Visualizations

Matthew Murray

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```
# libraries

library(janitor)
```

```
## Warning: package 'janitor' was built under R version 4.0.5
```

```
##
## Attaching package: 'janitor'
```

```
## The following objects are masked from 'package:stats':
##
##     chisq.test, fisher.test
```

```
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 4.0.5
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyverse)
```

```
## Warning: package 'tidyverse' was built under R version 4.0.5
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --
```

```
## v ggplot2 3.3.5     v purrr   0.3.4
## v tibble  3.1.4     v stringr 1.4.0
## v tidyr   1.1.3     v forcats 0.5.1
## v readr   2.0.1
```

```
## Warning: package 'ggplot2' was built under R version 4.0.5

## Warning: package 'tibble' was built under R version 4.0.5

## Warning: package 'tidyr' was built under R version 4.0.4

## Warning: package 'readr' was built under R version 4.0.5

## Warning: package 'purrr' was built under R version 4.0.3

## Warning: package 'stringr' was built under R version 4.0.4

## Warning: package 'forcats' was built under R version 4.0.4

## -- Conflicts ----------------------------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(lubridate)
```

```
## Warning: package 'lubridate' was built under R version 4.0.4

##
## Attaching package: 'lubridate'

## The following objects are masked from 'package:base':
##
##     date, intersect, setdiff, union
```

```
library(stringi)
```

```
## Warning: package 'stringi' was built under R version 4.0.5
```

```
library(r2r)
```

```
## Warning: package 'r2r' was built under R version 4.0.5
```

```
library(purrr)
library(scales)
```

```
## Warning: package 'scales' was built under R version 4.0.4

##
## Attaching package: 'scales'

## The following object is masked from 'package:purrr':
##
##     discard

## The following object is masked from 'package:readr':
##
##     col_factor
```

```r
# read in data
data <- read.csv("data.csv")

# truncate/filter data
data <- data[data$Year >= 1954, ]
```

Visualizations

All Subjective Sports

```
f1 <- ggplot(data = data,
       aes(x = as.numeric(Year), y = as.integer(N), group = Sport, color = Sport)) +
  scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                              ceiling(max(y, digits = 1)),
                                              by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential GOATs by Year (Version 5.0)",
       caption = "Figure 1") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))

