

# Brian Mitchell

Portfolio for Induction  
into the Pro Football  
Hall of Fame

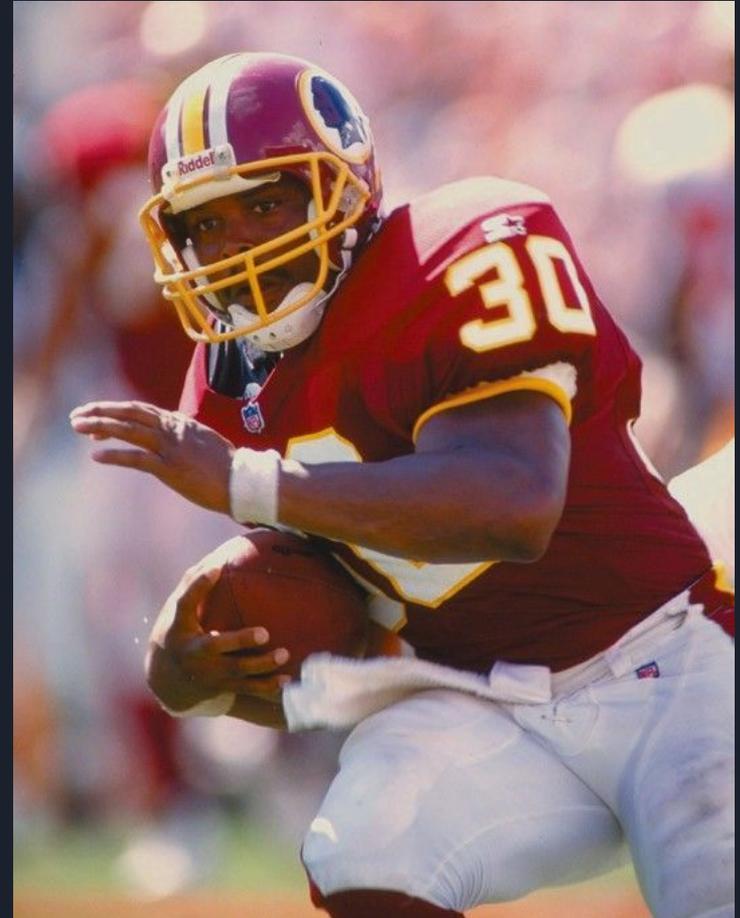
By the St. Albans School  
Sports Analytics Club  
Washington, D.C.



# Our Purpose

As students of a Washington, D.C.-based school, we at St. Albans School are all avid fans of D.C. sports teams. One of the most beloved of these teams being the Washington Football Team/Redskins. As the most prolific kick returner in Washington Football Team history, Brian Mitchell has placed himself in the spotlight of the Team's fans everywhere.

Recognizing this world class career, we developed this advanced statistical analysis portfolio proving that Mitchell belongs with the NFL greats enshrined in the Pro Football Hall of Fame. He would be the first return specialist in League history to accomplish this feat. We believe that the longevity of his excellence and record breaking numbers makes him more than qualified to stand amongst the greats of pro football.



# Research Description

In this portfolio we leverage traditional statistics as well as advanced statistics to build a case for Mr. Mitchell to be the first return specialist inducted into the Pro Football Hall of Fame.

First, we will analyze Mr. Mitchell's body of work in the context of NFL career leaders in key statistical areas.

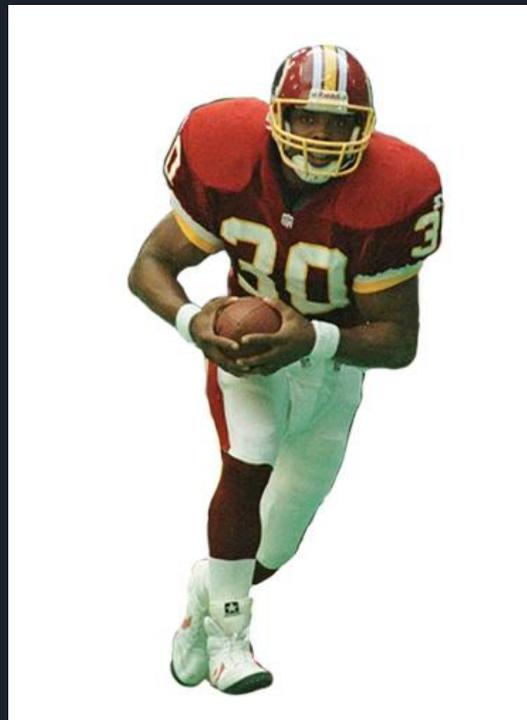
Second, we will use an advanced statistical analysis technique called K-Nearest Neighbors to analyze Mr. Mitchell's overall team contribution by evaluating every kick return of his career relative to other kick returners during this time. To accomplish this we compiled a database of every kickoff and punt return in the NFL between 1990 and 2003 (length of Mr. Mitchell's career). This dataset includes key data points including kick location, kick length, fielding location, game quarter, game score, among others.



