Base Visuals

Austin Eaton

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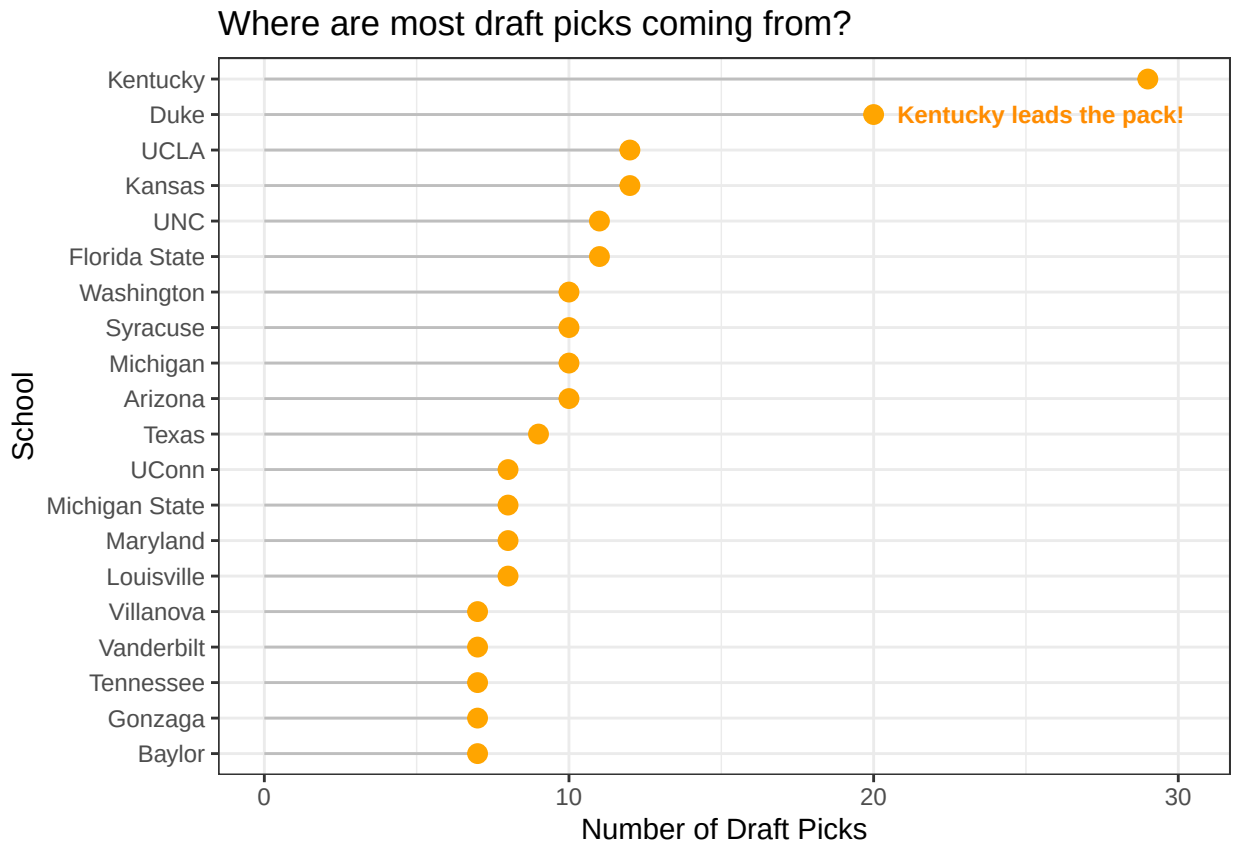
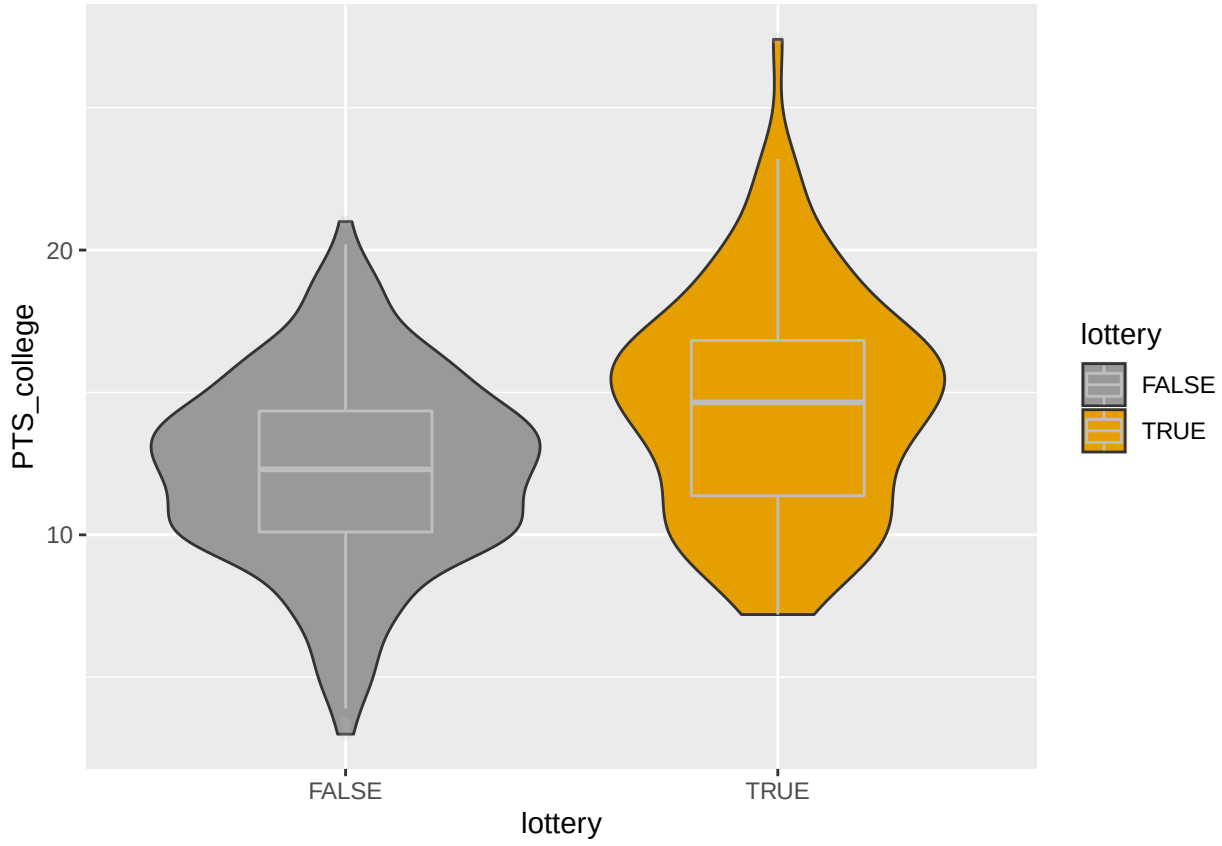
```
# import libraries
library(tidyverse)
library(plyr)
library(GGally)
library(ggridges)
# import file
df <- read_csv('../NBAdraft.csv')

names(df)[9] <- "FG_college_perc"
names(df)[12] <- "2P_perc"
names(df)[15] <- "3P_perc"
names(df)[18] <- "FT_perc"
```

```
## Top Schools ----
count(df,'School') %>%
  arrange(freq) %>%
  tail(n=20) %>%
  mutate(School=factor(School, levels=School)) %>%
  ggplot( aes(x=School, y=freq)) +
  geom_segment(
    aes(x=School, xend=School, y=0, yend=freq),
    color='grey',
    # color=ifelse(School == c("Kentucky"), "orange", "grey"),
    # size=ifelse(School %in% c("Kentucky"), 1.3, 0.7)
    ) +
  geom_point(size = 3, color='orange') +
  coord_flip() +
  theme_bw() +
  xlab("School") +
  ylab("Number of Draft Picks") +
  ggtitle("Where are most draft picks coming from?") +
  annotate("text", x="Duke", y=29+1.2,
           label="Kentucky leads the pack!",
           color='darkorange', size=3 , angle=0, fontface="bold", hjust=1)
```




```
## BOX PLOTS ----
ggplot(df, aes(x=lottery, y=PTS_college, fill=lottery)) +
  geom_violin() +
  geom_boxplot(width=0.4,color="grey", alpha=0.2) +
  scale_fill_manual(values=c("#999999", "#E69F00", "#56B4E9"))
```




```
  theme_bw()
```

```
## List of 93
##  $ line                      :List of 6
##   ..$ colour       : chr "black"
##   ..$ size         : num 0.5
##   ..$ linetype     : num 1
##   ..$ lineend      : chr "butt"
##   ..$ arrow        : logi FALSE
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_line" "element"
##  $ rect                      :List of 5
##   ..$ fill         : chr "white"
##   ..$ colour       : chr "black"
##   ..$ size         : num 0.5
##   ..$ linetype     : num 1
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_rect" "element"
##  $ text                      :List of 11
##   ..$ family       : chr ""
##   ..$ face         : chr "plain"
##   ..$ colour       : chr "black"
##   ..$ size         : num 11
##   ..$ hjust        : num 0.5
##   ..$ vjust        : num 0.5
##   ..$ angle        : num 0
```