f1
```

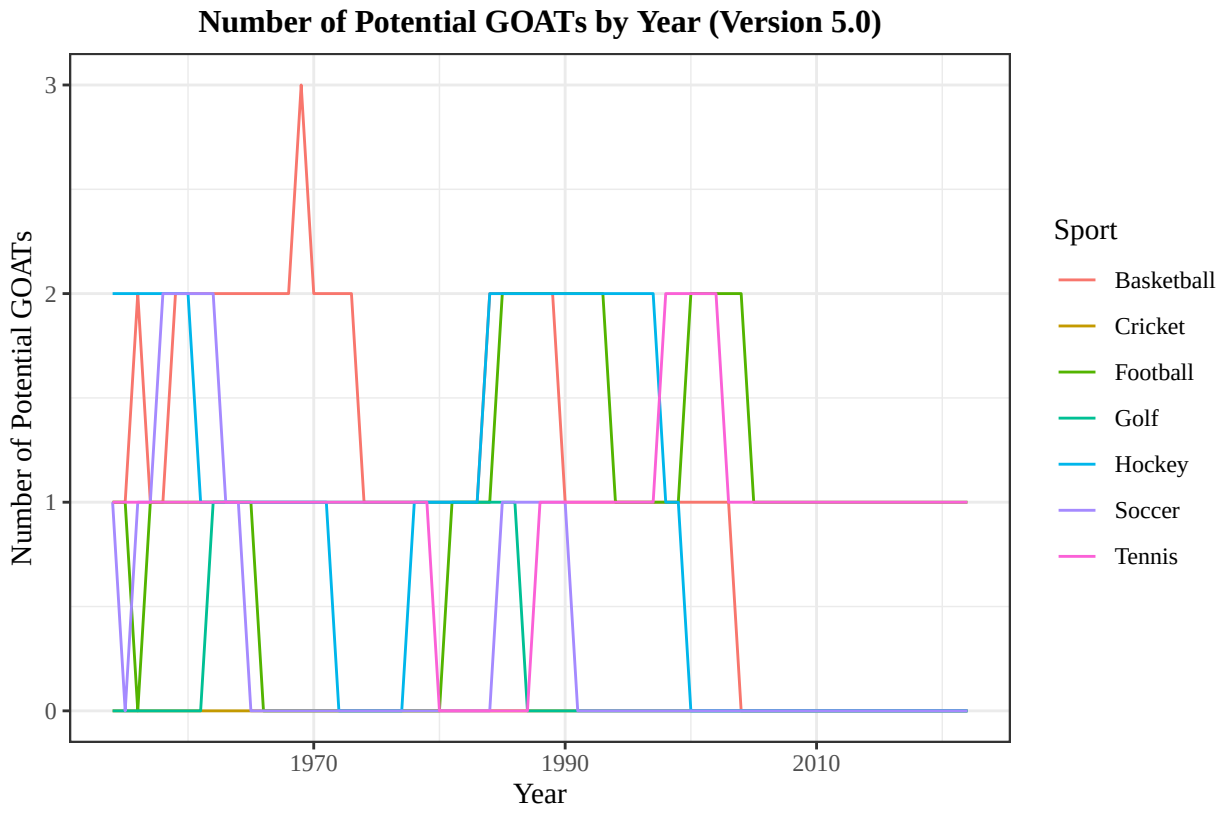

Figure 1

Soccer

```
soccer.filter = data[data$Sport == "Soccer",]

ggplot(data = soccer.filter,
       aes(x = as.numeric(Year), y = as.integer(N))) +
       scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                                   ceiling(max(y, digits = 1)),
                                                   by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential Soccer GOATs by Year",
       caption = "Figure 2") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))
```

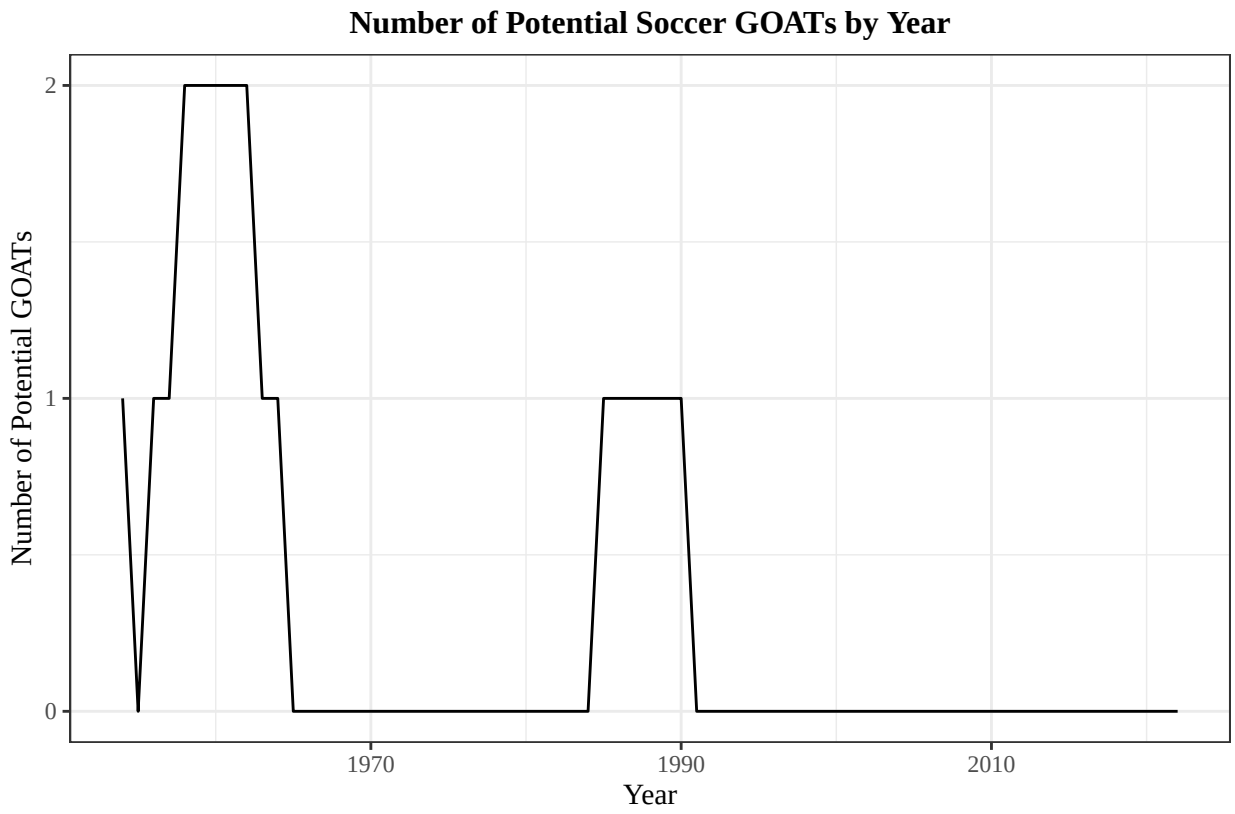

Figure 2

Cricket

