

Average Salaries for 30 Atlanta Falcons, 2018

| Player          | Avg Salary (millions) | Player         | Avg Salary (millions) | Player        | Avg Salary (millions) |
|-----------------|-----------------------|----------------|-----------------------|---------------|-----------------------|
| Matt Ryan       | 30                    | Jake Matthews  | 14.5                  | Julio Jones   | 14                    |
| Desmond Trufant | 14                    | Robert Alford  | 9.5                   | Alex Mack     | 9                     |
| Devonta Freeman | 8                     | Andy Levitre   | 8                     | Mohamed Sanu  | 6.5                   |
| Ricardo Allen   | 6.5                   | Ryan Schraeder | 6.5                   | Matt Schaub   | 4.5                   |
| Brooks Reed     | 4.5                   | Brandon Fusco  | 4.5                   | Vic Beasley   | 3.5                   |
| Matt Bryant     | 3.5                   | Jack Crawford  | 3                     | Ben Garland   | 3                     |
| Calvin Ridley   | 3                     | Keanu Neal     | 2.5                   | Tevin Coleman | 1                     |
| Austin Hooper   | 1                     | Justin Hardy   | 0.5                   | Grady Jarrett | 0.5                   |
| Richard Jarvis  | 0.5                   | Brian Poole    | 0.5                   | Justin Zimmer | 0.5                   |
| Russell Gage    | 1                     | Ito Smith      | 1                     | Deion Jones   | 1                     |

1. Create a dotplot of the salary.



Complete the following table.

|                |          |      |         |     |    |   |    |     |
|----------------|----------|------|---------|-----|----|---|----|-----|
| Variable       | <i>n</i> | Mean | St. dev | Min | Q1 | M | Q3 | Max |
| Average Salary |          |      |         |     |    |   |    |     |

2. Find the percentile for Brooks Reed's salary. Explain what this means.
3. Find the z-score corresponding to Reed's salary. Explain what this means.
4. Find the percentile for Tevin Coleman salary. Explain what this means.
5. Find the z-score corresponding to Tevin Coleman's salary. Explain what this means.

6. Find the percentile for Matt Ryan's salary. Explain what this means.
7. Find the z-score corresponding to Ryan's salary. Explain what this means.
8. Based on his z-score, would you consider Matt Ryan's salary to be unusual? Why or why not?
9. Prove whether or not Matt Ryan's salary is an outlier. Make sure to use the formula.
10. Which player has a z-score close to 2.5? (Hint:  $z = 2.5$ , Solve for  $x$ )
11. Which player has a z-score close to -0.5?
12. Describe using vocabulary and calculations, describe the distribution of the 30 Atlanta Falcon average salaries.
  - a. Shape
  - b. Best measure of center (Mean/median)
  - c. Best measure of spread (Standard Deviation, IQR)