

Lab Exercise 4 (Descriptive Statistics)

IT2110 - Probability & Statistics

Week 04

Major League Baseball is known as “America’s pastime.” The role of Major League Baseball has been ingrained into American culture. The heroic figures and memorable moments of Major League Baseball reflect the type of attitude that American culture is built on. Given below are some measurements observed in this significant sport during the 1998 league.

X1 = Team Attendance

(Average number of spectators for a match that the team play)

X2 = Team Salary

(Earning of the team)

X3 = Years

(Years since the team has owned a stadium)

1. Identify the variables and enter the given data set into R.
2. Obtain the following for each variable
 - a. Box-Plot, Histogram and Stem-Leaf Plot.
 - b. Mean, Median and Standard Deviation.
 - c. First and Third Quartile.
 - d. Interquartile Range.
3. Write a function to find the modes of a given set of values. Check the function by finding the mode of the variable “Years”.
4. Write a function that would produce the outliers when the values are given. Check the function with the 3 variables in the dataset.

Team	Team Attendance (X₁)	Team Salary (X₂)	Years (X₃)
Atlanta Braves	3.361	59.536	3
New York Mets	2.288	49.518	35
Philadelphia Phillies	1.716	34.370	28
Florida Marlins	0.914	9.162	23
Houston Astros	1.750	33.434	12
Chicago Cubs	2.450	40.629	34
St. Louis Cardinals	2.623	49.433	85
Cincinnati Reds	3.195	52.575	33
Milwaukee Brewers	1.794	21.995	29
Pittsburgh Pirates	1.812	32.393	46
San Diego Padres	1.561	13.352	29
San Francisco Giants	2.556	45.368	32
Colorado Rockies	1.926	40.571	39
Arizona Diamondbacks	3.089	47.970	37
New York Yankees	3.789	47.435	4
Boston Red Sox	3.603	30.572	1
Toronto Blue jays	2.950	63.461	76
Baltimore Orioles	2.344	51.647	87
Tampa Bay Devil	2.454	48.666	10
Cleveland Indians	3.685	68.988	7
Chicago White Sox	2.506	25.318	9
Kansas City Royals	3.467	59.584	5
Minnesota Twins	1.391	36.840	8
Detroit Tigers	1.495	32.963	26
Texas Rangers	1.166	26.183	17
Anaheim Angels	1.409	22.725	87
Seattle Mariners	2.927	55.305	5
Oakland Athletics	2.519	38.702	33
Montreal Expos	2.644	52.027	23
Los Angeles Dodgers	1.232	20.063	33