

Analysis of Player Salaries and Team Success in the NFL (2020-2024)

Megan Tetrick, Brendan Sullivan, Anne Oddan

Introduction

- Examining the relationship between player salaries and team success.
- Player salaries vary by player position, skill level, experience and contract negotiables.
- Team success is assessed by win-loss records, playoff appearances, and performance in the post season.

Data Dictionary

Field Name	Data Type	Description
Date	Date	The date the game was played
Day of the Week	String	The day of the week the game was played (e.g., “Thu”, “Sun”, “Mon”)
Winning Team Name	String	The winning team
Losing Team Name	String	The losing team
Winning Team Score	Integer	The number of points scored by the winning team (WT)
Losing Team Score	Integer	The number of points scored by the losing team (LT)
Type	String	The type of game (i.e., “Regular Season” or “Playoff”)
Year	Integer	The season year (e.g., 2020, 2021, etc.)
Winning Rank	Integer	The winning team's salary cash ranking (1 being the highest total cash salary) by each season
Winning Team Record	String	The winning team’s win-loss-tie record
Winning Signed Players	Integer	Total number of signed players on the winning team

Data Dictionary

Field Name	Data Type	Description
Winning Avg Age	Float	Average age of the signed players on the winning team
Winning Active Cash	Integer	The money that is currently allocated to players and counts against the winning team's salary cap for the season
Winning Dead Cash	Integer	Money that is still owed to players from a previous contract but is no longer counted against the winning team's active salary cap
Winning Total Cash	Integer	The total amount of money players will earn in a given season, including both active and dead cash, of the winning team.(Base salary, signing bonuses, roster bonuses, performance incentives, and any dead money)
Losing Rank	Integer	The losing team's salary cash ranking (1 being the highest total cash salary) by each season

Data Dictionary

Field Name	Data Type	Description
Losing Team Record	String	The losing team's win-loss-tie record
Losing Signed Players	Integer	Total number of signed players on the losing team
Losing Avg Age	Float	Average age of the signed players on the losing team
Losing Active Cash	Integer	The money that is currently allocated to players and counts against the losing team's salary cap for the season
Losing Dead Cash	Integer	Money that is still owed to players from a previous contract but is no longer counted against the losing team's active salary cap
Losing Total Cash	Integer	The total amount of money players will earn in a given season, including both active and dead cash, of the losing team.(Base salary, signing bonuses, roster bonuses, performance incentives, and any dead money)

Initial Analysis

- Team success (wins) in relation to salary
- Superbowl winner salaries versus league average salary

Road Map – moving forward

- Model training and evaluation
- Interpretation of results and insights

Question we have

- Feedback follow-up: Dataset merging - would also want the information for the losing team as your dataset is going to be disproportionately dominated by winning teams.
 - Was losing data added in the best way?
- Any suggestions for specific analysis that you believe would be beneficial?