```
cricket.filter = data[data$Sport == "Cricket",]

ggplot(data = cricket.filter,
       aes(x = as.numeric(Year), y = as.integer(N))) +
       scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                                   ceiling(max(y, digits = 1)),
                                                   by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential Cricket GOATs by Year",
       caption = "Figure 3") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))
```

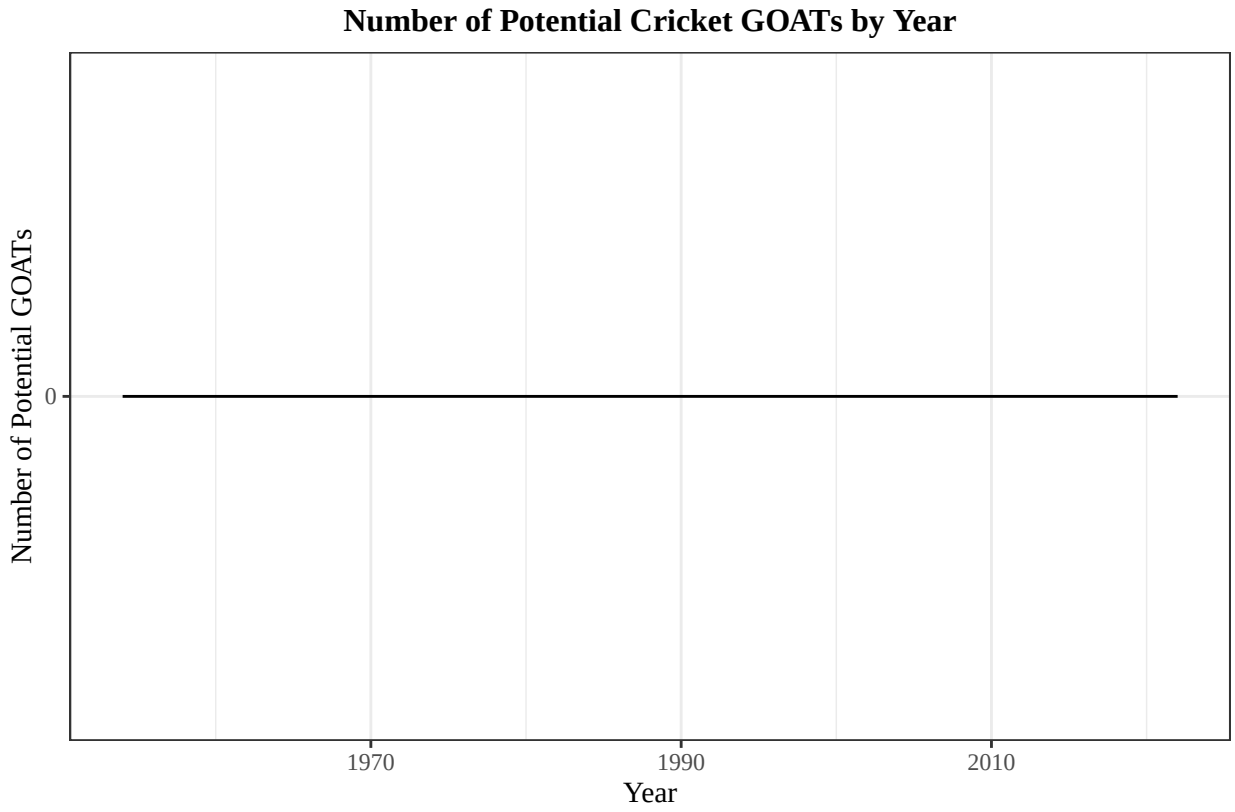

Figure 3

Tennis