# Traditional Statistics & Accomplishments

# Brian Mitchell Accomplishments

- **1x** Super Bowl Champ
- **1x** NFL 1st team All-Pro
- **2x** NFL 2nd team All-Pro
- **1x** Pro Bowler
- **2x** 1st team All-Conference
- **4x** League leader all purpose yards
- **6x** Player of the Week winner
- **1 of 5** players to have 4 seasons of 2,000+ yards
- Nominated for 2017 HOF class
- In Redskins Ring of Fame

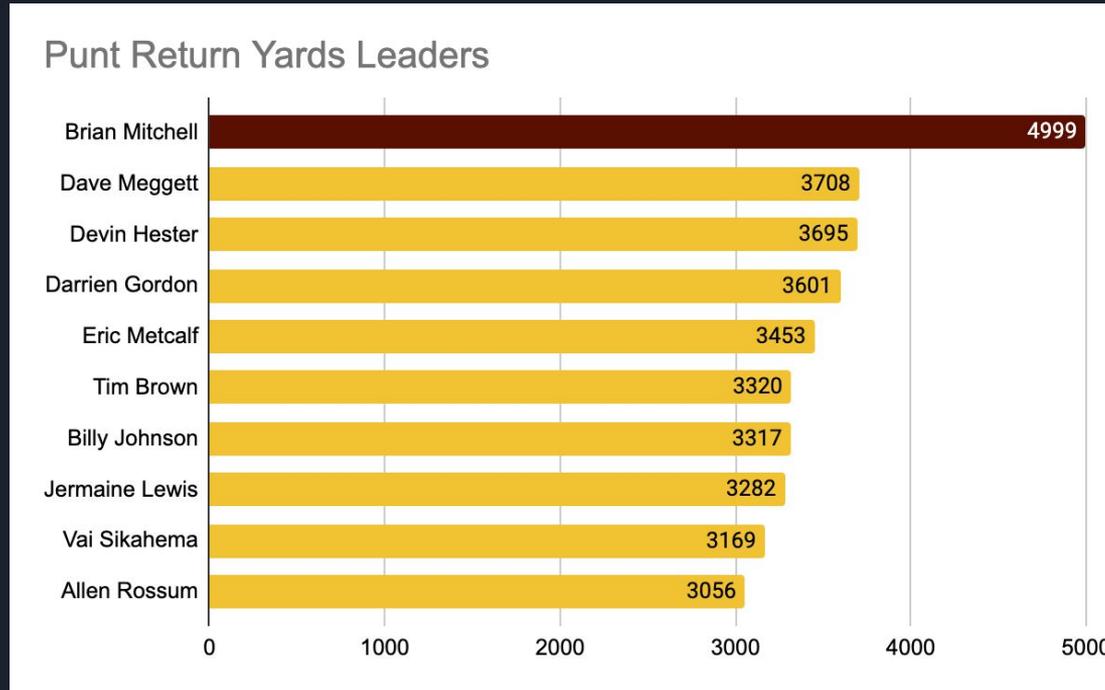


# Brian Mitchell League Records



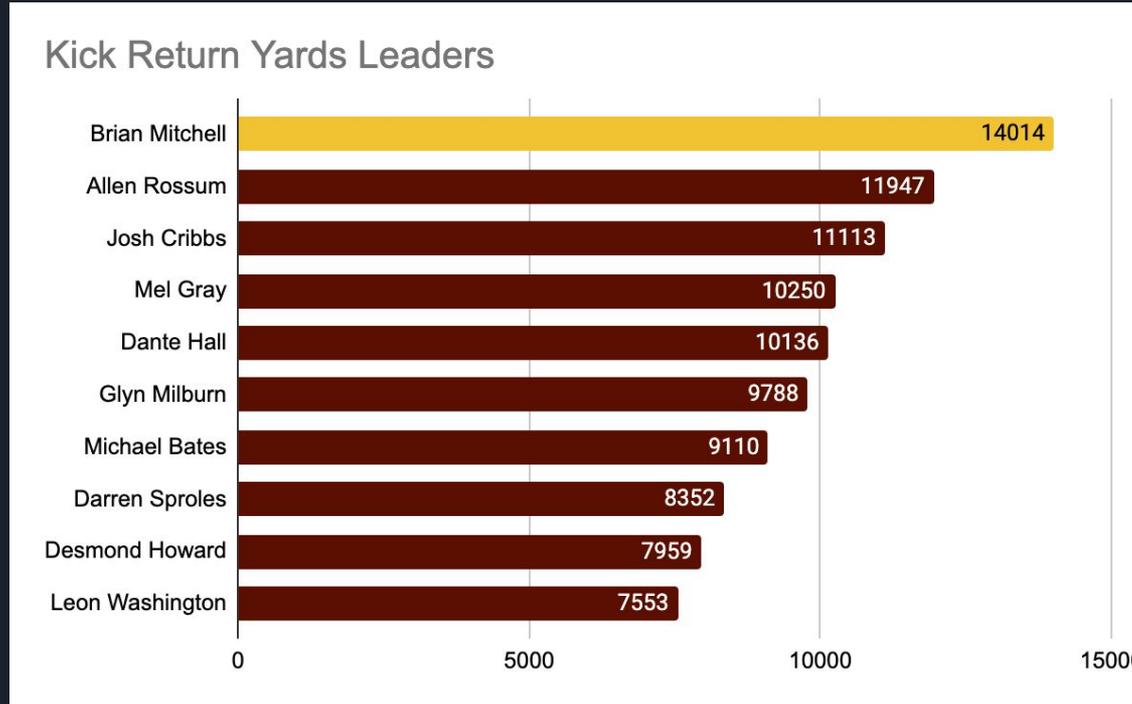
- **1st** all time kickoff return yards
