

One source of data for this lab is the public Lahman database which contains a number of data sets with different units of observation. Below are the first few rows and some of the columns for two of these data sets: Teams and Batting. They contain data going back to 1871. Use these excerpts to help you answer the following questions.

| yearID | teamID | franchID | G   | W  | L   | R    | RA  | name                 |
|--------|--------|----------|-----|----|-----|------|-----|----------------------|
| 2014   | NYA    | NYN      | 162 | 84 | 78  | 633  | 664 | New York Yankees     |
| 2013   | WAS    | WSN      | 162 | 86 | 76  | 656  | 626 | Washington Nationals |
| 1997   | NYA    | NYN      | 162 | 96 | 66  | 891  | 688 | New York Yankees     |
| 1981   | PIT    | PIT      | 103 | 46 | 56  | 407  | 425 | Pittsburgh Pirates   |
| 1931   | NYA    | NYN      | 155 | 94 | 59  | 1067 | 760 | New York Yankees     |
| 1928   | BSN    | ATL      | 153 | 50 | 103 | 631  | 878 | Boston Braves        |

| playerID  | yearID | teamID | G   | AB  | R  | H   | BB | SO |
|-----------|--------|--------|-----|-----|----|-----|----|----|
| hammeja01 | 2016   | CHN    | 35  | 65  | 6  | 16  | 1  | 24 |
| mcewijo01 | 2002   | NYN    | 105 | 196 | 22 | 39  | 9  | 50 |
| jeffcmi01 | 1985   | CLE    | 9   | 0   | 0  | 0   | 0  | 0  |
| richmbe01 | 1933   | CHN    | 5   | 1   | 0  | 0   | 0  | 0  |
| cooneji02 | 1925   | SLN    | 54  | 187 | 27 | 51  | 4  | 5  |
| mcinnst01 | 1919   | BOS    | 120 | 440 | 32 | 134 | 23 | 11 |

1. What is the unit of observation for the Teams data set? What about for the Batting data set?
2. Write out two questions about baseball that could answered purely through *summaries* of these data sets (numerical summaries or plots).
3. Write out *predictive* questions (two classification and two regression) that you could answer about baseball using the data sets above. Identify a response variable for each.

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7. Some people believe analytics is ruining baseball because Teams are more cautious which makes the games less entertaining. Do you agree or disagree? Why? Answer in two or more sentences.