

## Curse of the Chicago Bears

```
# install.packages("readxl")
# We'll need a library with a function that can read .xlsx files
library("readxl")
```

```
## Warning: package 'readxl' was built under R version 4.1.3
```

```
# Now we read the .xlsx file
nfl_pt <- read_excel("NFL_Passing_Teams.xlsx")
head(nfl_pt)
```

```
## # A tibble: 6 x 17
##   Team      Att  Cmp 'Cmp %' 'Yds/Att' 'Pass Yds'   TD   INT  Rate '1st' '1st%'
##   <chr> <dbl> <dbl>   <dbl>   <dbl>     <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
## 1 49ers   383   226    59      7.8     2990    25    10  94.7     0     0
## 2 <NA>     NA    NA    NA      NA      NA     NA    NA   NA     NA    NA
## 3 Bears  422   210   49.8    5.8     2431    21    22  62.4     0     0
## 4 <NA>     NA    NA    NA      NA      NA     NA    NA   NA     NA    NA
## 5 Benga~ 339   172   50.7    6.2     2097    12    11  68.4     0     0
## 6 <NA>     NA    NA    NA      NA      NA     NA    NA   NA     NA    NA
## # ... with 6 more variables: '20+' <dbl>, '40+' <dbl>, Lng <chr>, Sck <dbl>,
## #   SckY <dbl>, Year <dbl>
```

```
# Let's find out the dimensions of this data set
dim(nfl_pt)
```

```
## [1] 2999  17
```

```
# The data is full empty rows in between the actual observations, so
# we'll need to get creative with removing the empty rows without
# affect any of the actual data.
index_empty <- which(apply(is.na(nfl_pt), 1, sum) == 17)
nfl_pt <- nfl_pt[-index_empty, ]
# Essentially, what I did was I used the is.na() function to get Boolean
# values out of the whole data set, and then use the apply function using
# sum which allows us to sum up the number of TRUE values by row as they
# technically count as 1, so then we use which() to find which rows have
# a sum value of 17 (the number of columns in this data set) to remove
# in the second line of code.

# We won't check for strange data as I pulled it all out of the NFL's website.
# Instead, we'll just check out the summary stats.
summary(nfl_pt)
```

```
##      Team           Att           Cmp           Cmp %
## Length:1500      Min.    :205.0      Min.    : 78.0      Min.    :38.00
## Class :character 1st Qu.:454.0      1st Qu.:252.0      1st Qu.:54.20
## Mode  :character Median :512.0      Median :298.0      Median :58.00
##                               Mean  :502.9      Mean  :293.7      Mean  :57.89
##                               3rd Qu.:562.0      3rd Qu.:339.0      3rd Qu.:61.70
##                               Max.   :740.0      Max.   :492.0      Max.   :73.40
##      Yds/Att      Pass Yds      TD           INT
## Min.    :4.900      Min.    :1236      Min.    : 3.00      Min.    : 2.00
## 1st Qu.:6.400      1st Qu.:3038      1st Qu.:16.00      1st Qu.:13.00
## Median :6.900      Median :3501      Median :20.00      Median :17.00
## Mean    :6.925      Mean    :3489      Mean    :21.07      Mean    :17.35
## 3rd Qu.:7.400      3rd Qu.:3974      3rd Qu.:26.00      3rd Qu.:21.00
## Max.    :9.500      Max.    :5572      Max.    :55.00      Max.    :37.00
##      Rate          1st           1st%          20+
## Min.    : 22.50      Min.    : 0.0      Min.    : 0.00      Min.    : 0.0
## 1st Qu.: 69.67      1st Qu.: 0.0      1st Qu.: 0.00      1st Qu.: 0.0
## Median : 78.05      Median :156.0      Median :30.60      Median :38.0
## Mean    : 78.25      Mean    :115.1      Mean    :21.35      Mean    :29.3
## 3rd Qu.: 87.40      3rd Qu.:189.0      3rd Qu.:34.60      3rd Qu.:48.0
## Max.    :122.60      Max.    :293.0      Max.    :45.20      Max.    :82.0
##      40+           Lng           Sck           SckY
## Min.    : 0.00      Length:1500      Min.    : 7.0      Min.    : 41.0
## 1st Qu.: 0.00      Class :character 1st Qu.: 29.0      1st Qu.:198.0
## Median : 6.00      Mode  :character Median : 36.5      Median :250.0
## Mean    : 5.25                               Mean    : 37.2      Mean    :259.8
## 3rd Qu.: 9.00                               3rd Qu.: 45.0      3rd Qu.:317.0
## Max.    :21.00                               Max.    :104.0      Max.    :708.0
##      Year
## Min.    :1970
## 1st Qu.:1984
## Median :1998
## Mean    :1997
## 3rd Qu.:2010
## Max.    :2021
```

```
# Check to see if all years are available for us:
unique(nfl_pt$Year)
```

```
## [1] 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1983 1984 1985
## [16] 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000
## [31] 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
## [46] 2016 2017 2018 2019 2020 2021
```

```
# All the years are accounted for and ready for analysis, except for 1982,
# as that year had a shortened schedule which is just better off not seen.
# write.csv(nfl_pt, "nfl_pass_offense.csv", row.names = F)
```

```
library(ggplot2)
```

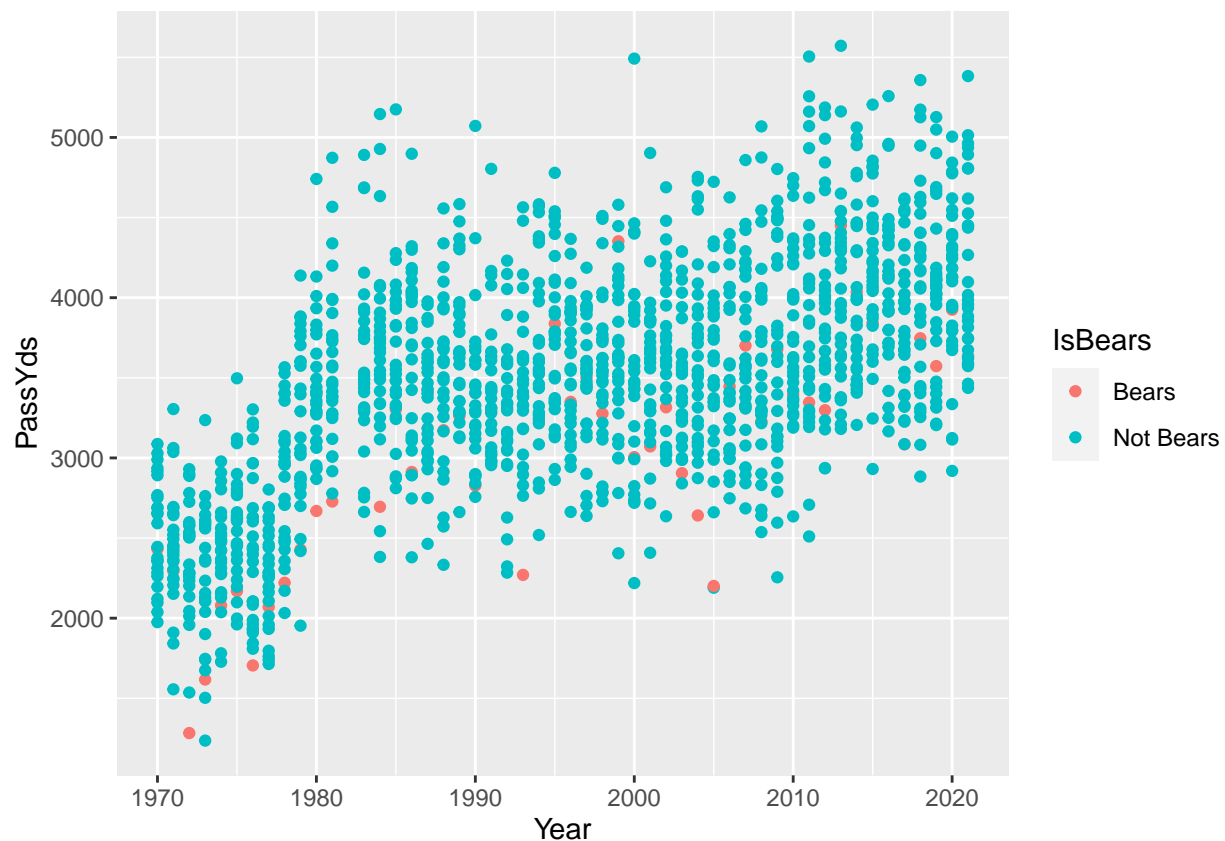
```
## Warning: package 'ggplot2' was built under R version 4.1.3
```

```

# Since spaces in column names are treated oddly, we'll remove the space from "Pass Yds"
names(nfl_pt)[6] <- "PassYds"
# We'll create a vector with empty elements to later merge with our dataset.
IsBears <- replicate(n = dim(nfl_pt)[1], NA)
# Now we use a for loop to insert indicators of which observations come from the Bears.
for(i in 1:dim(nfl_pt)[1]) {
  IsBears[i] <- ifelse(nfl_pt$Team[i] == "Bears", "Bears", "Not Bears")
}

nfl_pt2 <- cbind(nfl_pt, "IsBears" = IsBears)
ggplot(nfl_pt2, aes(x = Year, y = PassYds, color = IsBears)) +
  geom_point()

```



As we can see, the Chicago Bears haven't exactly been a great passing team throughout their existence (at least from 1970). We see they are constantly below average in passing yards and even in those anomaly years where they appear to have a great passing season, even going above the 4000 yard mark in 1999, there is a lot more than what meets the eye. We already know that the Chicago Bears are currently the only team in the league to still not have a quarterback with a 4000 yard passing season, so we'll find out later what exactly happened in those seasons where a miracle seemed to happen for Chicago.