```
tennis.filter = data[data$Sport == "Tennis",]

ggplot(data = tennis.filter,
       aes(x = as.numeric(Year), y = as.integer(N))) +
       scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                                   ceiling(max(y, digits = 1)),
                                                   by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential Tennis GOATs by Year",
       caption = "Figure 4") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))
```

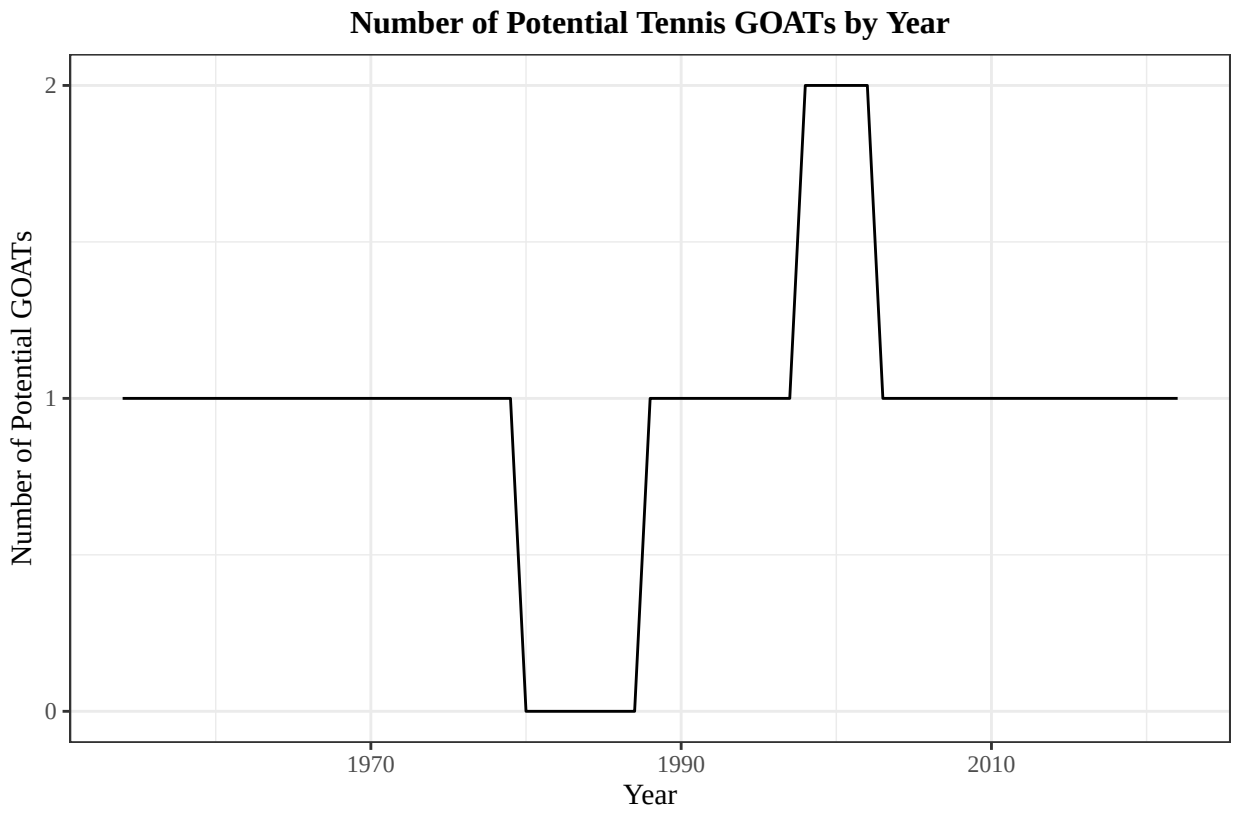

Figure 4

Basketball