- **1st** all time punt return yards
- **1st** all time kickoff returns
- **1st** all time punt returns
- **2nd** all time in all purpose yards
- **3rd** all time punt return TDs (9)
- **5th** all time in non-offensive TDs (13)

# All-Time Punt Return Yards



**Mitchell is the all-time leader in Punt Return Yards by over 1,200 yards.**

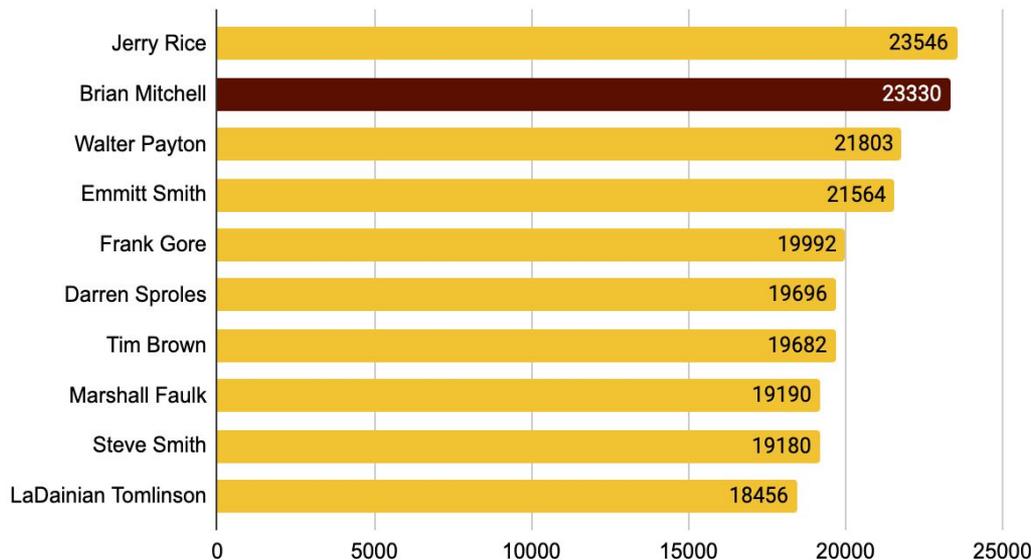
# All-Time Kickoff Return Yards



**Mitchell retired as, and still is, the all-time leader in Kickoff Return Yards by a considerable margin - over 2,000 yards.**