```
##   ..$ lineheight   : num 0.9
##   ..$ margin       : 'margin' num [1:4] 0points 0points 0points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : logi FALSE
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ title                     : NULL
##  $ aspect.ratio              : NULL
##  $ axis.title                : NULL
##  $ axis.title.x              :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : num 1
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 2.75points 0points 0points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.title.x.top          :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : num 0
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 0points 2.75points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.title.x.bottom       : NULL
##  $ axis.title.y              :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : num 1
##   ..$ angle        : num 90
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 2.75points 0points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.title.y.left         : NULL
##  $ axis.title.y.right        :List of 11
```

```
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : num 0
##   ..$ angle        : num -90
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 0points 0points 2.75points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.text                 :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : chr "grey30"
##   ..$ size         : 'rel' num 0.8
##   ..$ hjust        : NULL
##   ..$ vjust        : NULL
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : NULL
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.text.x               :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : num 1
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 2.2points 0points 0points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.text.x.top           :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : num 0
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 0points 2.2points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
```

```
##  $ axis.text.x.bottom        : NULL
##  $ axis.text.y               :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : num 1
##   ..$ vjust        : NULL
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 2.2points 0points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.text.y.left          : NULL
##  $ axis.text.y.right         :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : num 0
##   ..$ vjust        : NULL
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 0points 0points 2.2points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ axis.ticks                :List of 6
##   ..$ colour       : chr "grey20"
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ lineend      : NULL
##   ..$ arrow        : logi FALSE
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_line" "element"
##  $ axis.ticks.x              : NULL
##  $ axis.ticks.x.top          : NULL
##  $ axis.ticks.x.bottom       : NULL
##  $ axis.ticks.y              : NULL
##  $ axis.ticks.y.left         : NULL
##  $ axis.ticks.y.right        : NULL
##  $ axis.ticks.length         : 'simpleUnit' num 2.75points
##   ..- attr(*, "unit")= int 8
##  $ axis.ticks.length.x       : NULL
##  $ axis.ticks.length.x.top   : NULL
##  $ axis.ticks.length.x.bottom: NULL
##  $ axis.ticks.length.y       : NULL
##  $ axis.ticks.length.y.left  : NULL
##  $ axis.ticks.length.y.right : NULL
##  $ axis.line                 : list()
##   ..- attr(*, "class")= chr [1:2] "element_blank" "element"
```

```
##  $ axis.line.x              : NULL
##  $ axis.line.x.top          : NULL
##  $ axis.line.x.bottom       : NULL
##  $ axis.line.y              : NULL
##  $ axis.line.y.left         : NULL
##  $ axis.line.y.right        : NULL
##  $ legend.background        :List of 5
##   ..$ fill         : NULL
##   ..$ colour       : logi NA
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_rect" "element"
