Introduction

The NFL Combine is an annual event where college football players showcase their athletic abilities. This report focuses on analyzing various performance metrics from the NFL Combine to evaluate their impact on NFL Draft outcomes, with a particular emphasis on wide receivers and defensive linemen

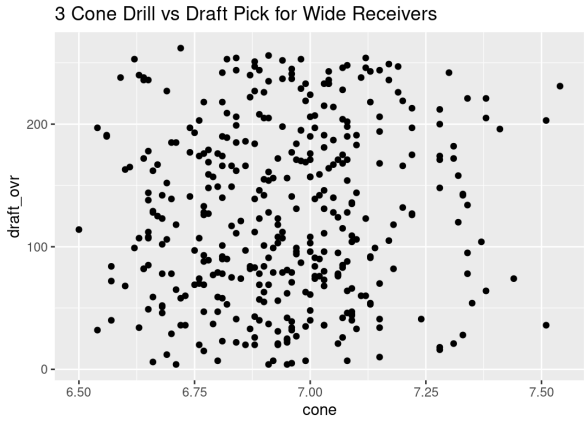
Data Description

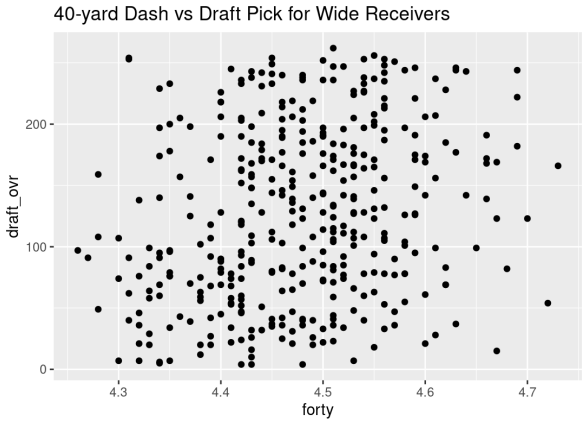
The dataset under scrutiny encompasses key performance metrics such as the 40-yard dash, 3-cone drill, and bench press, alongside players' draft pick results over multiple years. This study narrows down on wide receivers for speed and agility analysis, defensive linemen for weight trends, and a comparative strength analysis of players from Mizzou and Kansas.

<u>Speed (40) vs. Agility (3-Cone) in Drafting Wide Receivers</u>

Methodology:

Utilized Pearson correlation and a linear regression to investigate the relationship between the 40-yard dash times and 3 cone drill to where a player gets drafted.





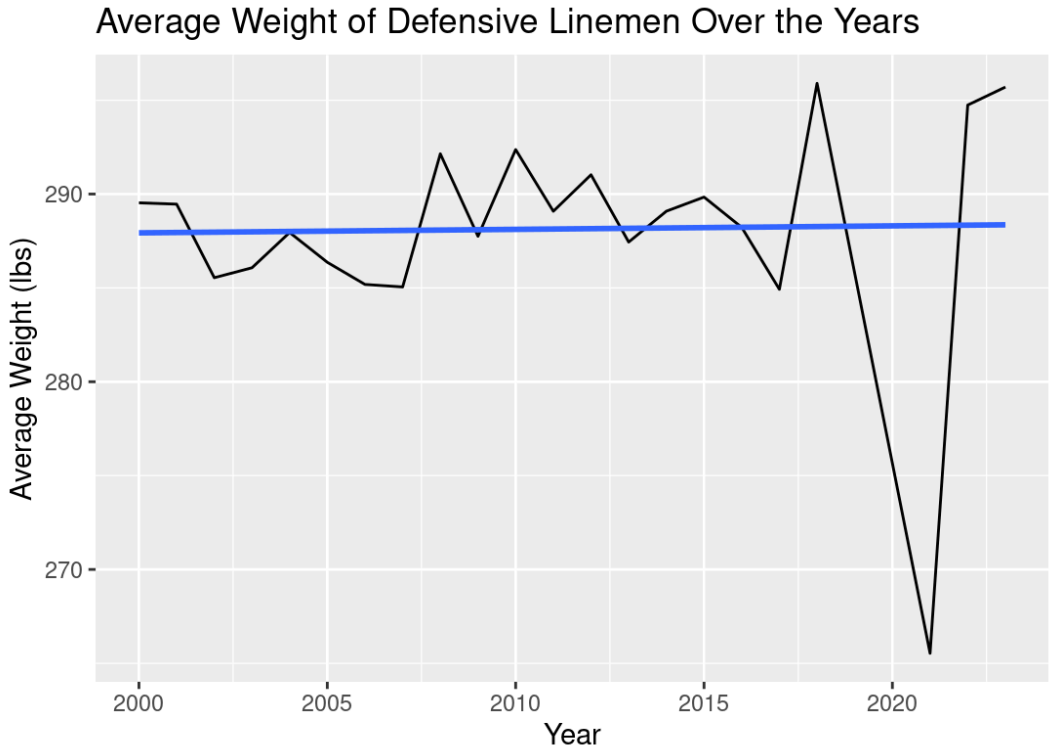
Results for Speed (40) / Agility (3):

For the 40, A statistically significant positive correlation ($r = 0.2395$, p-value < 0.001) was found, indicating that lower 40-yard dash times could predict earlier draft picks. The confidence interval was 110.83 to 261.78. The analysis confirms that straight-line speed is a significant factor considered by NFL teams when drafting wide receivers. For the 3 cone drill, the analysis yielded a non-significant positive correlation ($r = 0.07758$, p-value $= 0.1266$), suggesting that agility, as measured by the 3-cone drill, may not be as critical for draft selection as speed. The confidence interval was -7.89 to 63.46. Agility, while important, does not seem to have as much influence on draft outcomes as speed for the position of wide receiver.

Trends in Defensive Linemen's Weights Over the Years

Methodology:
Evaluated the trend of defensive linemen's weights across different draft years using linear regression.

Results:
No significant trend was detected, as indicated by a stable line in the graph. We did find that from the 2017 to the 2022 draft the average lineman weight decreased from 297.2 pounds to 265.8 pounds. The 2023 draft increased the average lineman weight from 265.8 pounds to 294.9 pounds.



Conclusion:
Defensive linemen's weights have not shown a significant increase or decrease over the years analyzed, suggesting that teams may have consistent physical criteria for these positions.

General Conclusion
In the study of NFL Draft outcomes for wide receivers and defensive linemen, I discovered key insights into player selection criteria. Speed, particularly as measured by the 40-yard dash, emerged as a critical factor influencing the draft positions of wide receivers, overshadowing agility metrics like the 3-cone drill. For defensive linemen, the data indicated a consistent preference for certain physical attributes, particularly weight, over the years. These findings

highlight the nuanced and position-specific evaluation criteria used in the drafting process, with speed being a pivotal attribute for wide receivers and stable physical traits being preferred for defensive linemen.