An Analysis of Baseball Statistics

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CSE 140
Research Questions

• What is the association between baseball statistics and fan attendance?

• What is the association between baseball statistics and team salary?
Motivations

• Attendance is important for financial stability of baseball franchises
• Teams spend millions of dollars to hire players with the best talent
• Results could be useful for MLB marketing strategists or team owners/managers/scouts
Methodology

- Select 5 batting and 5 pitching stats
- Compare to attendance and salary
- Compute Pearson's correlation
- Interpret strength of association

\[ r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{\left(\sum X^2 - \frac{(\sum X)^2}{N}\right)\left(\sum Y^2 - \frac{(\sum Y)^2}{N}\right)}} \]
Results

• Attendance
  o Batting: Batting Average (.5257)
  o Pitching: Runs per game (.4514)

• Salary
  o Batting: Batting Average (.4849)
  o Pitching: Strikeouts (-.5332)