##  $ legend.margin            : 'margin' num [1:4] 5.5points 5.5points 5.5points 5.5points
##   ..- attr(*, "unit")= int 8
##  $ legend.spacing           : 'simpleUnit' num 11points
##   ..- attr(*, "unit")= int 8
##  $ legend.spacing.x         : NULL
##  $ legend.spacing.y         : NULL
##  $ legend.key               :List of 5
##   ..$ fill         : chr "white"
##   ..$ colour       : logi NA
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_rect" "element"
##  $ legend.key.size          : 'simpleUnit' num 1.2lines
##   ..- attr(*, "unit")= int 3
##  $ legend.key.height        : NULL
##  $ legend.key.width         : NULL
##  $ legend.text              :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : 'rel' num 0.8
##   ..$ hjust        : NULL
##   ..$ vjust        : NULL
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : NULL
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ legend.text.align        : NULL
##  $ legend.title             :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : num 0
##   ..$ vjust        : NULL
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : NULL
```

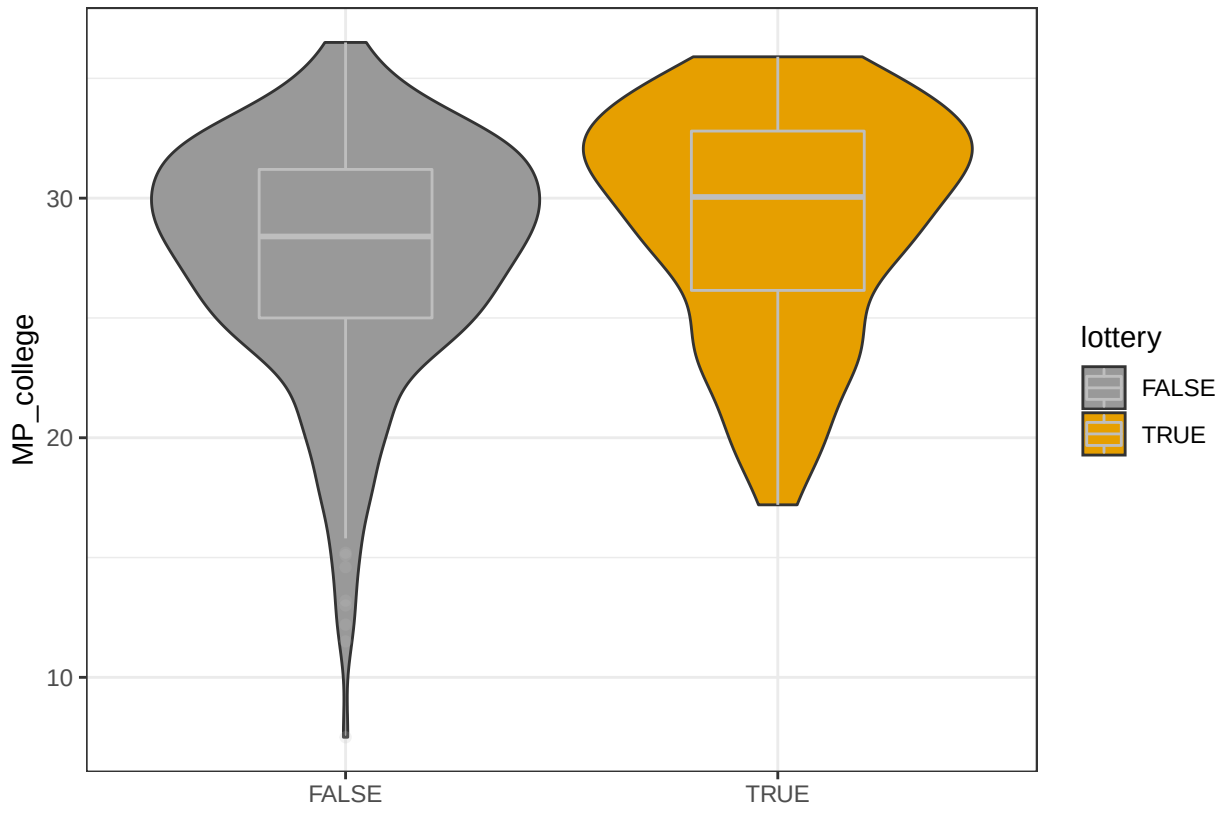
```
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ legend.title.align        : NULL
##  $ legend.position           : chr "right"
##  $ legend.direction          : NULL
##  $ legend.justification      : chr "center"
##  $ legend.box                : NULL
##  $ legend.box.just           : NULL
##  $ legend.box.margin         : 'margin' num [1:4] 0cm 0cm 0cm 0cm
##   ..- attr(*, "unit")= int 1
##  $ legend.box.background     : list()
##   ..- attr(*, "class")= chr [1:2] "element_blank" "element"
##  $ legend.box.spacing        : 'simpleUnit' num 11points
##   ..- attr(*, "unit")= int 8
##  $ panel.background          :List of 5
##   ..$ fill         : chr "white"
##   ..$ colour       : logi NA
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_rect" "element"
##  $ panel.border              :List of 5
##   ..$ fill         : logi NA
##   ..$ colour       : chr "grey20"
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_rect" "element"