Let's explore the passing yard history of the Chicago Bears starting with the 70's:

## The 1970's - The Dark Age

```
# install.packages("sqldf")
library(sqldf)
```

```
## Warning: package 'sqldf' was built under R version 4.1.3
```

```
## Loading required package: gsubfn
```

```
## Warning: package 'gsubfn' was built under R version 4.1.3
```

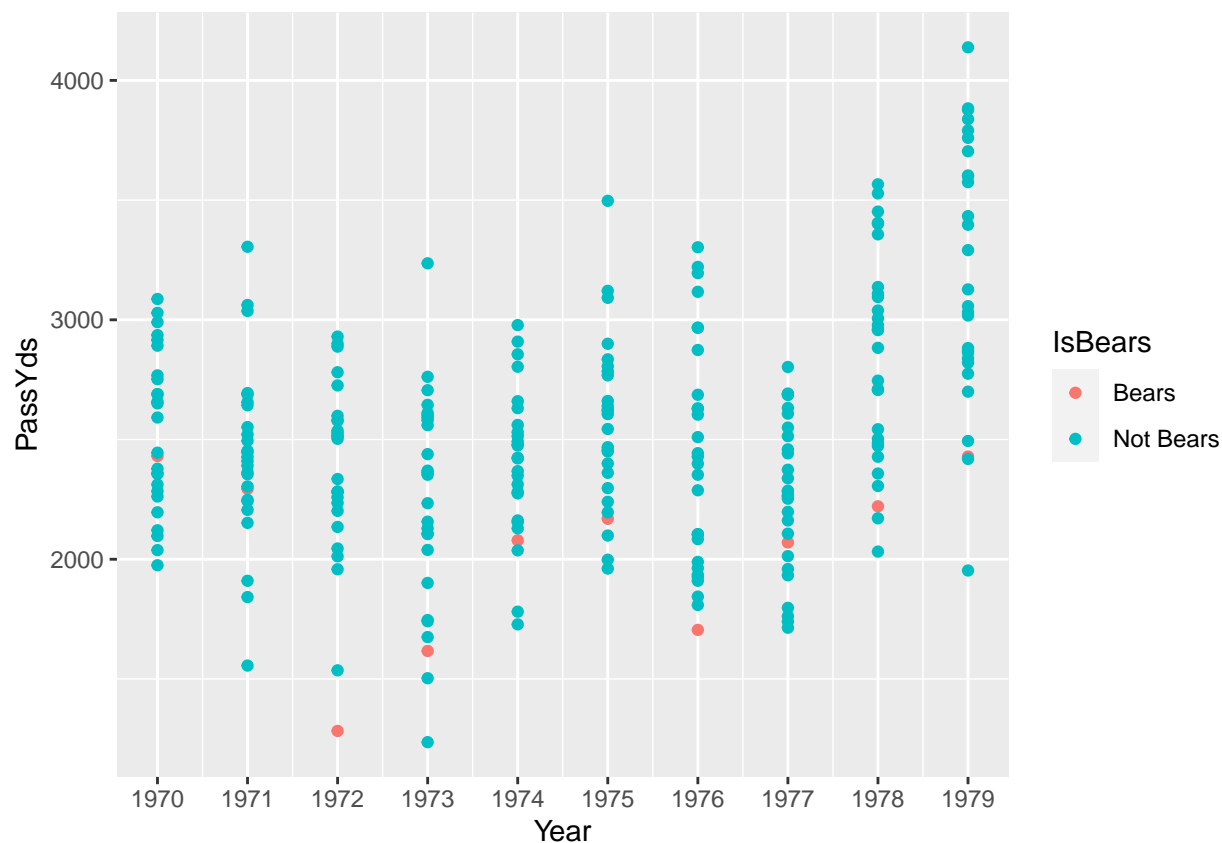
```
## Loading required package: proto
```

```
## Warning: package 'proto' was built under R version 4.1.3
```

```
## Loading required package: RSQLite
```

```
## Warning: package 'RSQLite' was built under R version 4.1.3
```

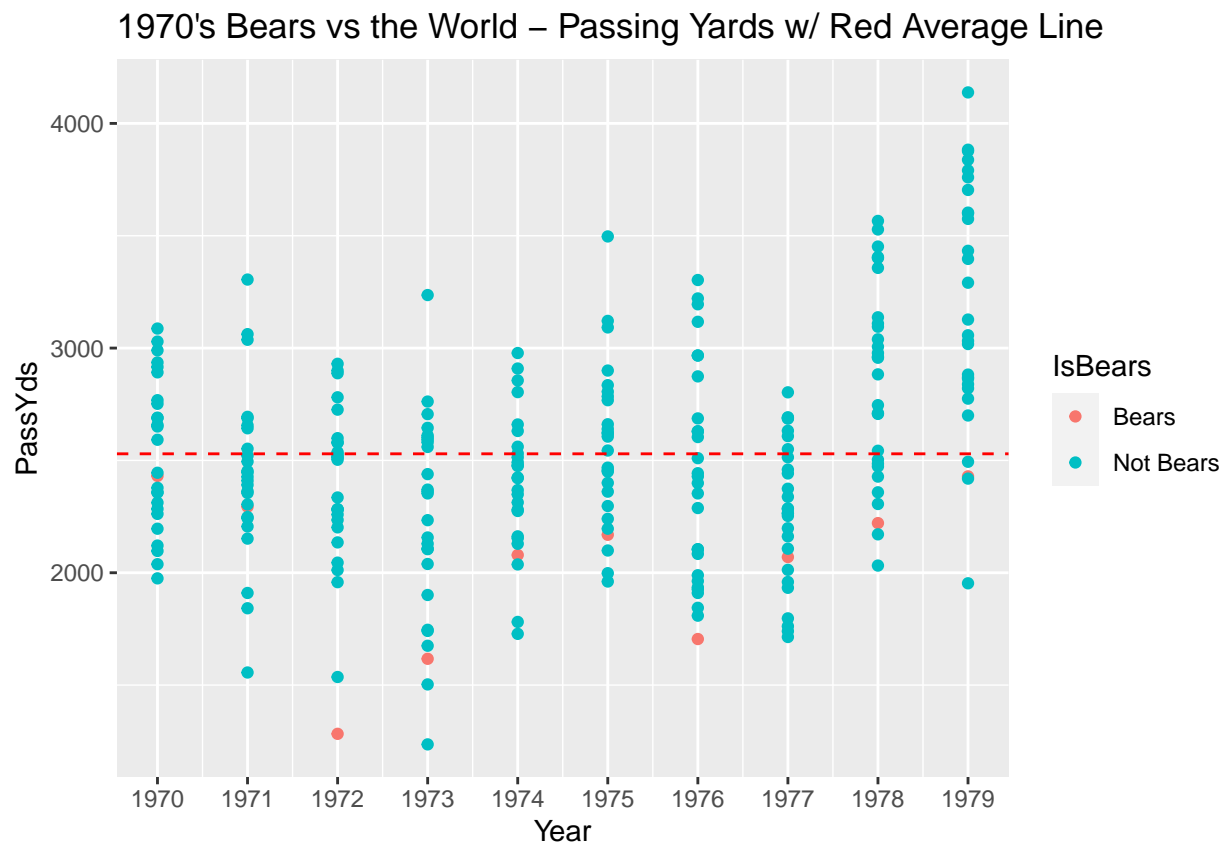
```
seventies <- sqldf("SELECT * FROM nfl_pt2 WHERE Year BETWEEN 1970 AND 1979")
b1 <- ggplot(seventies, aes(x = Year, y = PassYds, color = IsBears)) +
  geom_point() +
  scale_x_continuous(breaks = seq(1970, 1979, by = 1))
b1
```



```
avg70 <- mean(seventies$PassYds)
avg70
```

```
## [1] 2529.433
```

```
b1 + geom_hline(yintercept = avg70, linetype = "dashed", color = "red") +
  ggtitle("1970's Bears vs the World - Passing Yards w/ Red Average Line")
```



```
avg70_79 <- sqldf("SELECT Year, IsBears, AVG(PassYds) AS PassYds FROM seventies GROUP BY Year")
bears70 <- sqldf("SELECT Year, IsBears, PassYds FROM seventies WHERE Team = 'Bears'")
head(sqldf("SELECT * FROM avg70_79 UNION SELECT * FROM bears70"), 20)
```

```
##   Year  IsBears  PassYds
## 1  1970    Bears 2431.000
## 2  1970   Not Bears 2534.769
## 3  1971    Bears 2294.000
## 4  1971   Not Bears 2432.808
## 5  1972    Bears 1283.000
## 6  1972   Not Bears 2362.500
## 7  1973    Bears 1617.000
## 8  1973   Not Bears 2231.115
## 9  1974    Bears 2079.000
## 10 1974   Not Bears 2399.654
## 11 1975    Bears 2169.000
```

