Data Source and Preparation

The data used for this report came from the trades.csv file, which I found online, and it details NFL draft pick trades. This file includes information about each trade, like which teams were involved, the year (season), the round, and the specific pick number. Before analysis, the data was cleaned up to ensure accuracy. Team abbreviations that had changed over time, such as "STL" and "LA" becoming "LAR", "OAK" becoming "LV", and "SD" becoming "LAC", were updated for consistency. Additionally, trades that did not have a clear pick number were removed to avoid confusion, and the columns for pick_round and pick_number were set explicitly as integers.

Methodology and Features

The main tool used for this analysis was a Python script (nfl_trades.py) that builds a visual representation of trades using the NetworkX library. Each NFL team is represented as a node, and the trades between teams are depicted as directed edges. An edge points from the team giving away the pick to the team receiving it. Each trade is given a numerical value based on how early in the draft the pick was (lower pick numbers are more valuable). Picks were grouped into bins of 16, with earlier picks receiving higher values.

The script provides several useful features for exploring the trade data:

- Finding which teams trade most frequently with each other.

- Counting how many trades a particular team participated in during any given season.

- Identifying the team that has the most trades overall.

- Highlighting the highest-value trades each team has received.

A visual graph (nfl_trade_network.png) was generated to clearly illustrate the relationships and frequency of trades among NFL teams.

Key Findings

One interesting observation from the analysis was the clear identification of the most connected team within the trade network. The visual analysis showed that the Chargers are particularly active, being involved in more trades than most other teams. In the visual representation, the Chargers stand apart from the rest, indicating a high level of

trade activity. This suggests that the Chargers are particularly strategic or active in trading draft picks compared to other NFL teams.

Additional Observations

The visualization also helps illustrate the trade activity between specific pairs of teams, allowing viewers to quickly identify frequent trading partners. Some teams, like the Patriots or Eagles, also appear quite active and frequently engage in trades, suggesting their strategies rely heavily on negotiating and adjusting through trades.

Conclusion and Future Directions

The analysis and tools used provided valuable initial insights into NFL draft pick trading behaviors. Even though this analysis was straightforward, it highlighted notable behaviors and strategies, especially around teams like the Chargers. For future research, incorporating more historical data could enhance the analysis and reveal longer-term patterns. Additionally, considering the outcomes or impacts of these trades on team performance over subsequent seasons could provide further valuable insights, helping to understand the strategic effectiveness of different teams' trading practices.