# All-Time All Purpose Yards

All-Purpose Yards Leaders



\*Data as of the end of the 2020-2021 season



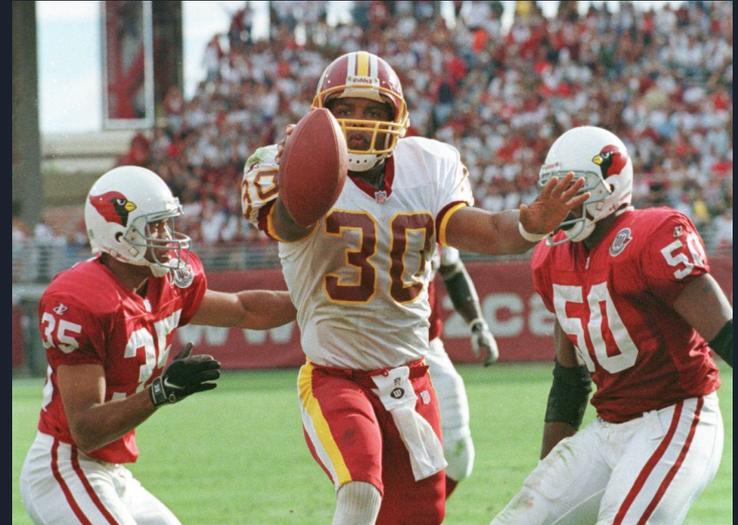
**Mitchell is second only to the great Jerry Rice, trailing him by only 216 yards despite playing six fewer seasons than Rice.**

# Advanced Statistics

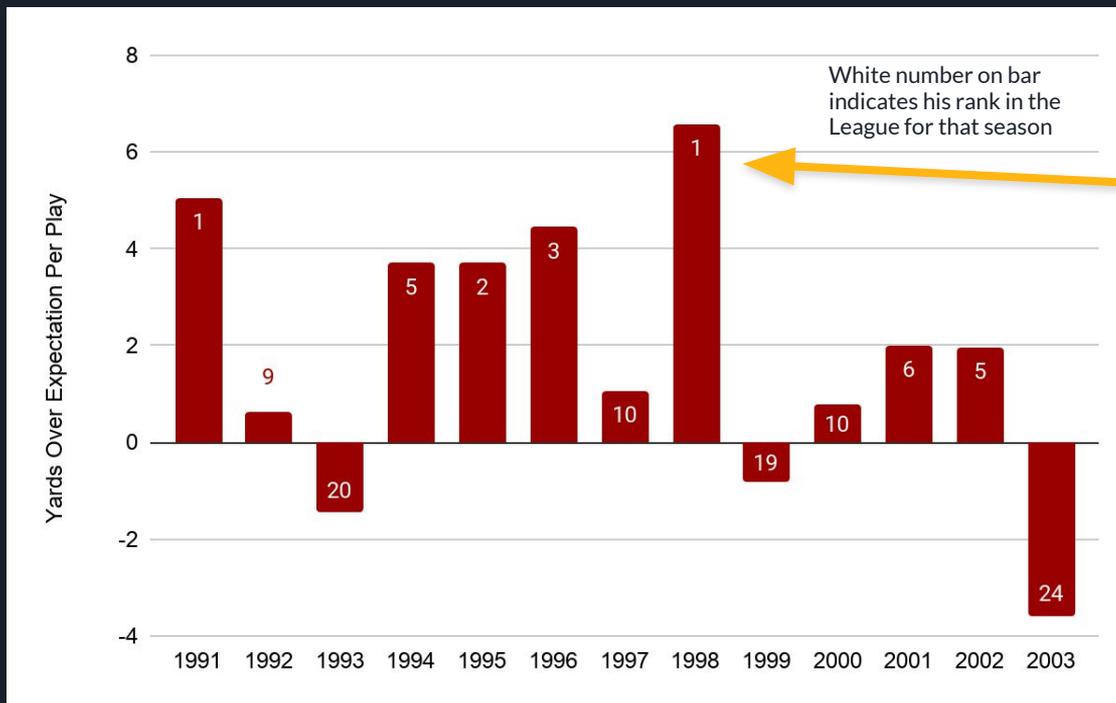
# K-Nearest Neighbors Algorithm

Since there are no pure kick return specialists in the Pro Football Hall of Fame, there are no direct HOF member comparables. However, we have used an advanced statistical technique called the K-Nearest Neighbors Algorithm to evaluate Mitchell's performance vs his returner peers during his era. This algorithm combs through every punt and kickoff return between 1990 and 2003 to predict how long a return will be based on kickoffs and punts of similar conditions (starting field yard line, kick length, fielding yard line, etc). This model is then applied to each kickoff and punt return in the dataset to show how many more or less yards the actual return was as compared to its expected value [Yards Over Expectation - YOE].

This metric helps us quantify the value of the returner as the higher the yards over expectation, the better the starting field position for the offense.