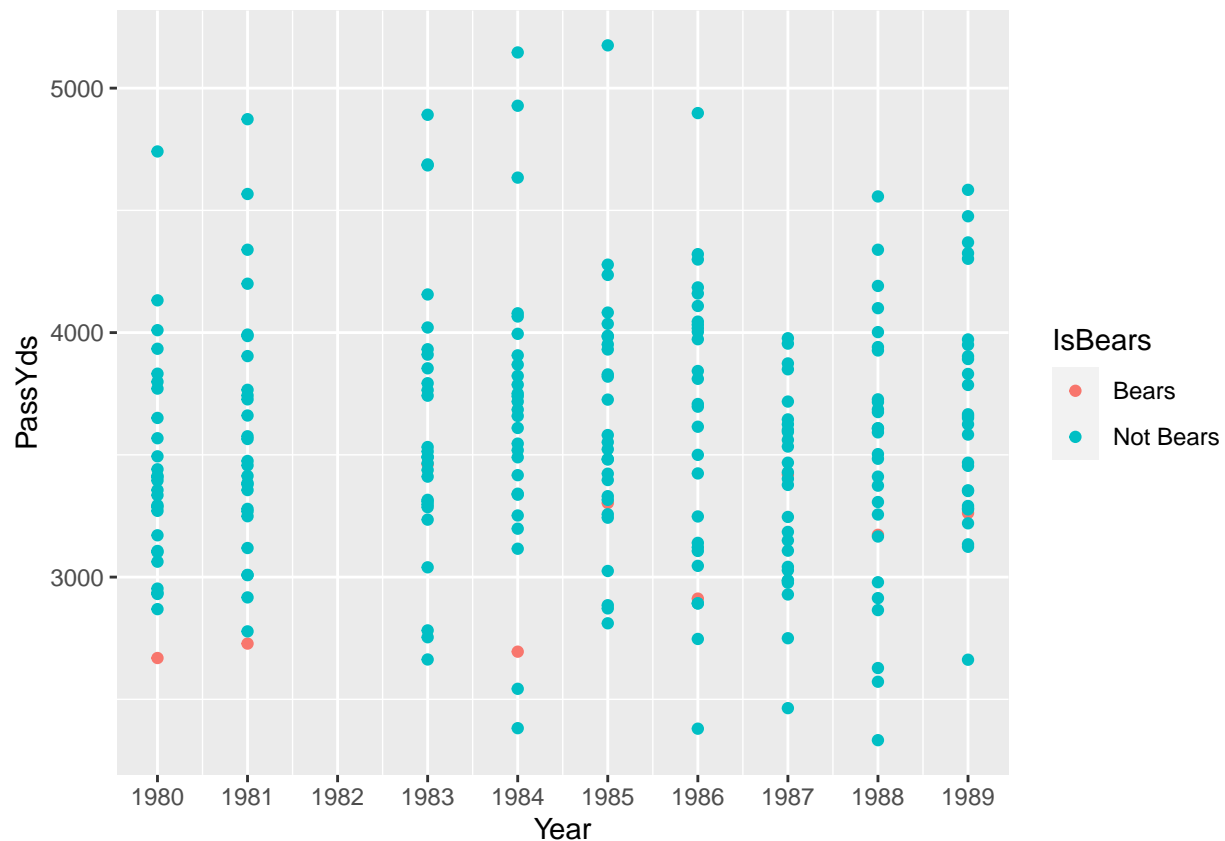
```
## 12 1975 Not Bears 2561.346
## 13 1976 Bears 1705.000
## 14 1976 Not Bears 2428.214
## 15 1977 Bears 2070.000
## 16 1977 Not Bears 2271.214
## 17 1978 Bears 2221.000
## 18 1978 Not Bears 2841.321
## 19 1979 Bears 2429.000
## 20 1979 Not Bears 3184.643
```

Not a single Bears team from the 70's managed to be above average. All of them were below average as they couldn't get past the decade average of 2529 passing yards, and a few of these Bears teams were at the very bottom as we can see in 1972 and 1976. Overall a terrible time to be a quarterback on the Chicago Bears, but that's not saying much.

Let's see how the Bear's offense was during their golden era:

## The 1980's - The Era of Progress?

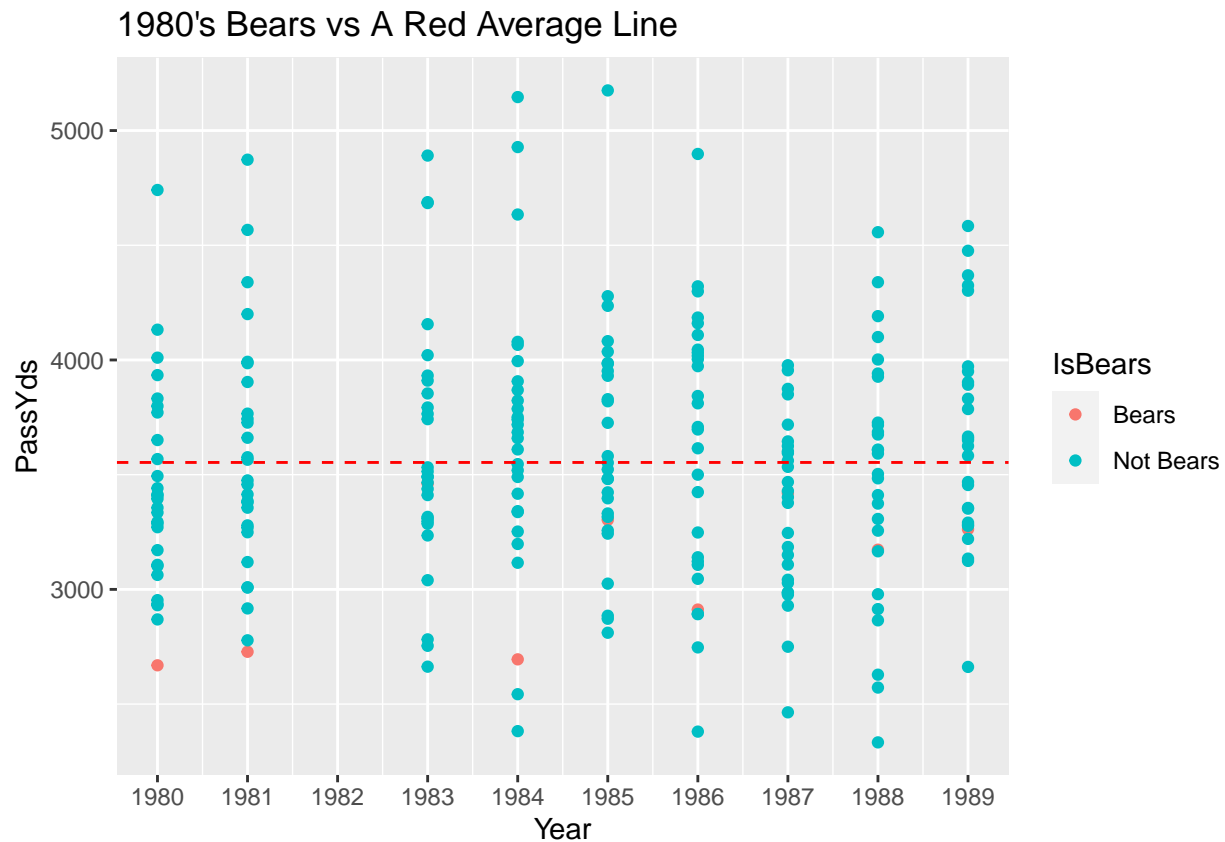
```
eighties <- sqldf("SELECT * FROM nfl_pt2 WHERE Year BETWEEN 1980 AND 1989")
b2 <- ggplot(eighties, aes(x = Year, y = PassYds, color = IsBears)) +
  geom_point() +
  scale_x_continuous(breaks = seq(1980, 1989, by = 1))
b2
```



```
avg80 <- mean(eighties$PassYds)
avg80
```

```
## [1] 3553.294
```

```
b2 + geom_hline(yintercept = avg80, linetype = "dashed", color = "red") +
  ggtitle("1980's Bears vs A Red Average Line")
```



```
avg80_89 <- sqldf("SELECT Year, IsBears, AVG(PassYds) AS PassYds FROM eighties GROUP BY Year")
bears80 <- sqldf("SELECT Year, IsBears, PassYds FROM eighties WHERE Team = 'Bears'")
head(sqldf("SELECT * FROM avg80_89 UNION SELECT * FROM bears80"), 20)
```

```
##   Year  IsBears  PassYds
## 1  1980    Bears 2669.000
## 2  1980   Not Bears 3426.250
## 3  1981    Bears 2728.000
## 4  1981   Not Bears 3561.464
## 5  1983    Bears 3461.000
## 6  1983   Not Bears 3604.357
## 7  1984    Bears 2695.000
## 8  1984   Not Bears 3651.179
## 9  1985    Bears 3303.000
## 10 1985   Not Bears 3625.643
## 11 1986    Bears 2912.000
```

```
## 12 1986 Not Bears 3611.714
## 13 1987      Bears 3420.000
## 14 1987 Not Bears 3352.929
## 15 1988      Bears 3173.000
## 16 1988 Not Bears 3486.964
## 17 1989      Bears 3262.000
## 18 1989 Not Bears 3659.143
```

```
cat("Now hold on there for a second. The 1987 Bears are actually above average in terms
of passing yards. However, they still don't pass the decade average of", avg80,
"
unfortunately. Still, let's take a look at the quarterback(s) for that year as
this is still cause for celebration... for the Bears at least.")
```

```
## Now hold on there for a second. The 1987 Bears are actually above average in terms
## of passing yards. However, they still don't pass the decade average of 3553.294
## unfortunately. Still, let's take a look at the quarterback(s) for that year as
## this is still cause for celebration... for the Bears at least.
```

```
Bears_1987 <- read_excel("1987BearsPassing.xlsx")
```

```
## New names:
## * 'Yds' -> 'Yds...11'
## * 'Yds' -> 'Yds...24'
```

```
names(Bears_1987)[10] <- "CmpPercentage"
names(Bears_1987)[11] <- "Yds"
sqldf("SELECT Player, Pos, G, CmpPercentage, Yds FROM Bears_1987")
```

```
##      Player Pos  G CmpPercentage  Yds
## 1   Jim McMahon  QB  7          59.5 1639
## 2   Mike Tomczak  qb 12          54.5 1220
## 3   Mike Hohensee <NA>  2          53.8  343
## 4   Sean Payton <NA>  3          34.8   79
## 5   Steve Bradley <NA>  1          33.3   77
## 6   Jim Harbaugh <NA>  6          72.7   62
## 7   Walter Payton  RB 12           0.0    0
```

While the Bears fared much better in the 80's, they were below average in passing yards. That didn't stop them from winning the Super Bowl in 1985 at all though as they had one of the greatest defenses ever assembled that year. Perhaps they could've won more Super Bowls in this decade if it wasn't for the various misfortunes that plagued the Bears, such as the injury to QB McMahon in 1986. Still though, at least we see that the 1987 season was a lot more successful than expected for the Bears' offense. Not successful enough to be above the decade average, but just enough to be above the passing average of that year.

