4 LAB MANUAL FOR STATISTICAL ANALYSIS

3. Understanding Your Data

The table below contains a data set that describes the top 25 salaries for major league baseball players as of opening day of the 2016 season:

| Player | Team | Position | Age (as of April 28, 2016) | Salary |
|-----------|---------------|-------------------|-------------------------------|--------|
| Kershaw | Dodgers | Pitcher | 28 | 34.57 |
| Greinke | Diamond Backs | Pitcher | 32 | 34 |
| Price | Red Sox | Pitcher | 30 | 30 |
| Verlander | Tigers | Pitcher | 33 | 28 |
| Cabrera | Tigers | 1st Base | 33 | 28 |
| Hernandez | Mariners | Pitcher | 30 | 25.85 |
| Sabathia | Yankees | Pitcher | 35 | 25 |
| Lester | Cubs | Pitcher | 32 | 25 |
| Howard | Phillies | 1st base | 36 | 25 |
| Pujols | Angels | Designated Hitter | 36 | 25 |
| Cano | Mariners | 2nd Base | 33 | 24 |
| Hamels | Rangers | Pitcher | 32 | 23.5 |
| Teixeira | Yankees | 1st Base | 36 | 23.13 |
| Mauer | Twins | 1st Base | 33 | 23 |
| Ramirez | Red Sox | 1st Base | 32 | 22.75 |
| Scherzer | Nationals | Pitcher | 31 | 22.14 |
| Upton | Tigers | Left Field | 28 | 22.13 |
| Tanaka | Yankees | Pitcher | 27 | 22 |
| Reyes | Rockies | Shortstop | 32 | 22 |
| Gonzalez | Dodgers | 1st Base | 33 | 21.86 |
| Crawford | Dodgers | Left Field | 34 | 21.61 |
| Werth | Nationals | Left Field | 36 | 21.57 |
| Ellsbury | Yankees | Center Field | 32 | 21.14 |
| Davis | Orioles | 1st Base | 30 | 21.12 |
| Shields | Padres | Pitcher | 34 | 21 |

- (1) What are the individuals (i.e., items of analysis) in this data set? Consider what each row in the table above represents to answer this question.
- (2) In addition to the players' names, how many variables does the data set contain? Which of these variables take numerical values?
- (3) What are the units in which each of the numerical values is expressed? For example, what does it mean when Howard's salary is listed as 25?
- (4) What is the most common position in the data set? What is the most common salary? Do you think the most common salary will be the same as the average salary? Why or why not?

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