```
basketball.filter = data[data$Sport == "Basketball",]

ggplot(data = basketball.filter,
       aes(x = as.numeric(Year), y = as.integer(N))) +
       scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                                   ceiling(max(y, digits = 1)),
                                                   by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential Basketball GOATs by Year",
       caption = "Figure 5") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))
```

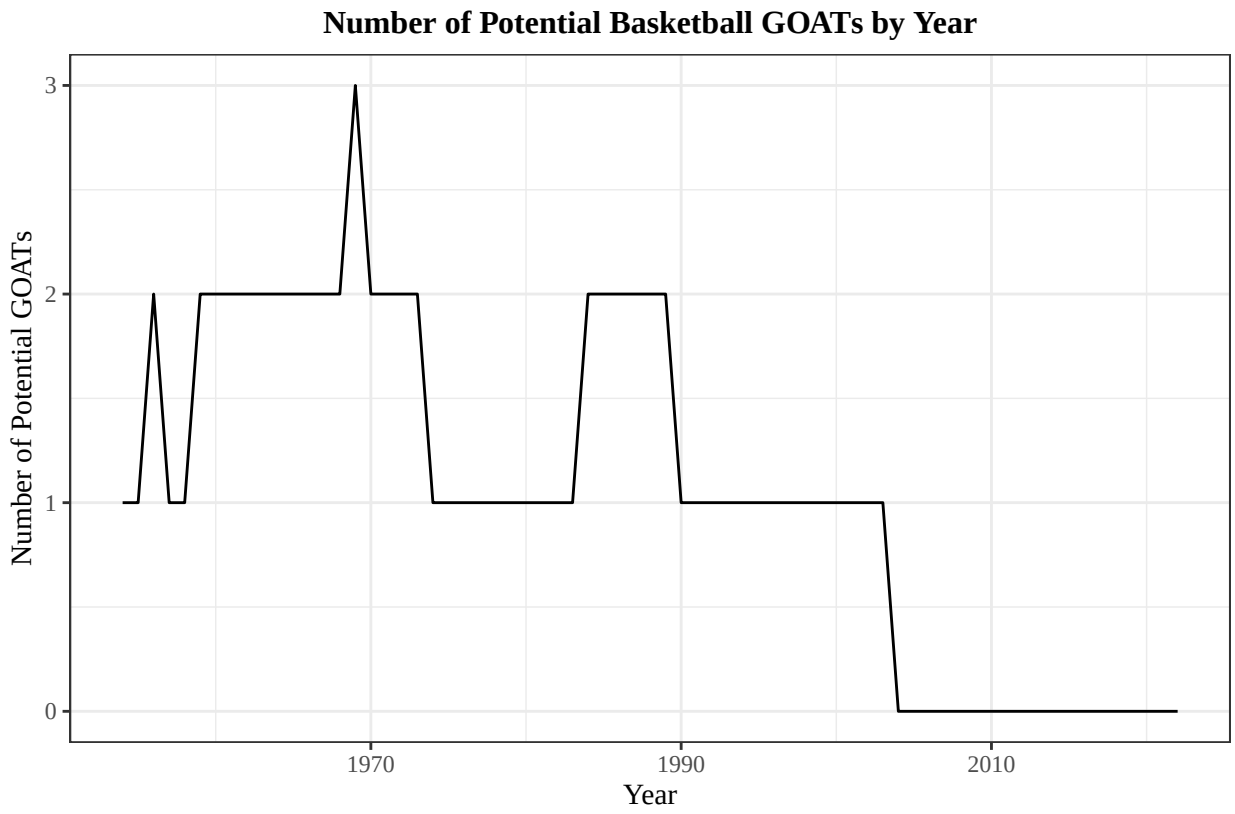

Figure 5

Football

