

# 2002-2021 NFL Scores

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## Add in data and print summary

This data set was generated by Reddit user **gigantoir** [https://www.reddit.com/r/NFLstatheads/comments/q73yd0/nfl\\_scores\\_20172020/](https://www.reddit.com/r/NFLstatheads/comments/q73yd0/nfl_scores_20172020/) I added the 2021 data that was scrapped from <https://www.footballdb.com/games/index.html> and 2002-2016 data from Reddit user **yuxbni76** <https://www.reddit.com/user/yuxbni76>

```
Scores <- read.csv("NFL_SCORES_2002-2021.txt", header=TRUE, sep= "\t")
Scores$Score_differential <- abs(Scores$Score_away - Scores$Score_home)
Scores$Week <- as.factor(Scores$Week)
summary(Scores)
```

```
##      Year      Week      Home      Away
## Min.   :2002    2      : 323 Length:5044 Length:5044
## 1st Qu.:2006    1      : 313 Class :character Class :character
## Median :2011   12      : 313 Mode  :character Mode  :character
## Mean   :2011    3      : 312
## 3rd Qu.:2016   14      : 304
## Max.   :2021   15      : 304
##      (Other):3175
##      Score_home  Score_away  Score_differential
## Min.   : 0.0    Min.   : 0.00  Min.   : 0.0
## 1st Qu.:16.0    1st Qu.:14.00  1st Qu.: 4.0
## Median :23.0    Median :21.00  Median : 8.0
## Mean   :23.3    Mean   :21.14  Mean   :11.7
## 3rd Qu.:30.0    3rd Qu.:28.00  3rd Qu.:17.0
## Max.   :62.0    Max.   :59.00  Max.   :59.0
##
```

