Ohtani was one of the highest performing players in the Major League Baseball (MLB) in 2024. The versatility of him and other players are uncovered through comparing each other’s statistics.

# Datasets

## Source of dataset

All the data was copy and pasted from MLB’s website and another baseball statistic website from MLB called Statcast, or known as Baseball Savant. Both sources are credible since the statistics are generated straight from MLB. The data was copy and pasted into excel sheets which are easier to use.

## Character of the datasets

The size of the excel file is 620KB and there are 13 sheets in the workbook. There are 3 main types of sheets, swing stats, batting stats, and pitch stats. The swing stats look specifically into a swing, so that looks at exit velocity, launch angle, distance the ball was hit, the speed the pitch came in, and pitch type. The batting stats looked mainly at outcomes of hits, so plate appearances, at bats, runs, hits, doubles, triples, homeruns, runs batted in, walks, strikeouts, batting average, and slugger. The pitch stats included

# Methodology

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## Method B

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An excellent style manual for science writers is [7].

# Results

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## Result A

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## Results B

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## Results C

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1. Table Type Styles

| Table Head | Table Column Head | | |
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| Table column subhead | Subhead | Subhead |
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1. Sample of a Table footnote. (*Table footnote*)
2. Example of a figure caption. (*figure caption*)

Figure Labels: Use 8 point Times New Roman for Figure labels. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity “Magnetization”, or “Magnetization, M”, not just “M”. If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write “Magnetization (A/m)” or “Magnetization {A[m(1)]}”, not just “A/m”. Do not label axes with a ratio of quantities and units. For example, write “Temperature (K)”, not “Temperature/K”.

# Discussion

Example: xxx

# Conclusion

Example: xxx

##### Acknowledgment *(Heading 5)*

The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g”. Avoid the stilted expression “one of us (R. B. G.) thanks ...”. Instead, try “R. B. G. thanks...”. Put sponsor acknowledgments in the unnumbered footnote on the first page.

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