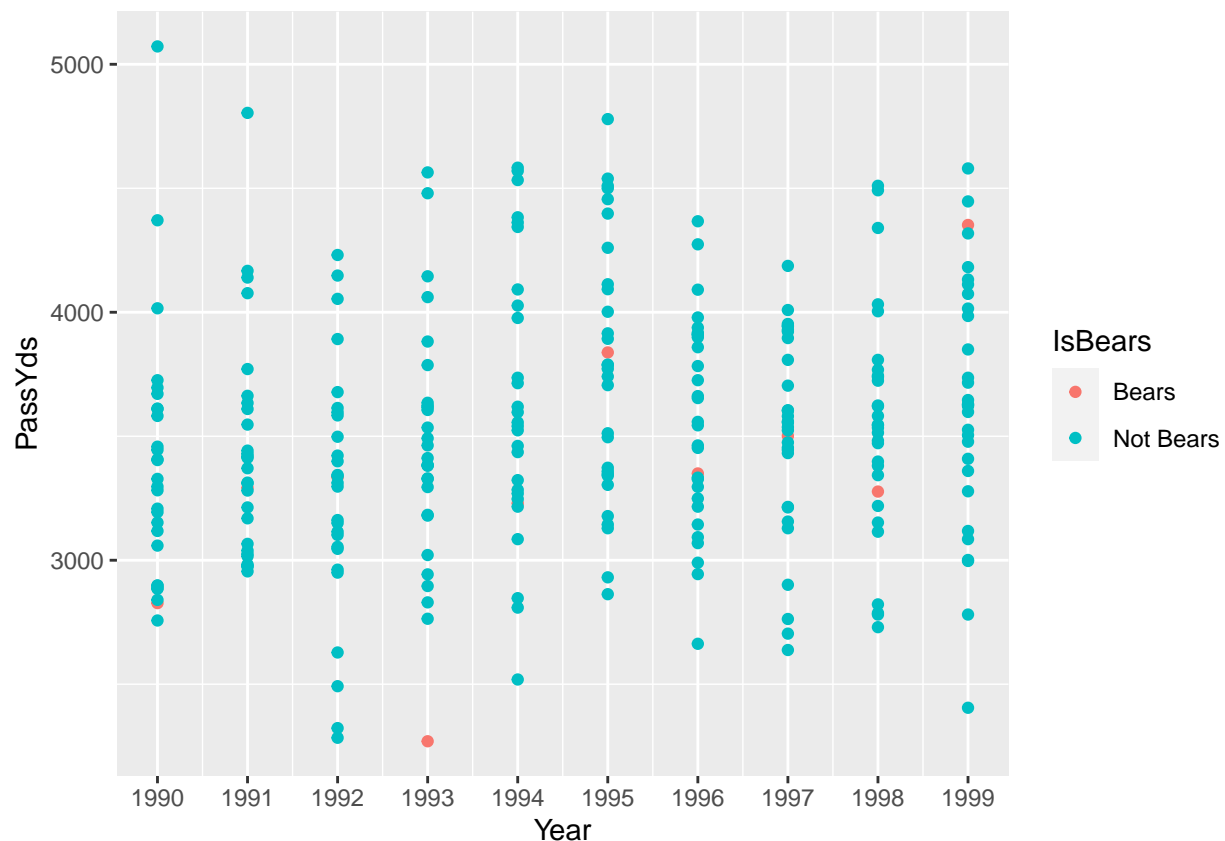
However, taking a closer look at the '87 Bears QBs and we see that the glory was shared amongst 6 different passers. Heck, if we look at the Position column, we see that most of them are unlabeled for reasons unknown. The most yards was from Jim McMahon and he only got 1639 yards; granted he only played in 7 games due to the strike



going on at the time as well as drama between the players and coaches. Second highest yards goes to Mike Tomczak, who was the de facto Bears QB1 that year with 12 games played. Fun fact, two QBs here have later taken their own teams to the Super Bowl as head coaches: Sean Payton with the New Orleans Saints in 2009 and Jim Harbaugh with the San Francisco 49ers in 2012.

## The 1990's - Franchise Quarterback? It Could Perhaps be Done.

```
nineties <- sqldf("SELECT * FROM nfl_pt2 WHERE Year BETWEEN 1990 AND 1999")
b3 <- ggplot(nineties, aes(x = Year, y = PassYds, color = IsBears)) +
  geom_point() +
  scale_x_continuous(breaks = seq(1990, 1999, by = 1))
b3
```

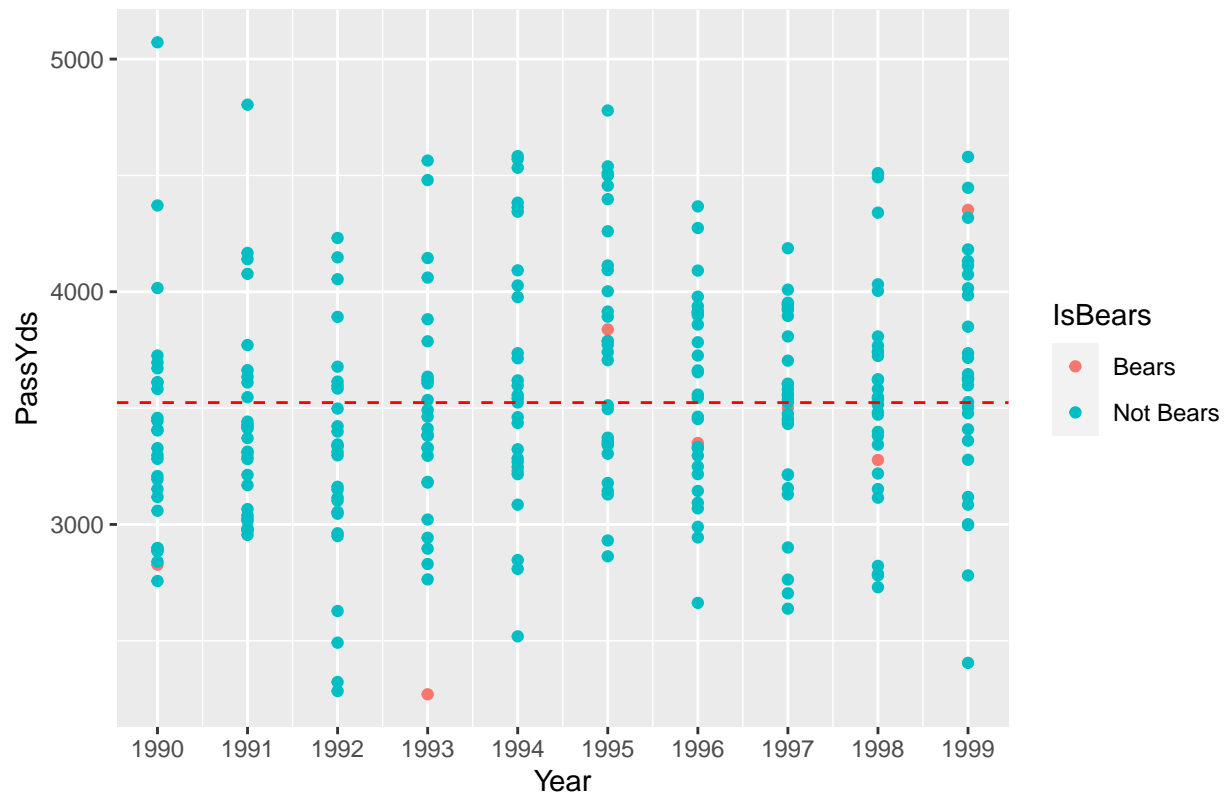


```
avg90 <- mean(nineties$PassYds)
avg90
```

```
## [1] 3523.628
```

```
b3 + geom_hline(yintercept = avg90, linetype = "dashed", color = "red") +
  ggtitle("1990's Bears vs the Rest of the NFL")
```

## 1990's Bears vs the Rest of the NFL



*# Looks like we're finally seeing actual progress! Ignoring the abomination that  
# is the 1993 Chicago Bears passing stat, we can see there are certainly bright  
# spots in 1995 and especially 1999. It looks like the Bears finally have a QB that  
# can take their franchise to new heights in the new century... or so one would  
# think by just looking at this. Still, they managed to cross the ever elusive  
# 4000 passing yard mark, an incredible feat that netted them... a 6-10 record.  
# Incredible.*

```
avg90_99 <- sqldf("SELECT Year, IsBears, AVG(PassYds) AS PassYds FROM nineties GROUP BY Year")
bears90 <- sqldf("SELECT Year, IsBears, PassYds FROM nineties WHERE Team = 'Bears'")
head(sqldf("SELECT * FROM avg90_99 UNION SELECT * FROM bears90"), 20)
```