## Team colors

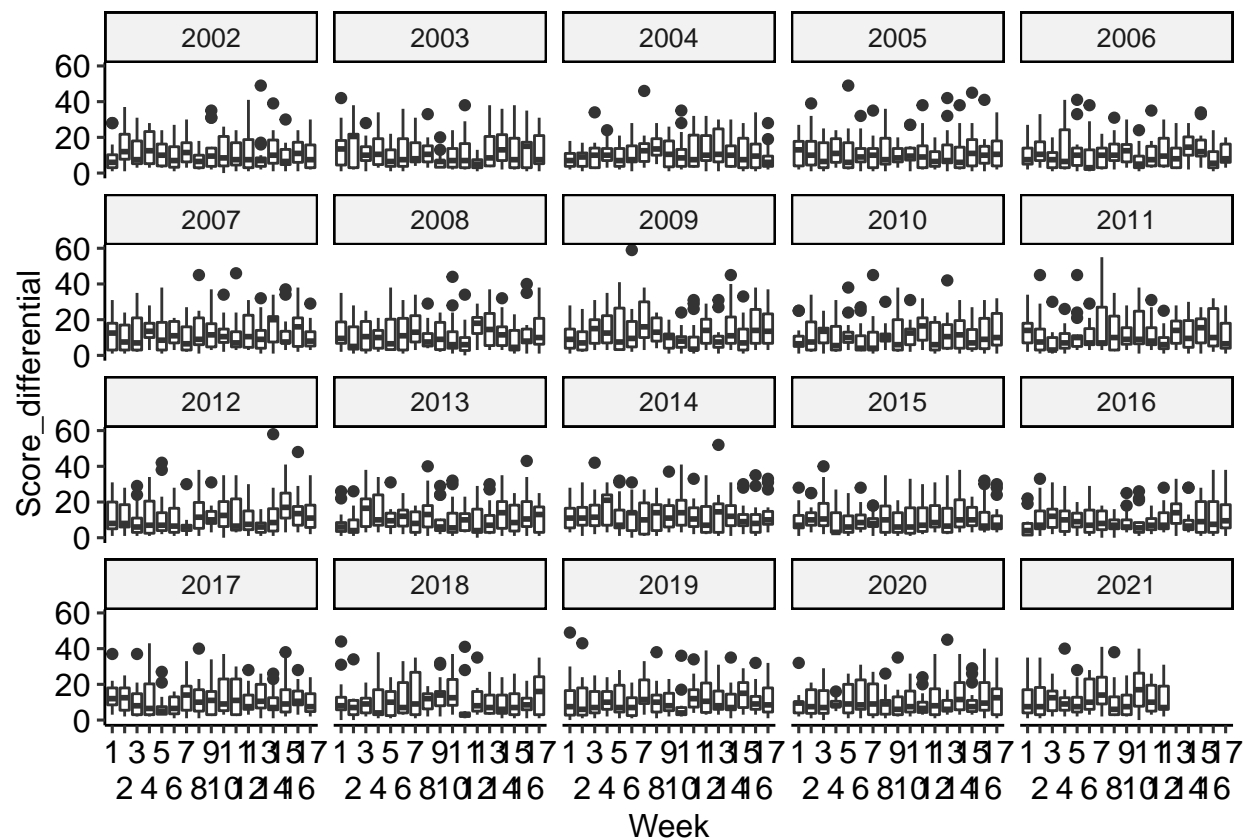
Team colors were extracted from <https://teamcolorcodes.com>, I took the first primary color for each team and created a list that will be for later use. For the Browns and Titans I took the secondary color as it seemed more *appropriate*.

```
Team_colors <- c("SF"="#AA0000",
                "CHI"="#0B162A",
                "CIN"="#FB4F14",
                "BUF"="#00338D",
                "DEN"="#FB4F14",
                "CLE"="#FF3C00",
                "TB"="#D50A0A",
                "ARI"="#97233F",
                "LAC"="#0080C6",
                "KC"="#E31837",
                "IND"="#002C5F",
                "DAL"="#041E42",
```

```
"MIA"="#008E97",  
"PHI"="#004C54",  
"ATL"="#A71930",  
"NYG"="#0B2265",  
"JAX"="#006778",  
"NYJ"="#125740",  
"DET"="#0076B6",  
"GB"="#203731",  
"CAR"="#0085CA",  
"NE"="#002244",  
"LV"="#000000",  
"LA"="#003594",  
"BAL"="#241773",  
"WAS"="#773141",  
"NO"="#D3BC8D",  
"SEA"="#002244",  
"PIT"="#FFB612",  
"HOU"="#03202F",  
"TEN"="#4B92DB",  
"MIN"="#4F2683")
```