```
football.filter = data[data$Sport == "Football",]

ggplot(data = football.filter,
       aes(x = as.numeric(Year), y = as.integer(N))) +
       scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                                   ceiling(max(y, digits = 1)),
                                                   by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential Football GOATs by Year",
       caption = "Figure 6") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))
```

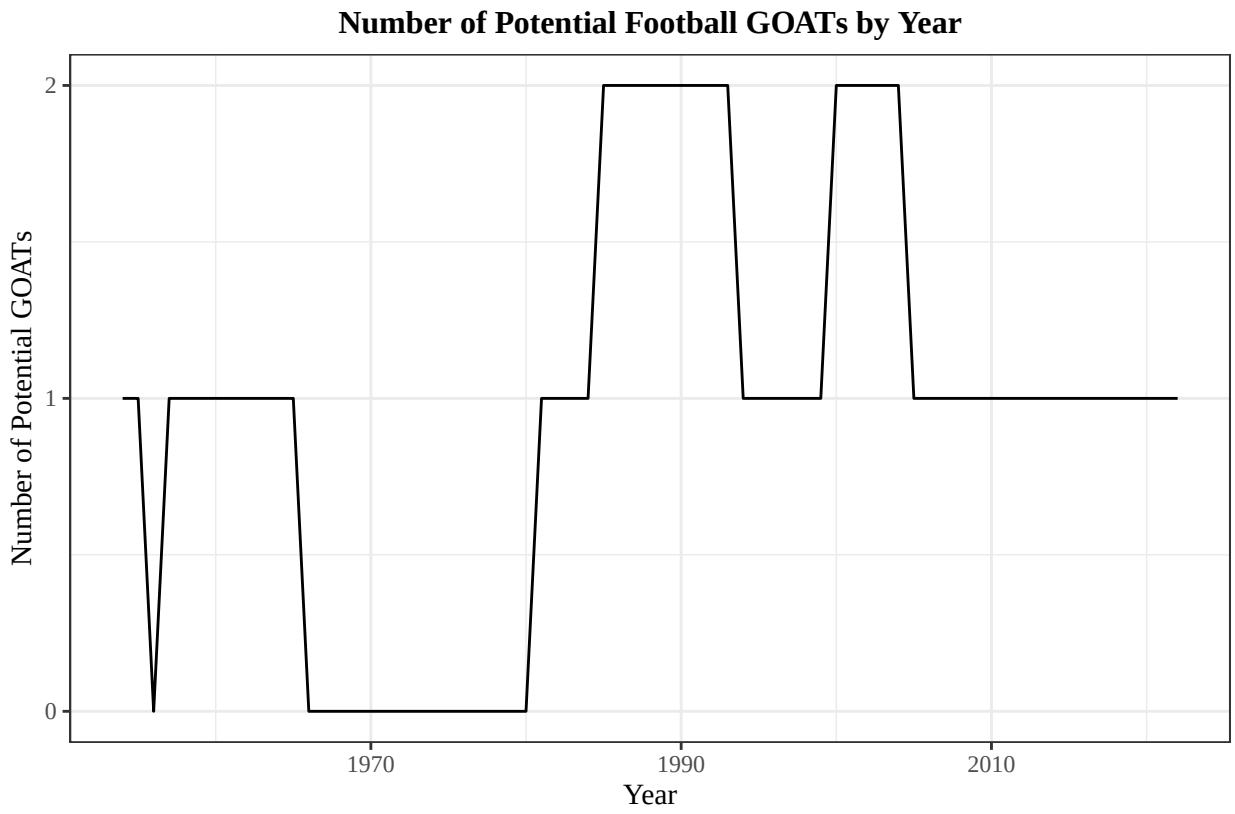

Figure 6

Hockey