##	Year	IsBears	PassYds
## 1	1990	Bears	2827.000
## 2	1990	Not Bears	3382.143
## 3	1991	Bears	3292.000
## 4	1991	Not Bears	3432.143
## 5	1992	Bears	3334.000
## 6	1992	Not Bears	3286.107
## 7	1993	Bears	2270.000
## 8	1993	Not Bears	3446.071
## 9	1994	Bears	3230.000
## 10	1994	Not Bears	3638.714
## 11	1995	Bears	3838.000
## 12	1995	Not Bears	3768.967

```
## 13 1996      Bears 3350.000
## 14 1996 Not Bears 3555.367
## 15 1997      Bears 3501.000
## 16 1997 Not Bears 3509.600
## 17 1998      Bears 3277.000
## 18 1998 Not Bears 3536.200
## 19 1999      Bears 4352.000
## 20 1999 Not Bears 3652.100
```

*# Right off the bat, we can see that the Bears have beaten the year average passing yards in 1992, 1995 (and this year had a high average of 3769 yards), and 1999 with the 1997 team almost touching the average of that year by a measly 8.6 yards. But the real stars of the show are 1995 and 1999. There is definitely some investigation that needs to be done there.*

```
# 1995
Bears_1995 <- read_excel("1995BearsPassing.xlsx")
```

```
## New names:
## * 'Yds' -> 'Yds...11'
## * 'Yds' -> 'Yds...24'
```

```
names(Bears_1995)[10] <- "CmpPercentage"
names(Bears_1995)[11] <- "Yds"
sqldf("SELECT Player, Pos, G, CmpPercentage, Yds FROM Bears_1995")
```

```
##           Player Pos  G CmpPercentage  Yds
## 1   Erik Kramer  QB 16          60.3 3838
## 2 Curtis Conway  WR 16           0.0    0
```

*# Only two QBs? With only one QB being the main source of passing yards? What the actual hell is going on? Well, to begin, this is the highest the Chicago Bears have ever reached with a single QB's passing stats. Detroit Lions fans might also recognize a familiar face in Erik Kramer, who was the only QB in their franchise's history to win a playoff game in the entire Super Bowl Era. Quite an impressive resume already considering that even 2021 LA Rams Super Bowl winning QB Matthew Stafford couldn't get the job done for the Lions. The '95 Bears also managed a decent 9-7 record, but missed the playoffs by an inch. Just another one of the many misfortunes that characterizes the Chicago franchise. But hey, maybe they have a franchise QB at long last... right? Nah, he only had 5 seasons with the Bears and hit his peak in 1995. He still certainly is one of the best quarterbacks Chicago has ever had.*

*# At long last, we have reached 1999. So far, the best record we see from the Bears' passing record. This can only be good.*

```
Bears_1999 <- read_excel("1999BearsPassing.xlsx")
```

```
## New names:
## * 'Yds' -> 'Yds...11'
## * 'Yds' -> 'Yds...24'
```

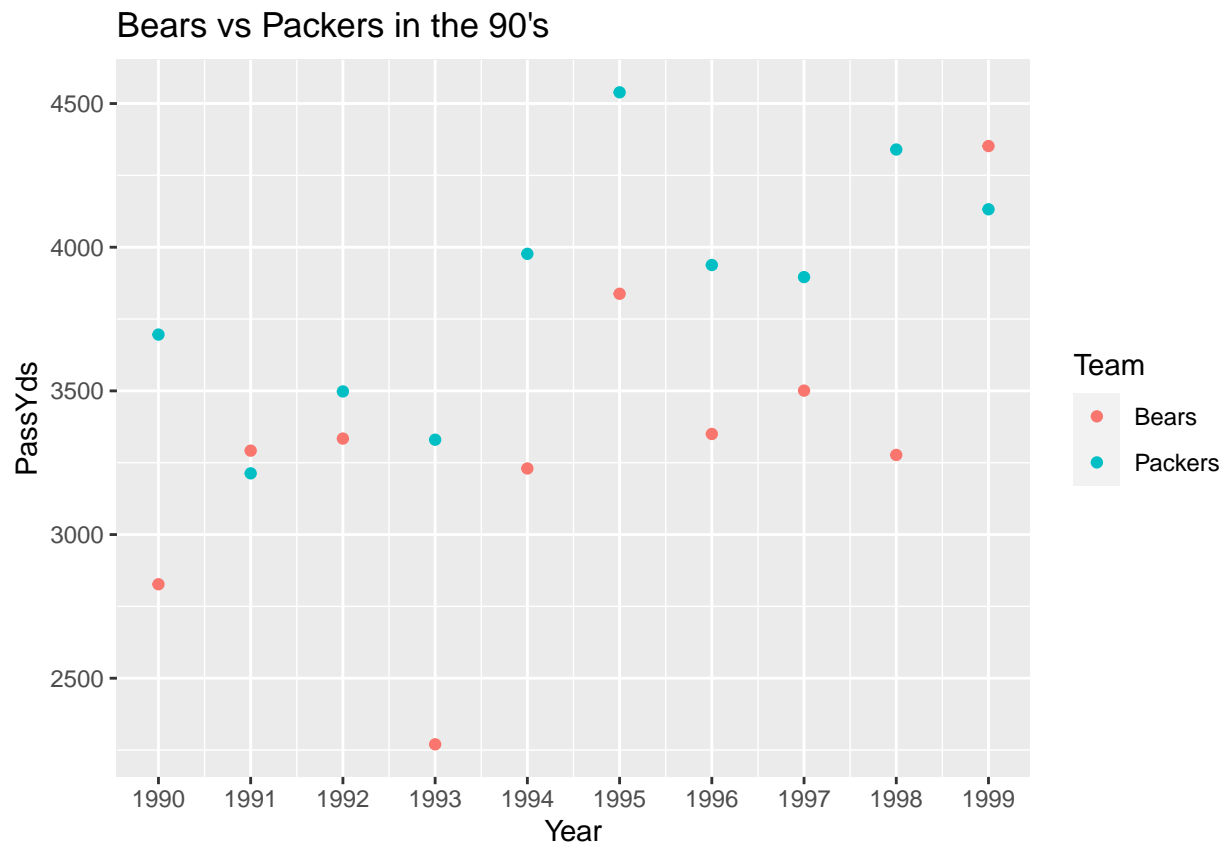
```
names(Bears_1999)[10] <- "CmpPercentage"
names(Bears_1999)[11] <- "Yds"
sqldf("SELECT Player, Pos, G, CmpPercentage, Yds FROM Bears_1999")
```

```
##           Player Pos  G CmpPercentage  Yds
## 1 Shane Matthews QB   8         60.7 1645
## 2 Cade McNown   qb  15         54.0 1465
## 3 Jim Miller   qb   5         63.2 1242
```

*# What the hell?*  
*# Certainly not what anyone expects when you look at that passing yards stat. You*  
*# don't see 3 quarterbacks in one team throw for a total of over 4000 yards where*  
*# none of these fellas reached over 2000 yards individually. But if you haven't been*  
*# paying attention, this is just Bears football in a nutshell.*

*# That was disappointing. But hey, let's take a look at their longtime rivals: The*  
*# Green Bay Packers. They haven't been doing too hot since the 70's and 80's. They*  
*# just picked up some guy named Brett Favre in '92 to be the QB of the future for GB.*  
*# How did that turn out in comparison to the Bears?*

```
BvP_90 <- sqldf("SELECT * FROM nineties WHERE Team IN ('Bears', 'Packers')")
ggplot(BvP_90, aes(x = Year, y = PassYds, color = Team)) +
  geom_point() +
  scale_x_continuous(breaks = seq(1990, 1999, by = 1)) +
  ggtitle("Bears vs Packers in the 90's")
```



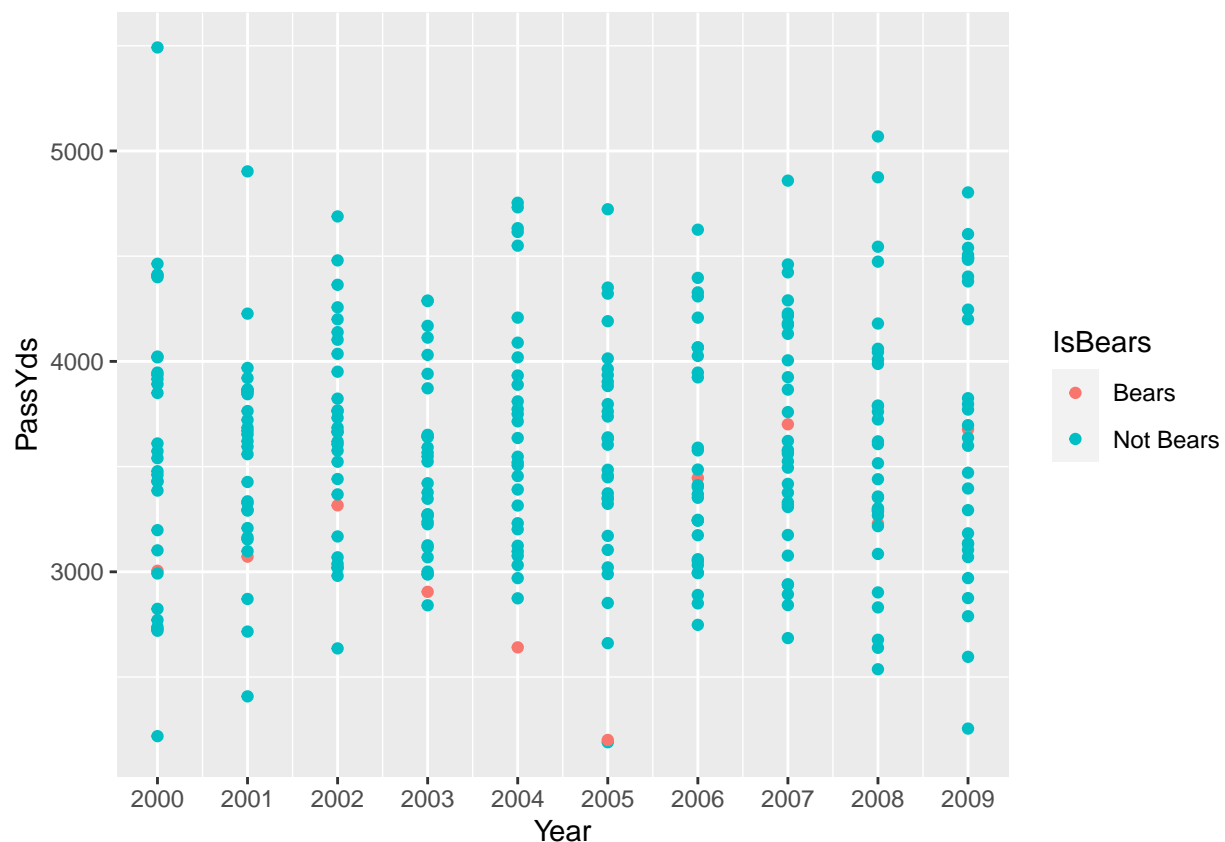
```
# Reminder that Favre won 3 consecutive MVP's in this decade and made 2 Super  
# Bowls (record 1-1). Must be painful to live as a Bears fan. At least Chicago's  
# triplicate army of QBs beat Favre in '99. Not bad.
```