# Punt Return Yards Over Expectation - Per Play

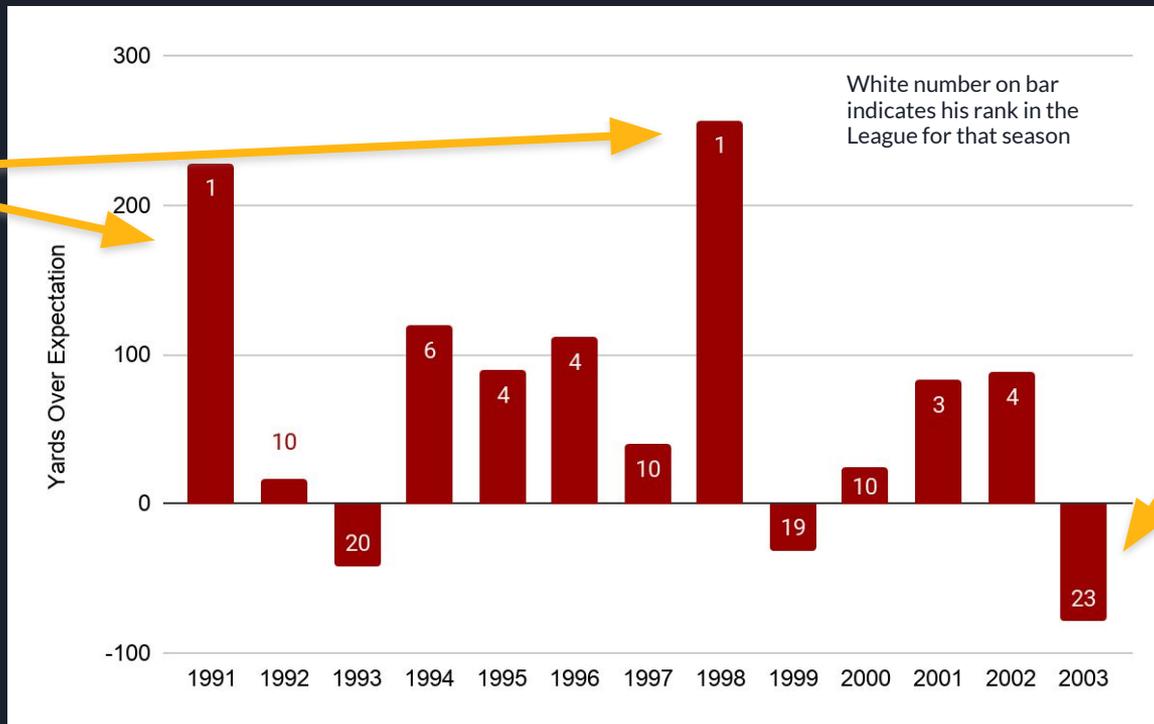


In his best year, Mitchell's punt returns were on average 6.6 yards longer than peer returners in similar situations.

\*Players must have met minimum number of returns to qualify (see appendix)

**Mitchell was an elite punt returner finishing in top 10 of punt return YOY in 10 seasons. He even finished top 6 in over half of his qualifying seasons.**

# Punt Return Yards Over Expectation - Season Total



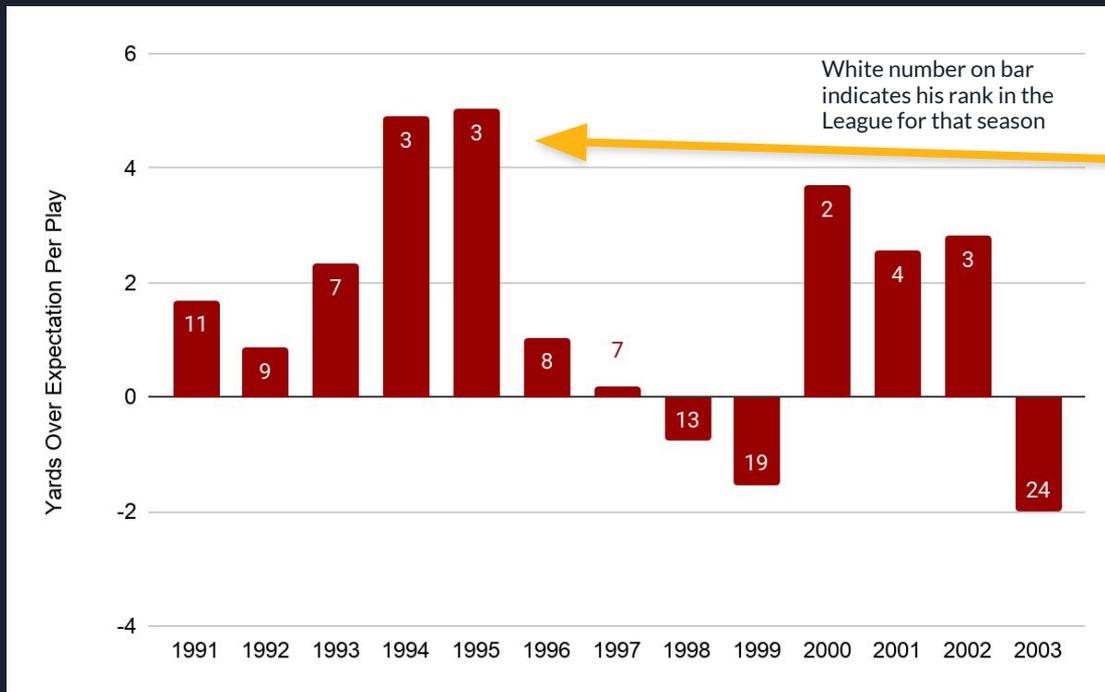
In his two best punt return YOE seasons, Mitchell gave his offense over 225 yards extra of field position versus what the average returner would be expected to do.