```
hockey.filter = data[data$Sport == "Hockey",]

ggplot(data = hockey.filter,
       aes(x = as.numeric(Year), y = as.integer(N))) +
       scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                                   ceiling(max(y, digits = 1)),
                                                   by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential Hockey GOATs by Year",
       caption = "Figure 7") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))
```

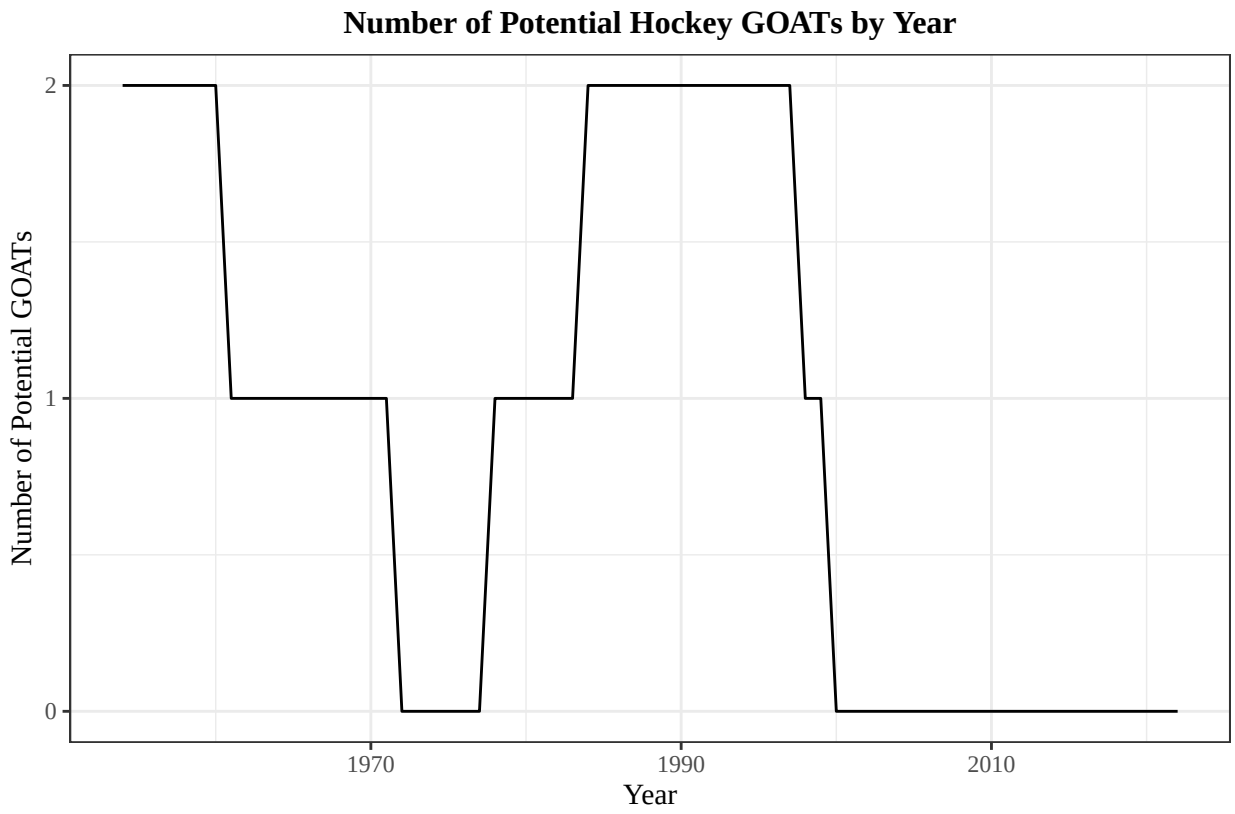

Figure 7

Golf

