## RB SNC Grades

#### Gavin Bulthuis

2024-02-26

Here are my SNC RB grades for the 2023 - 2024 NFL season, I will use data from PFF and SumerSports to help in computing the grades.

## **Data Loading**

Loading data and sorting QB's alphabetically (SumerSports data added to PFF data manually)

```
#Load data
pff_csv <- read.csv("PFFRBDATA.csv")

#Sort players alphabetically
pff_csv <- pff_csv[order(pff_csv$player), ]</pre>
```

#### Grade Calculations

Coefficients and metrics used from PFF dataset

```
#PFF model coefficients
pff_offense <- 0.4 #approx 20%
yards_att <- 1 #approx 5%
yards_after_contact_att <- 3 #approx 10%
breakaway_pct <- 0.25 #approx 5%
elusive_rating <- 0.1 #approx 5%
receiving_grade <- 0.25 #approx 10%
attempts <- 0.25 #approx 15%
epa_rush <- 10 #approx 20%
yards_created <- 5 #approx 10%</pre>
```

Calculating the SNC grade from PFF data

```
#Calculate pff model
for (player in seq_len(nrow(pff_csv))) {
    player_pff <- pff_offense * pff_csv$grades_offense[player]
    player_yards_att <- yards_att * pff_csv$ypa[player]
    player_yards_after_contact <- yards_after_contact_att * pff_csv$yco_attempt[player]
    player_breakaway <- breakaway_pct * pff_csv$breakaway_percent[player]
    player_elusive <- elusive_rating * pff_csv$elusive_rating[player]
    player_receiving <- receiving_grade * pff_csv$grades_pass_route[player]
    player_attempts <- attempts * pff_csv$attempts
    player_epa <- epa_rush * pff_csv$epa_rush
    player_yards_created <- yards_created * pff_csv$yards_create_att
    player_pffdata <- player_pff + player_yards_att + player_yards_after_contact + player_breakaway + player_csv$player_total_pff[player] <- player_pffdata * 0.60</pre>
```

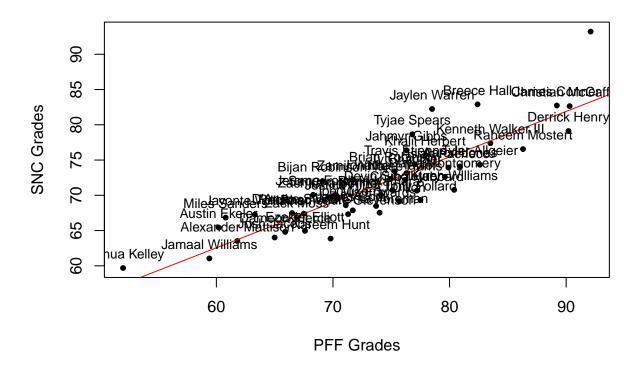
```
}
write.csv(pff_csv, "PFFQBDATA.csv", row.names = FALSE)
```

# Plotting Results

As you can see below, the well known PFF grade correlates well with my grading formula.

```
#Plot SNC grades vs PFF grades
plot(pff_csv$grades_offense, pff_csv$player_total_pff ,xlab = "PFF Grades", ylab = "SNC Grades", main =
abline(lm(pff_csv$player_total_pff ~ pff_csv$grades_offense), col = "red")
text(pff_csv$grades_offense, pff_csv$player_total_pff, labels = pff_csv$player, pos = 3, cex = 0.8, col
```

## Scatter Plot of PFF Grades vs SNC Grades



### Conclusions

Here are my top 32 RB's based on this season alone from my SNC grade (the numbers next to players are their position in the spreadsheet and have no correlation to the players or the grade).

```
pff_csv <- pff_csv[order(pff_csv$player_total_pff, decreasing = TRUE), ]
top32 <- head(pff_csv[,c("player", "player_total_pff")], 32)
print(top32)</pre>
```

```
##
                    player player_total_pff
## 15
            De'Von Achane
                                      93.219
## 7
              Breece Hall
                                      82.896
## 23
             James Conner
                                      82.740
      Christian McCaffrey
                                      82.644
## 9
## 26
            Jaylen Warren
                                      82.239
            Derrick Henry
                                      79.116
## 16
                                      78.645
## 46
             Tyjae Spears
```

##	34	Kenneth Walker III	77.388
##	40	Raheem Mostert	76.554
##	21	Jahmyr Gibbs	76.389
##	35	Khalil Herbert	75.723
##	44	Travis Etienne Jr.	74.388
##	47	Tyler Allgeier	74.331
##	1	Aaron Jones	74.088
##	20	Isiah Pacheco	73.935
##	8	Brian Robinson	73.404
##	45	Ty Chandler	73.137
##	14	David Montgomery	72.612
##	29	Jonathan Taylor	72.324
##	50	Zamir White	72.252
##	38	Najee Harris	72.162
##	6	Bijan Robinson	72.000
##	36	Kyren Williams	70.773
##	17	Devin Singletary	70.731
##	10	Chuba Hubbard	70.671
##	27	Jerome Ford	70.071
##	4	Alvin Kamara	70.047
##	42	Saquon Barkley	70.035
##	48	Zach Charbonnet	69.723
##	32	Justice Hill	69.438
##	43	Tony Pollard	69.330
##	2	AJ Dillon	69.141