“In 2003, it was a constant battle between me and the Special Teams Coach. He was trying to make me into a returner in year 14 that I was never in my previous 13 seasons.”  
--Brian Mitchell

\*Players must have met minimum number of returns to qualify (see appendix)

Showing his longevity and consistency, Mitchell sustained his elevated punt return play for full seasons, often ranking in the top 5, and rarely not in the top 10, for total yards over expectation.

# Kickoff Return Yards Over Expectation - Per Play

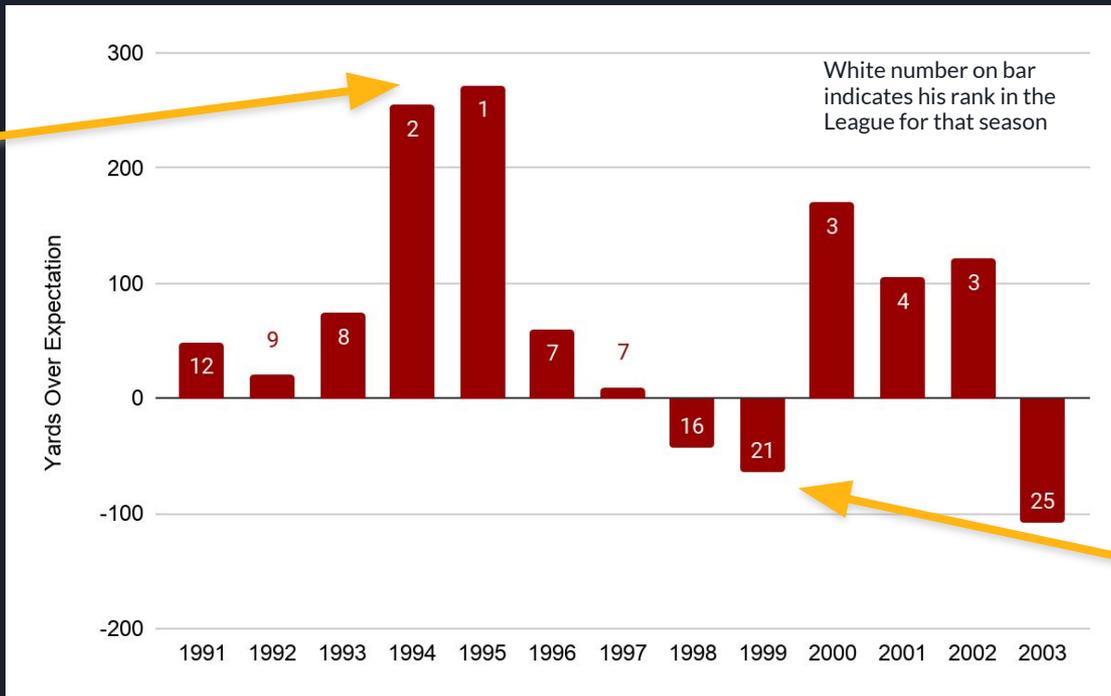


At the peak of his career, he was adding about 5 yards per kickoff over a replacement returner, a huge advantage to his offense.

\*Players must have met minimum number of returns to qualify (see appendix)

Mitchell was top 10 in punt return YOY per play for all but four seasons showing elite longevity and dominance. This is evidenced by his top 4 finishes during his 11th, 12th, and 13th seasons.

# Kickoff Return Yards Over Expectation - Season Total



In his 1st Team All-Pro year (1995), Mitchell added 271.8 yards over expectation to his team demonstrating his ability to flip the field for the offense.