Da Bears improved vastly from the previous two decades and had a 4k passing season. Granted, it took 3 QBs but still impressive nonetheless. The next stop for Chicago is now to get a true, single QB that can reach the fabled 4000 yard passing mark. They have to if they want to beat their rival Green Bay, who just happened to end up with a future Hall of Fame quarterback. Having a HoF quarterback is rare and most teams to this day would still kill for one, but eventually, everyone gets their time to shine. At least Chicago hopes so.

Onto the new millenium.

## The 2000's - Where are the Good Quarterbacks at?

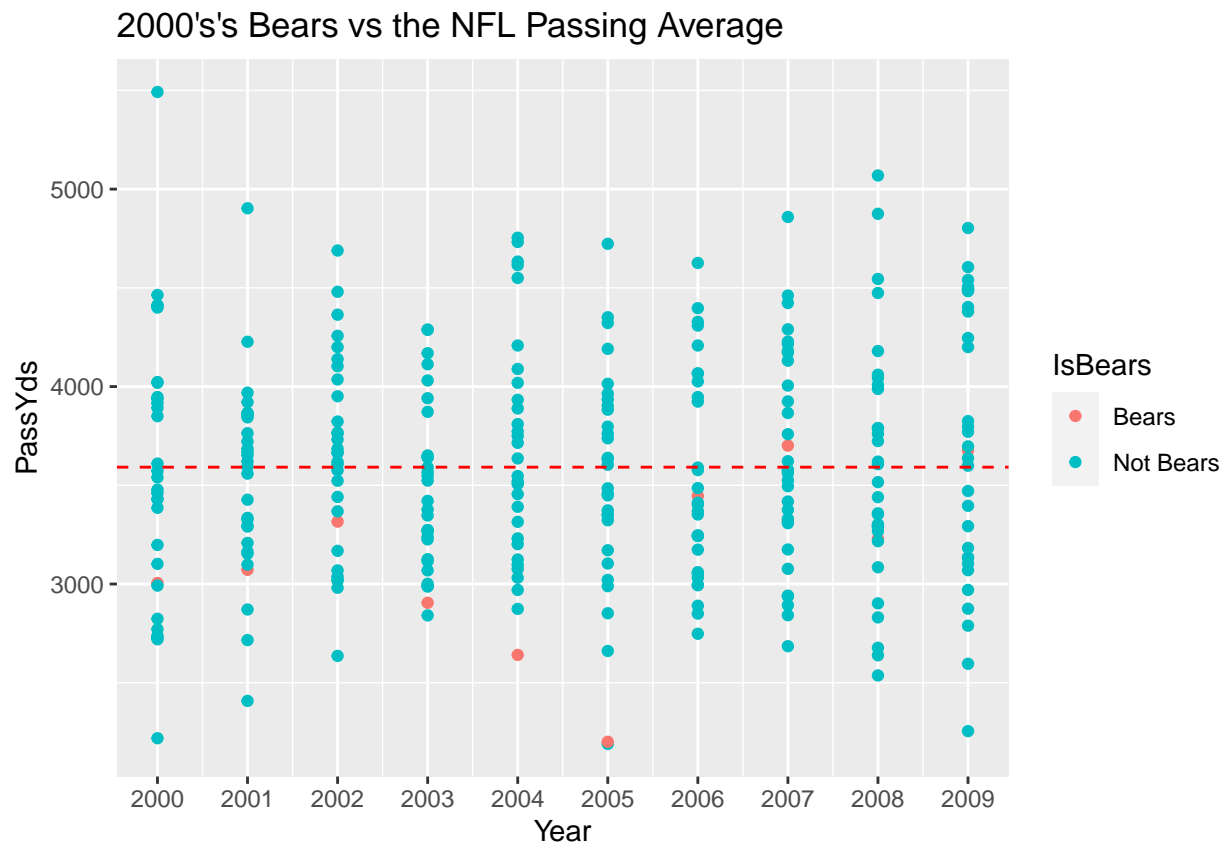
```
aughts <- sqldf("SELECT * FROM nfl_pt2 WHERE Year BETWEEN 2000 AND 2009")  
b4 <- ggplot(aughts, aes(x = Year, y = PassYds, color = IsBears)) +  
  geom_point() +  
  scale_x_continuous(breaks = seq(2000, 2009, by = 1))  
b4
```



```
avg00 <- mean(aughts$PassYds)
avg00
```

```
## [1] 3591.712
```

```
b4 + geom_hline(yintercept = avg00, linetype = "dashed", color = "red") +
  ggtitle("2000's's Bears vs the NFL Passing Average")
```



*# It seems like every we look at, the Bears drop the ball for the majority of the years, going below to way below average. And then we have an outlier year or two like 2007. Funny thing is, the one year they went above average was the year after the Bears went to the Super Bowl on the backs of their defense and special teams units and lost to the Manning-led Indianapolis Colts. They sure could've used that 2007 offense earlier but oh well. At least they made it.*

```
avg00_09 <- sqldf("SELECT Year, IsBears, AVG(PassYds) AS PassYds FROM aughts GROUP BY Year")
bears00 <- sqldf("SELECT Year, IsBears, PassYds FROM aughts WHERE Team = 'Bears'")
head(sqldf("SELECT * FROM avg00_09 UNION SELECT * FROM bears00"), 20)
```

```
##   Year  IsBears  PassYds
## 1  2000     Bears 3005.000
## 2  2000  Not Bears 3565.500
## 3  2001     Bears 3072.000
## 4  2001  Not Bears 3531.467
```

```
## 5 2002 Bears 3316.000
## 6 2002 Not Bears 3656.633
## 7 2003 Bears 2905.000
## 8 2003 Not Bears 3477.300
## 9 2004 Bears 2641.000
## 10 2004 Not Bears 3669.567
## 11 2005 Bears 2201.000
## 12 2005 Not Bears 3514.433
## 13 2006 Bears 3446.000
## 14 2006 Not Bears 3535.333
## 15 2007 Bears 3701.000
## 16 2007 Not Bears 3652.312
## 17 2008 Bears 3229.000
## 18 2008 Not Bears 3586.438
## 19 2009 Bears 3677.000
## 20 2009 Not Bears 3716.156
```

*# They have higher averages than the previous decades but still fail to make the hurdle  
# over the decade average and annual average passing yards except in 2007. You just  
# expect it from the Bears at this point. At least they almost touch the average after  
# 2007. Progress?*

*# Let's have a look at the team that made Super Bowl and the year after that.  
# 2006:*

```
Bears_2006 <- read_excel("2006BearsPassing.xlsx")
```

```
## New names:
## * 'Yds' -> 'Yds...11'
## * 'Yds' -> 'Yds...24'
```

```
names(Bears_2006)[10] <- "CmpPercentage"
names(Bears_2006)[11] <- "Yds"
sqldf("SELECT Player, Pos, G, CmpPercentage, Yds FROM Bears_2006")
```

```
##      Player Pos G CmpPercentage Yds
## 1 Rex Grossman QB 16      54.6 3193
## 2 Brian Griese <NA> 6      56.3  220
## 3 Thomas Jones RB 16     100.0   -4
## 4 Brad Maynard <NA> 16     100.0   37
```

*# By Chicago standards, Rex Grossman was not that bad. By modern NFL standards  
# Grossman is just completely mediocre. This is a guy that carried by the  
# special teams and defense all the way to the Super Bowl where Grossman  
# engaged in a shootout with Peyton Manning. It didn't end well.*

*#2007:*

```
Bears_2007 <- read_excel("2007BearsPassing.xlsx")
```

```
## New names:
## * 'Yds' -> 'Yds...11'
## * 'Yds' -> 'Yds...24'
```

