

## NFL Fantasy Football Article Data Analysis Project

DS 4002: NBA All Stars – Bowen Slingluff, Nick Larson, Andrew Patterson – 1/30/2026

### Goal Statement:

Evaluate how sentiment in fantasy football media contributes to real world performance for NFL players.

### Research Question:

Can sentiment in player outlook writeups/articles predict fantasy football performance for NFL players in a moderately positively correlated way ( $R=0.40-0.59$ )?

### Motivation:

Fantasy football is a major way fans engage with the NFL, with millions of participants relying on expert analysis to make their roster decisions. Every week, reporters and journalists provide predictions about NFL player performance for the upcoming week and suggestions for fantasy football players. As a group, we are all interested in football and have played fantasy football before.

We are constantly looking for ways to accurately predict the outcome of NFL games. A positive correlation could impact specific platforms/writers that are able to predict performance and could impact NFL media, sports betting, and prediction markets. We are curious whether positive sentiment towards a player correlates with better performance (TDs, Yards, Receptions, etc.).

### Modeling Approach:

First, we will collect weekly player outlook articles from fantasy football media sources. [1,2] Using natural language processing techniques, we will quantify sentiment toward individual players within these articles. This analysis will include rule based sentiment scoring using tools such as VADER [3], and transformer based models like BERT [4] to classify sports specific text and capture dimensions such as confidence and subjectivity. For VADER analysis, sentiment scores will be interpreted on a continuous scale ranging from  $-1$  (most negative) to  $+1$  (most positive), with compound scores between  $-0.05$  and  $0.05$  classified as neutral sentiment. BERT outputs will be used to generate probabilistic sentiment classifications, allowing for comparison between discrete sentiment categories and continuous sentiment scores. The resulting sentiment metrics will then be integrated with player performance data, including offensive statistics, fantasy points, and usage rates. Regression based models will then be used to compare actual player statistics against analysts sentiment.

### References:

- [1] “Fantasy Football Articles,” Fantasy Footballers Podcast, Fantasy Football Articles, <https://www.thefantasyfootballers.com/fantasy-football-articles/> (accessed Jan. 29, 2026).
- [2] “NFL Fantasy Articles,” FantasyPros, Fantasy Football Articles and Advice, <https://www.fantasypers.com/nfl/articles/> (accessed Jan. 29, 2026).
- [3] “Welcome to Vadersentiment’s documentation!,” VaderSentiment 3.3.1 documentation, <https://vadersentiment.readthedocs.io/en/latest/> (accessed Jan. 28, 2026).
- [4] “BERT,” Hugging Face Transformers documentation, [https://huggingface.co/docs/transformers/main/model\\_doc/bert](https://huggingface.co/docs/transformers/main/model_doc/bert) (accessed Jan. 30, 2026).

## Data Links

[GitHub NFL Data Repository](#)

[Fantasy Football Projections & Stats CSV](#)

[Historical Fantasy Football Data](#)

[2025 Dataset](#)

<https://www.thefantasyfootballers.com/fantasy-football-articles/>

<https://www.fantasypros.com/nfl/articles/>

Past example MI1:

<https://docs.google.com/document/d/1ZDCmvl7mZlF4saho1FKaxHgwYOKethhctvvvncWSU50/edit?tab=t.0>

Project Ideas:

- How has public sentiment toward AI shifted over time / since the release of ChatGPT/similar platforms. Scraping for change in language - fear vs excitement
- How are underdog versus favorite teams framed in sports media after a win? Underdogs more attributed to luck / opponent errors? Favorited teams more attributed to skill? Looking at language describing the narrative.
- Does mood in song lyrics correspond to the success of an artist in x genre (country, pop, hip hop)? Do popular artists tend to have happier, sadder, angier, etc. lyrics?
- analyze bad reviews (0-2 stars) at different restaurants. Do people complain more about food quality or service at expensive restaurants versus cheap/fast food restaurants?
- **Can sentiment in player outlook writeups/articles predict fantasy football performance for NFL players?**