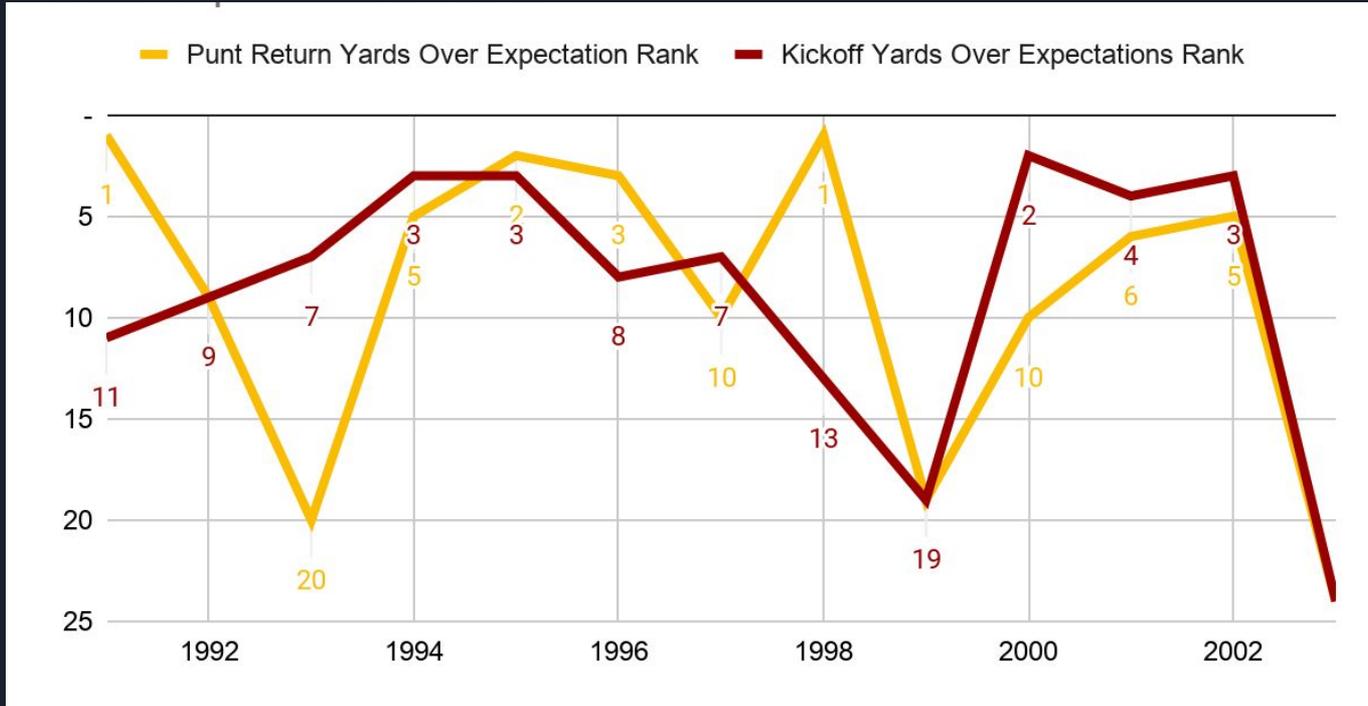
White number on bar indicates his rank in the League for that season

"...in 1999, we had an inexperienced Special Teams coach that was being told to use me and James Thrash back and forth which doesn't allow a returner to get into rhythm. With all of that, my last return there was a 100 yd TD in the playoff game. As you can see, the next year, things bounced right back."  
--Brian Mitchell

\*Players must have met minimum number of returns to qualify (see appendix)

Not only did Mitchell add a lot of yards per kickoff return, but he also had the durability to sustain this over the entire season as he ranked top 10 in all but 3 seasons.

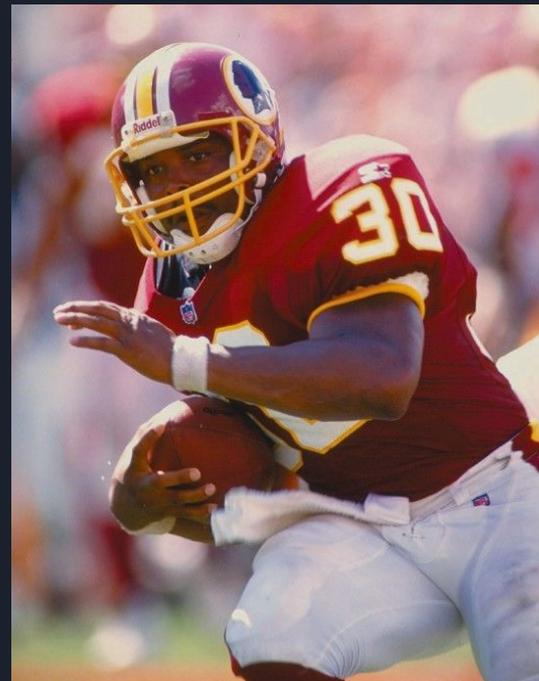
# Career Punt & Kickoff Return Rank



With the exception of two seasons, Brain Mitchell was an elite returner, always ranking in the top 10 for either punt returns, kickoff returns, and usually for both.