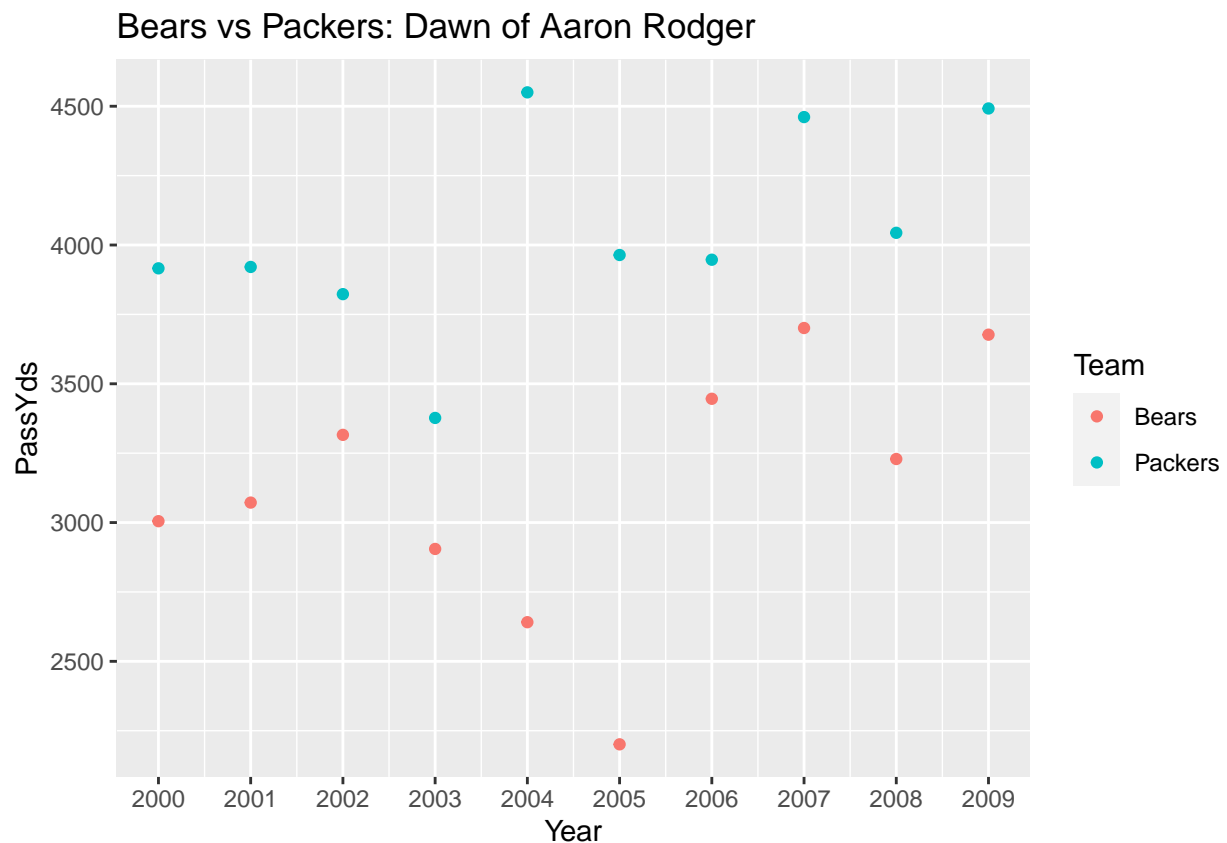
```
names(Bears_2007)[10] <- "CmpPercentage"
names(Bears_2007)[11] <- "Yds"
sqldf("SELECT Player, Pos, G, CmpPercentage, Yds FROM Bears_2007")
```

```
##           Player Pos  G CmpPercentage  Yds
## 1   Brian Griese  qb   7         61.5 1803
## 2   Rex Grossman  QB   8         54.2 1411
## 3    Kyle Orton <NA>  3         53.8  478
## 4   Robbie Gould <NA> 16          0.0    0
## 5 Adrian Peterson  rb 16        100.0    9
## 6  Devin Hester*+ <NA> 16          NA    0
```

*# I'm sure we've seen stats like this before. I don't even need to talk  
# about this. It's the Chicago Bears in peak form.*

*# Meanwhile, in Green Bay:*

```
BvP_00 <- sqldf("SELECT * FROM aughts WHERE Team IN ('Bears', 'Packers')")
ggplot(BvP_00, aes(x = Year, y = PassYds, color = Team)) +
  geom_point() +
  scale_x_continuous(breaks = seq(2000, 2009, by = 1)) +
  ggtitle("Bears vs Packers: Dawn of Aaron Rodger")
```



*# Once upon a time, Brett Favre spent the majority of the early and mid  
# aughts threatening to retire from the NFL. The Green Bay Packers got some*

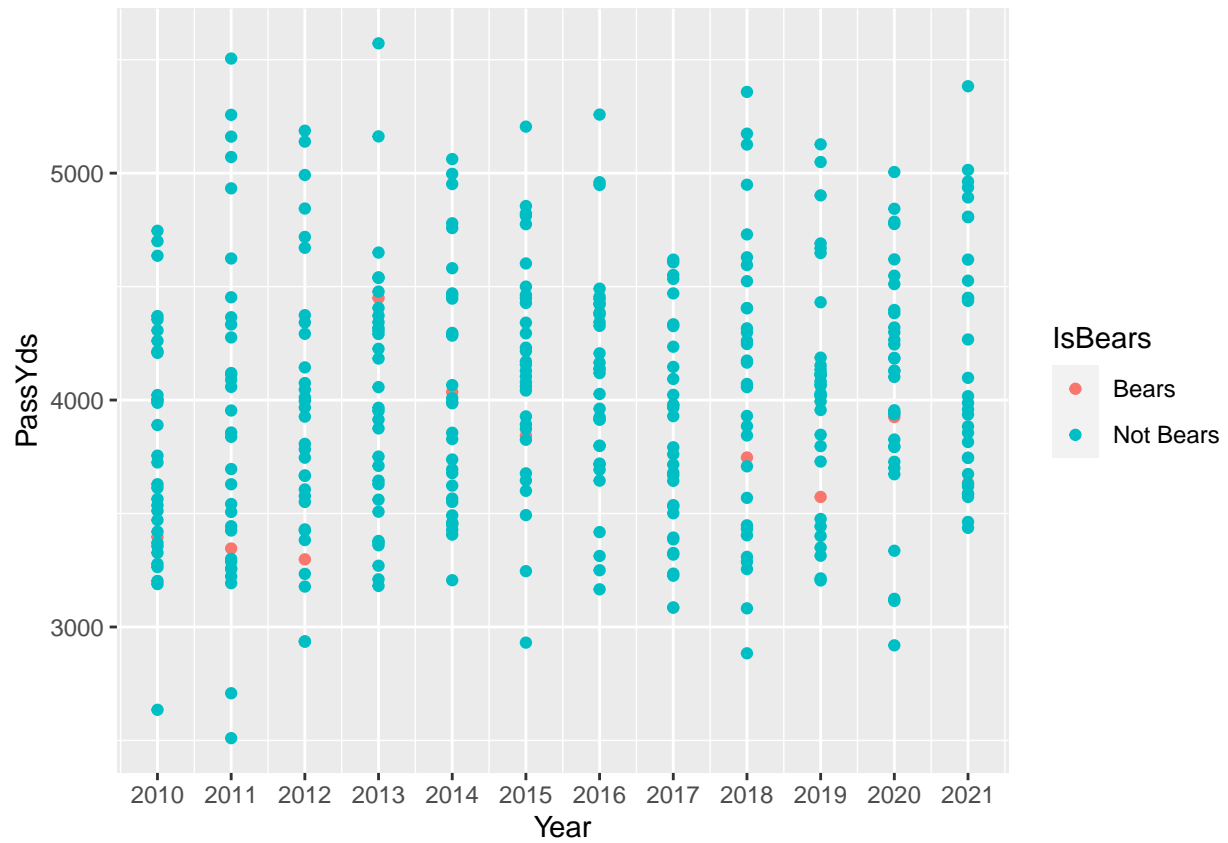


```
# young, unknown QB from UC Berkeley in the 2005 draft named Aaron Rodgers  
# as insurance in case Favre really did decide to retire. Let's just say  
# the draft pick did not help matters with Favre wanting to stay, and so he  
# retired in March 2008, where we would see him ever again(?) Aaron Rodger  
# needed to fill big shoes as his predecessor was a hall of fame QB, and he  
# answered the call to duty by turning into another HoF quarterback for GB.  
# Thus, in 2008, the Bears would continue to suffer while their rival continued  
# to experience "once-in-a-lifetime" passing talent for the second time...
```

It certainly seems like the Bears make an attempt to have a good quarterback but they either just don't know how to develop one or they keep picking the wrong one. Maybe they're just cursed to never have a quarterback that could come close to sniffing the success of the two recent hall of fame quarterbacks that Green Bay has. The modern NFL almost requires a skilled QB at the helm but the Bears seem to be stuck in the past. It's truly a wonder how such a passing talent deprived team managed to make a Super Bowl in 2006. Now we move onto the final stretch...

## The 2010's (and 2020-2021): So Close Yet So Far

```
tens <- sqldf("SELECT * FROM nfl_pt2 WHERE Year BETWEEN 2010 AND 2021")  
b5 <- ggplot(tens, aes(x = Year, y = PassYds, color = IsBears)) +  
  geom_point() +  
  scale_x_continuous(breaks = seq(2010, 2021, by = 1))  
b5
```



```
avg10 <- mean(tens$PassYds)
avg10
```

```
## [1] 4007.846
```

```
b5 + geom_hline(yintercept = avg10, linetype = "dashed", color = "red") +
  ggtitle("2010's's Bears vs the Mean NFL")
```