##  $ panel.spacing             : 'simpleUnit' num 5.5points
##   ..- attr(*, "unit")= int 8
##  $ panel.spacing.x           : NULL
##  $ panel.spacing.y           : NULL
##  $ panel.grid                :List of 6
##   ..$ colour       : chr "grey92"
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ lineend      : NULL
##   ..$ arrow        : logi FALSE
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_line" "element"
##  $ panel.grid.major          : NULL
##  $ panel.grid.minor          :List of 6
##   ..$ colour       : NULL
##   ..$ size         : 'rel' num 0.5
##   ..$ linetype     : NULL
##   ..$ lineend      : NULL
##   ..$ arrow        : logi FALSE
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_line" "element"
##  $ panel.grid.major.x        : NULL
##  $ panel.grid.major.y        : NULL
##  $ panel.grid.minor.x        : NULL
##  $ panel.grid.minor.y        : NULL
```

```
##  $ panel.ontop               : logi FALSE
##  $ plot.background           :List of 5
##   ..$ fill         : NULL
##   ..$ colour       : chr "white"
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_rect" "element"
##  $ plot.title                :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : 'rel' num 1.2
##   ..$ hjust        : num 0
##   ..$ vjust        : num 1
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 0points 5.5points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ plot.title.position       : chr "panel"
##  $ plot.subtitle             :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : num 0
##   ..$ vjust        : num 1
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 0points 0points 5.5points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ plot.caption              :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : 'rel' num 0.8
##   ..$ hjust        : num 1
##   ..$ vjust        : num 1
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 5.5points 0points 0points 0points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ plot.caption.position     : chr "panel"
##  $ plot.tag                  :List of 11
##   ..$ family       : NULL
```

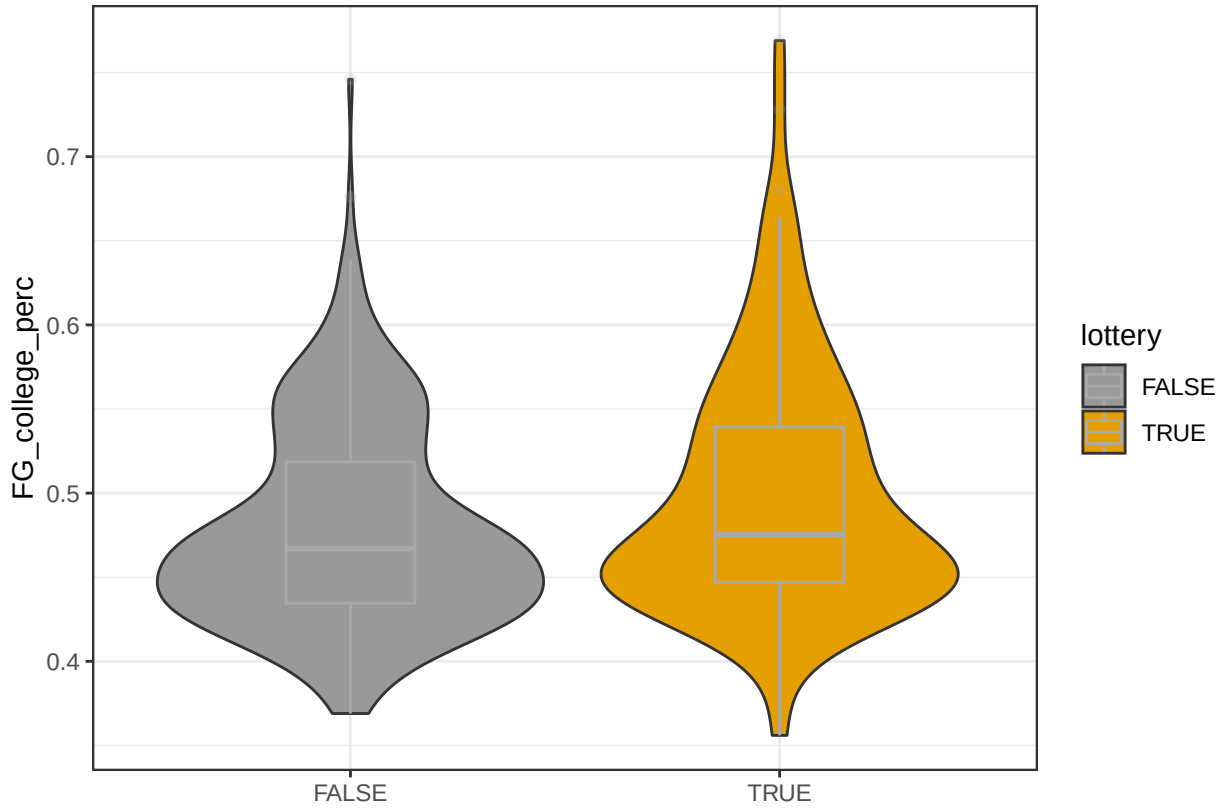
```
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : 'rel' num 1.2