# Elite longevity in a dangerous position

- Returners often do not last long in the position given the physical toll of the position. Mitchell sustained his excellence in the position for an astounding 14 seasons.
- As a punt returner, he outperformed the total expected total return yards almost every year, **ranking in the top 10 in that category ten times** and the **top 5** six times.
  - It wasn't just how many punts he returned - Mitchell also ranked in the **top 10 in yards over expectation per play ten times** and the **top 5** six times.
- Mitchell was also dominant as a kickoff returner, eclipsing the total expected return yards almost every year and **ranking top 5 in that category five times**.
  - Per kickoff, Mitchell was just as dominant, **ranking in the top 5 for five seasons**.



# Case Study: Expected Points Added Comparison

- One method for comparing individual players is an Expected Points Added (EPA) model. An individual player's EPA is the cumulative measure of the player's impact on the score of the game.
- Leveraging the nflfastR dataset we compare Brian Mitchell's 2002 season (his last truly elite year in the League) to Devin Hester's 2007 season (a season where he had 6 return touchdowns and was First Team All-Pro)
  - Complete EPA data does not span Mr. Mitchell's entire career which is why this is a selective analysis
- In these comparison years Mitchell (58.6 EPA) outperformed Hester (52.3 EPA) by 6.3 expected points, 12% better!

Brain Mitchell (2002)	Devin Hester (2007)
	
58.6 EPA	52.3 EPA

While we do not have the same EPA model stretching Mitchell's entire career, his 2002 year compares favorably to his early to mid 1990s numbers. In his second to last year in the League he was adding nearly 60 points in EPA, showing he was a difference maker to the team.

# Conclusion

Brian Mitchell deserves to be the first true returner to be inducted into the Hall of Fame for the following reasons:

- Mitchell's **all purpose yards** are 2nd all-time, only behind the great Jerry Rice, despite playing 6 less seasons than Rice, an incredible feat.
- Mitchell owns the **return yard record book**, with considerable distances between him and second place.
- Elite Longevity - Mitchell **consistently outperformed peers** for each of his 14 seasons in the NFL, impressive especially for his position where many only last a couple years at peak physical condition.
- His contributions were **crucial for his offense**, at his peak adding up to 6.6 yards per return more than the average returner showing is ability to flip the field.



**Brian Mitchell was an elite returner for his entire career, gaining an unbelievable number of yards leaving a lasting mark on his teams and the NFL as a whole.**



# Appendix - K-Nearest Neighbors Algorithm

One of the main statistics used in this analysis is the total Yards Over Expectation. To calculate this statistic, we compiled a dataset of every kickoff and punt return that happened during the seasons that Mitchell played (1990-2003). We then used a K-Nearest Neighbors Algorithm (KNN) to produce a model that would predict the length of any return based on returns of similar characteristics. We used independent variables such as fielding location (to account for the amount of space the returner has to work with) and kick length (to account for potential impacts of coverage team getting downfield). We then used the model produced by KNN to predict the outcome of every punt and kickoff return. The difference between actual results and expected results are the Yards Over Expectation [YOE]. We then aggregate these statistics for each returner by season to show their performance relative to peers by season. At this point we can compare each of Brian Mitchell's seasons versus returner peers of his era.

Due to differences in the quantity of high volume returners over the years, different criteria were used in inclusion of returners for the analysis:

- 1990: Mitchell's rookie year didn't have enough returns of either type for inclusion in analysis
- **KICKOFFS:**
  - 1990-1993: Kickoff returners with at least 23 returns in a season included in analysis
  - 1994-2003: Kickoff returners with at least 30 returns in a season included in analysis
- **PUNTS:**
  - 1990-2003: Punt returners with at least 20 returns in a season included in analysis



# References

## Data Collection:

- <https://www.pro-football-reference.com/> - Mitchell career statistics, accomplishments, and accolades
- <https://stathead.com/> - 1994-2003 season play-by-play data for kick returns
- Aaron Schatz (Football Outsiders) - 1990-1993 season play-by-play data for kick returns

## Acknowledgement to NFL Baltimore Ravens Analyst Sean Clement's models

- The data was analyzed by Sean Clement in the coding language R
- The main analysis was a KNN Analysis, as provided by the R package tidymodels

## Other Acknowledgements:

- We used a data visualization software application called Tableau to compile the data and translate it into graphs that give a visual comparison of Mitchell and other return specialists.

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