## 2010's's Bears vs the Mean NFL



*# While this looks like any other decade with the bears (mostly below the average  
# with a few exceptions), I would like to point out that the Bears did not once  
# dip below the 3000 passing yards mark. It doesn't seem like much, but in the  
# modern NFL, having an offense below that threshold be cause for embarrassment.  
# So give it up for Chicago for at least having some form of stability. Also, give  
# the Bears some props for achieving the 4000 yard mark again, even if it isn't  
# with a single QB. They are late bloomers, but they seem to be on the right path.  
# Also, just take a look at that decade average: 4007 yards. Amazing how much  
# the offensive schemes have evolved throughout the decades.*

```
avg10_21 <- sqldf("SELECT Year, IsBears, AVG(PassYds) AS PassYds FROM tens GROUP BY Year")
bears10 <- sqldf("SELECT Year, IsBears, PassYds FROM tens WHERE Team = 'Bears'")
head(sqldf("SELECT * FROM avg10_21 UNION SELECT * FROM bears10"), 24)
```

```
##   Year  IsBears  PassYds
## 1  2010     Bears 3397.000
## 2  2010  Not Bears 3779.562
## 3  2011     Bears 3346.000
## 4  2011  Not Bears 3916.562
## 5  2012     Bears 3298.000
## 6  2012  Not Bears 3935.969
## 7  2013     Bears 4450.000
## 8  2013  Not Bears 4036.781
## 9  2014     Bears 4035.000
## 10 2014  Not Bears 4028.062
```

```
## 11 2015      Bears 3843.000
## 12 2015 Not Bears 4146.531
## 13 2016      Bears 4139.000
## 14 2016 Not Bears 4089.500
## 15 2017      Bears 3085.000
## 16 2017 Not Bears 3833.750
## 17 2018      Bears 3747.000
## 18 2018 Not Bears 4070.844
## 19 2019      Bears 3573.000
## 20 2019 Not Bears 4028.469
## 21 2020      Bears 3925.000
## 22 2020 Not Bears 4078.125
## 23 2021      Bears 3635.000
## 24 2021 Not Bears 4150.000
```

*# Quite honestly, the Bears are looking quite impressive, even if they still fall  
# below average for most of the years. Especially in 2013, where the Bears hit  
# 4.4 passing yards.*

*# Instead of taking a look at individual years for QB stats, let's take a look at  
# all the current ones for this date range:*

```
Bears_2010s <- read_excel("2010sBearsPassing.xlsx")
```

```
## New names:
## * 'Yds' -> 'Yds...13'
## * 'Yds' -> 'Yds...26'
```

```
names(Bears_2010s)[3] <- "Year"
names(Bears_2010s)[12] <- "CmpPercentage"
names(Bears_2010s)[13] <- "Yds"
head(sqldf("SELECT Player, Year, Pos, G, CmpPercentage, Yds FROM Bears_2010s"), 38)
```

```
##           Player Year Pos  G CmpPercentage  Yds
## 1      Justin Fields 2021  QB 12      58.9 1870
## 2        Andy Dalton 2021  qb  8      63.1 1515
## 3        Nick Foles 2021  qb  1      68.6  250
## 4   David Montgomery 2021  RB 13       0.0    0
## 5   Mitchell Trubisky 2020  QB 10      67.0 2055
## 6        Nick Foles 2020  qb  9      64.7 1852
## 7        Tyler Bray 2020  qb  1      20.0  18
## 8   Mitchell Trubisky 2019  QB 15      63.2 3138
## 9        Chase Daniel 2019  qb  3      70.3  435
## 10 Mitchell Trubisky* 2018  QB 14      66.6 3223
## 11        Chase Daniel 2018  qb  5      69.7  515
## 12   Anthony Miller 2018  wr 15     100.0    8
## 13   Tarik Cohen** 2018  RB 16     100.0    1
## 14 Mitchell Trubisky 2017  QB 12      59.4 2193
## 15        Mike Glennon 2017  qb  4      66.4  833
## 16   Pat O'Donnell 2017  p 16     100.0   38
## 17        Tarik Cohen 2017  rb 16      50.0   21
## 18        Matt Barkley 2016  QB  7      59.7 1611
## 19        Brian Hoyer 2016  qb  6      67.0 1445
## 20         Jay Cutler 2016  qb  5      59.1 1059
```

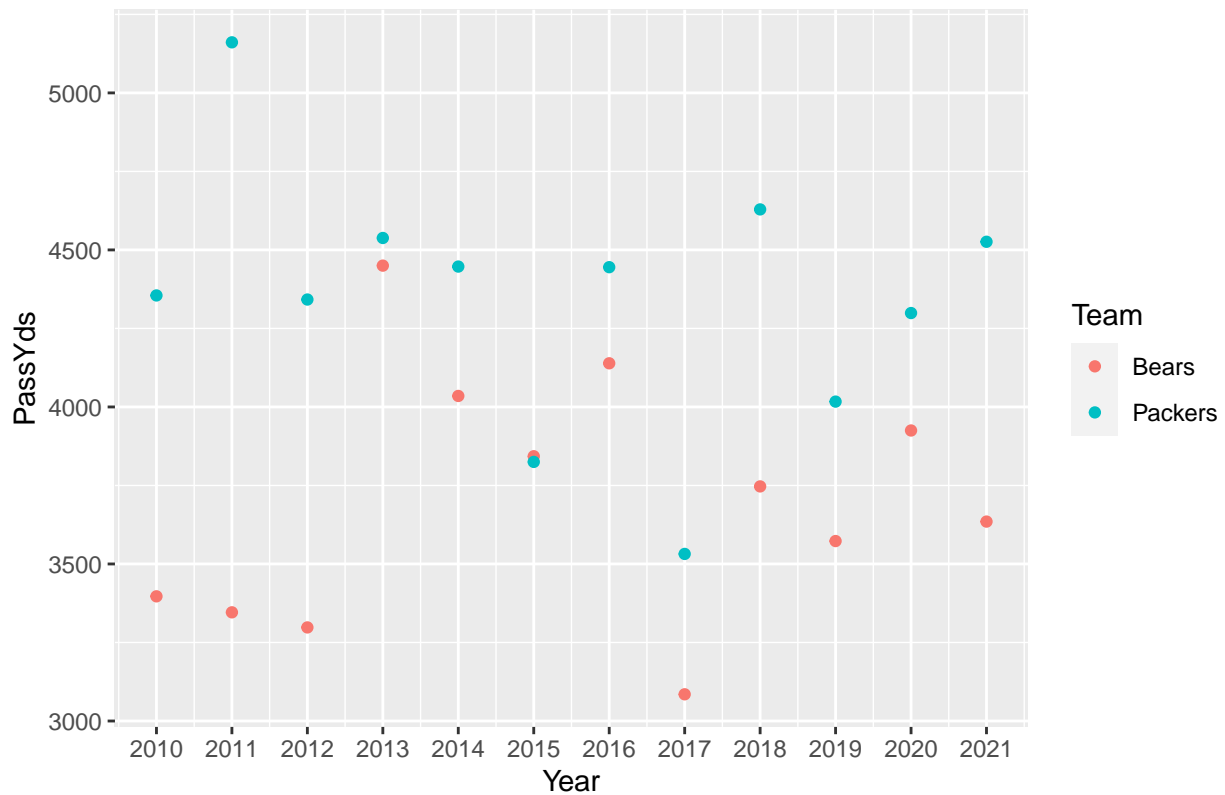
## 21	David Fales	2016	qb	1	40.0	22
## 22	Cameron Meredith	2016	WR	14	100.0	2
## 23	Jay Cutler	2015	QB	15	64.4	3659
## 24	Jimmy Clausen	2015	qb	2	57.5	184
## 25	Jay Cutler	2014	QB	15	66.0	3812
## 26	Jimmy Clausen	2014	qb	4	54.2	223
## 27	Jay Cutler	2013	QB	11	63.1	2621
## 28	Josh McCown	2013	qb	8	66.5	1829
## 29	Jay Cutler	2012	QB	15	58.8	3033
## 30	Jason Campbell	2012	qb	6	62.7	265
## 31	Jay Cutler	2011	QB	10	58.0	2319
## 32	Caleb Hanie	2011	qb	6	50.0	613
## 33	Josh McCown	2011	qb	3	63.6	414
## 34	Matt Forte*	2011	RB	12	0.0	0
## 35	Adam Podlesh	2011	p	16	0.0	0
## 36	Jay Cutler	2010	QB	15	60.4	3274
## 37	Todd Collins	2010	qb	2	37.0	68
## 38	Caleb Hanie	2010	qb	2	71.4	55

*# One name that really stands out is Jay Cutler. He is perhaps the best QB the Bears  
# ever had. His 2014 and 2015 stats were admirable, even if he never got to the  
# fabled 4000 yards by himself. The rest of the years are full of multiple QBs  
# combining to create a fairly impressive year in passing, especially in 2013.  
# Some years were with QB project Trubisky, who unfortunately didn't work out with the  
# Bears. Trubisky still led some teams into the playoffs. Either way, I can't really  
# say the Bears were outright bad this time around. They seem to be getting close  
# to finding their true franchise HoF QB. Perhaps it will be Justin Fields, who is  
# currently playing for the Bears right now. Who knows?*

*# Anyways, let's see the Packers one more time for the laughs.*

```
BvP_10s <- sqldf("SELECT * FROM tens WHERE Team IN ('Bears', 'Packers')")
ggplot(BvP_10s, aes(x = Year, y = PassYds, color = Team)) +
  geom_point() +
  scale_x_continuous(breaks = seq(2010, 2021, by = 1)) +
  ggtitle("Bears vs Packers: This is Getting Out of Hand Now")
```

## Bears vs Packers: This is Getting Out of Hand Now



*# At least the Bears beat the Packers in 2015, barely. But aside from that,  
# it's what you expect out of a team struggling to find the right QB going against  
# a team with a hall of famer that stuck by for years. It's just sad and maybe  
# we'll one day see the roles flipped around for once in a long time.*

It's easy to say that the Chicago Bears just don't give a damn about quarterbacks or they've just been unfortunate when it comes to that, but the Bears to appear to be making progress towards getting a real QB of the future. With the new 17 game schedule, it is likely that the Bears have a shot at seeing their own guy hit the big 4k yards, perhaps even the legendary 5k yards. They certainly have inflicted with some kind of curse (probably from a witch living in Wisconsin), but they're making strides to beat the odds. Chicago dreams of the day that they get a QB that can rival the likes of Aaron Rodgers, and maybe we'll it in our lifetimes. The NFL is a strange place; anything can happen.