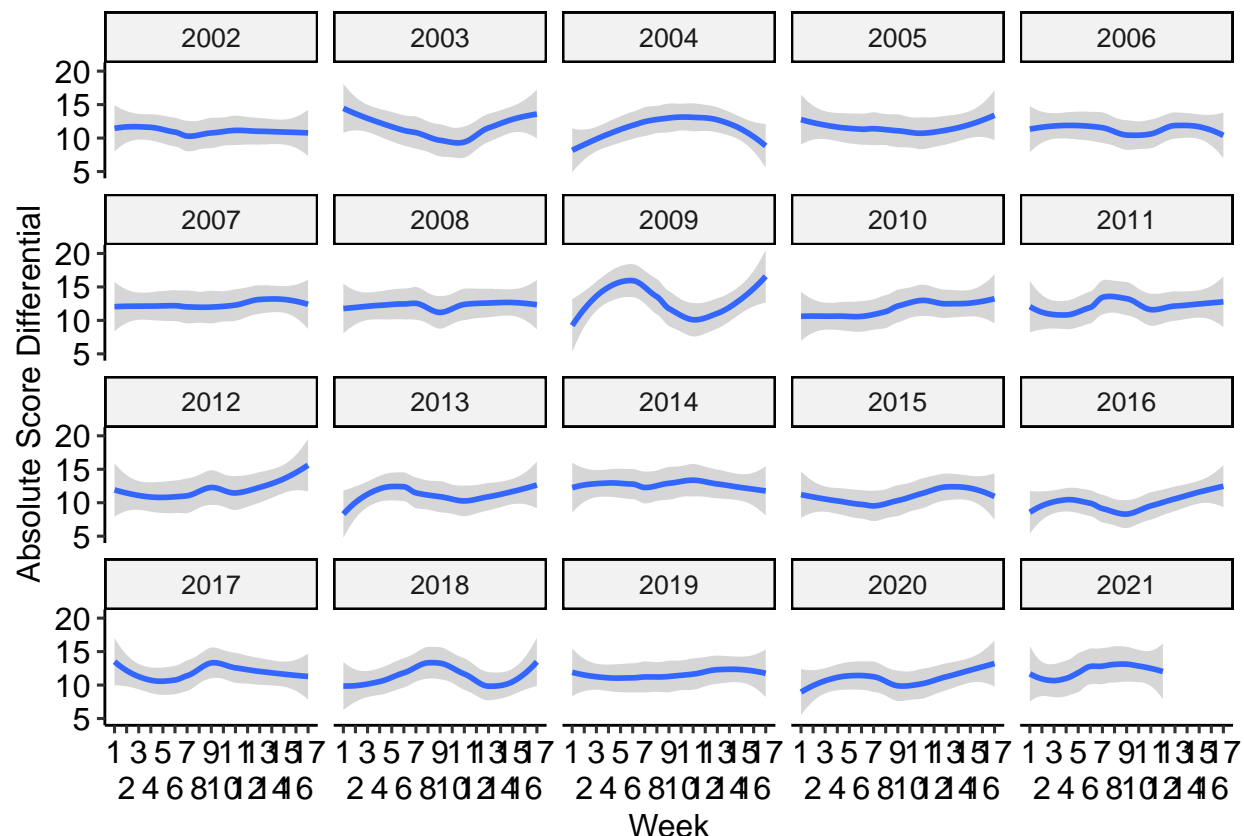
## All teams

```
ggplot(Scores, aes(x=Week, y=Score_differential)) +  
  geom_boxplot() +  
  scale_x_discrete(breaks = seq(1,17,1), guide = guide_axis(n.dodge=2)) +  
  facet_wrap(~Year)
```



```
ggplot(Scores, aes(x=Week, y=Score_differential)) +
  geom_smooth(aes(as.numeric(Week), Score_differential), method = "loess") +
  scale_x_continuous(breaks = seq(1,17,1), guide = guide_axis(n.dodge=2)) +
  facet_wrap(~Year) +
  ylab("Absolute Score Differential")
```

```
## `geom_smooth()` using formula 'y ~ x'
```



```
Score_varience <- c(var(Scores[ Scores$Year == 2002, ]$Score_differential),
  var(Scores[ Scores$Year == 2003, ]$Score_differential),
  var(Scores[ Scores$Year == 2004, ]$Score_differential),
  var(Scores[ Scores$Year == 2005, ]$Score_differential),
  var(Scores[ Scores$Year == 2006, ]$Score_differential),
  var(Scores[ Scores$Year == 2007, ]$Score_differential),
  var(Scores[ Scores$Year == 2008, ]$Score_differential),
  var(Scores[ Scores$Year == 2009, ]$Score_differential),
  var(Scores[ Scores$Year == 2010, ]$Score_differential),
  var(Scores[ Scores$Year == 2011, ]$Score_differential),
  var(Scores[ Scores$Year == 2012, ]$Score_differential),
  var(Scores[ Scores$Year == 2013, ]$Score_differential),
  var(Scores[ Scores$Year == 2014, ]$Score_differential),
  var(Scores[ Scores$Year == 2015, ]$Score_differential),
  var(Scores[ Scores$Year == 2016, ]$Score_differential),
  var(Scores[ Scores$Year == 2017, ]$Score_differential),
  var(Scores[ Scores$Year == 2018, ]$Score_differential),
  var(Scores[ Scores$Year == 2019, ]$Score_differential),
  var(Scores[ Scores$Year == 2020, ]$Score_differential),
  var(Scores[ Scores$Year == 2021, ]$Score_differential))
```

```
Score_varience <- as.data.frame(Score_varience)
```

```
Score_varience$Year <- c(2002,2003,2004,2005,2006,2007,2008,2009,2010,2011,2012,2013,2014,2015,2016,2017,2018,2019,2020,2021)
```

```
Score_varience$Year <- as.factor(Score_varience$Year)
```

```
ggplot(Score_variance, aes(x=Year, y=Score_variance)) +  
  geom_point(size = 3) +  
  geom_line(aes(x=as.numeric(Year))) +  
  theme(axis.text.x = element_text(angle = 45, hjust=1))
```