```
golf.filter = data[data$Sport == "Golf",]

ggplot(data = golf.filter,
       aes(x = as.numeric(Year), y = as.integer(N))) +
       scale_y_continuous(breaks = function(y) seq(floor(min(y, digits = 1)),
                                                   ceiling(max(y, digits = 1)),
                                                   by = 1))+
  geom_line() +
  labs(x = "Year",
       y = "Number of Potential GOATs",
       title = "Number of Potential Golf GOATs by Year",
       caption = "Figure 8") +
  theme_bw() +
  theme(text = element_text(family = "serif")) +
  theme(plot.title=element_text(family = "serif", face = "bold", hjust = 0.5, size = 12))
```

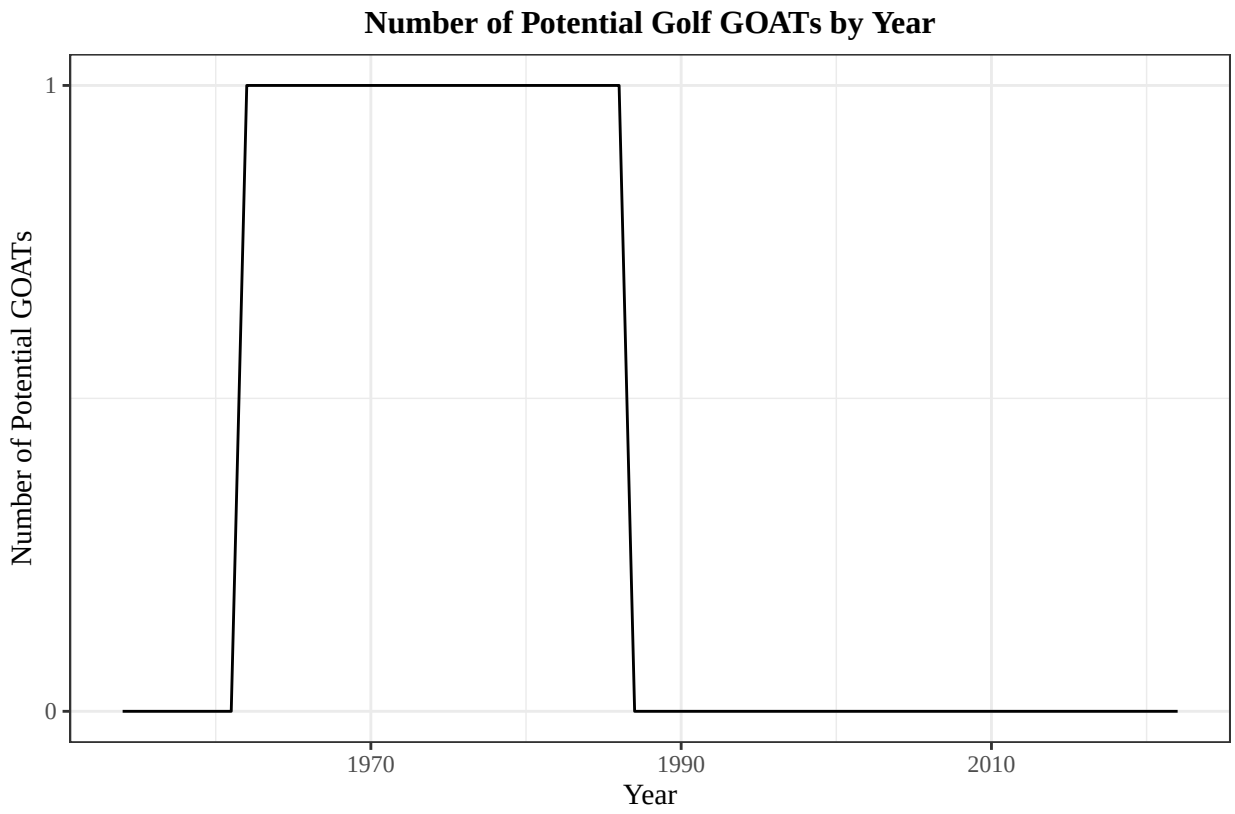

Figure 8

‘‘‘