##   ..$ hjust        : num 0.5
##   ..$ vjust        : num 0.5
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : NULL
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ plot.tag.position         : chr "topleft"
##  $ plot.margin               : 'margin' num [1:4] 5.5points 5.5points 5.5points 5.5points
##   ..- attr(*, "unit")= int 8
##  $ strip.background          :List of 5
##   ..$ fill         : chr "grey85"
##   ..$ colour       : chr "grey20"
##   ..$ size         : NULL
##   ..$ linetype     : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_rect" "element"
##  $ strip.background.x        : NULL
##  $ strip.background.y        : NULL
##  $ strip.placement           : chr "inside"
##  $ strip.text                :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : chr "grey10"
##   ..$ size         : 'rel' num 0.8
##   ..$ hjust        : NULL
##   ..$ vjust        : NULL
##   ..$ angle        : NULL
##   ..$ lineheight   : NULL
##   ..$ margin       : 'margin' num [1:4] 4.4points 4.4points 4.4points 4.4points
##   .. ..- attr(*, "unit")= int 8
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ strip.text.x              : NULL
##  $ strip.text.y              :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : NULL
##   ..$ angle        : num -90
##   ..$ lineheight   : NULL
##   ..$ margin       : NULL
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  $ strip.switch.pad.grid     : 'simpleUnit' num 2.75points
##   ..- attr(*, "unit")= int 8
```

```
##  $ strip.switch.pad.wrap     : 'simpleUnit' num 2.75points
##   ..- attr(*, "unit")= int 8
##  $ strip.text.y.left         :List of 11
##   ..$ family       : NULL
##   ..$ face         : NULL
##   ..$ colour       : NULL
##   ..$ size         : NULL
##   ..$ hjust        : NULL
##   ..$ vjust        : NULL
##   ..$ angle        : num 90
##   ..$ lineheight   : NULL
##   ..$ margin       : NULL
##   ..$ debug        : NULL
##   ..$ inherit.blank: logi TRUE
##   ..- attr(*, "class")= chr [1:2] "element_text" "element"
##  - attr(*, "class")= chr [1:2] "theme" "gg"
##  - attr(*, "complete")= logi TRUE
##  - attr(*, "validate")= logi TRUE
```

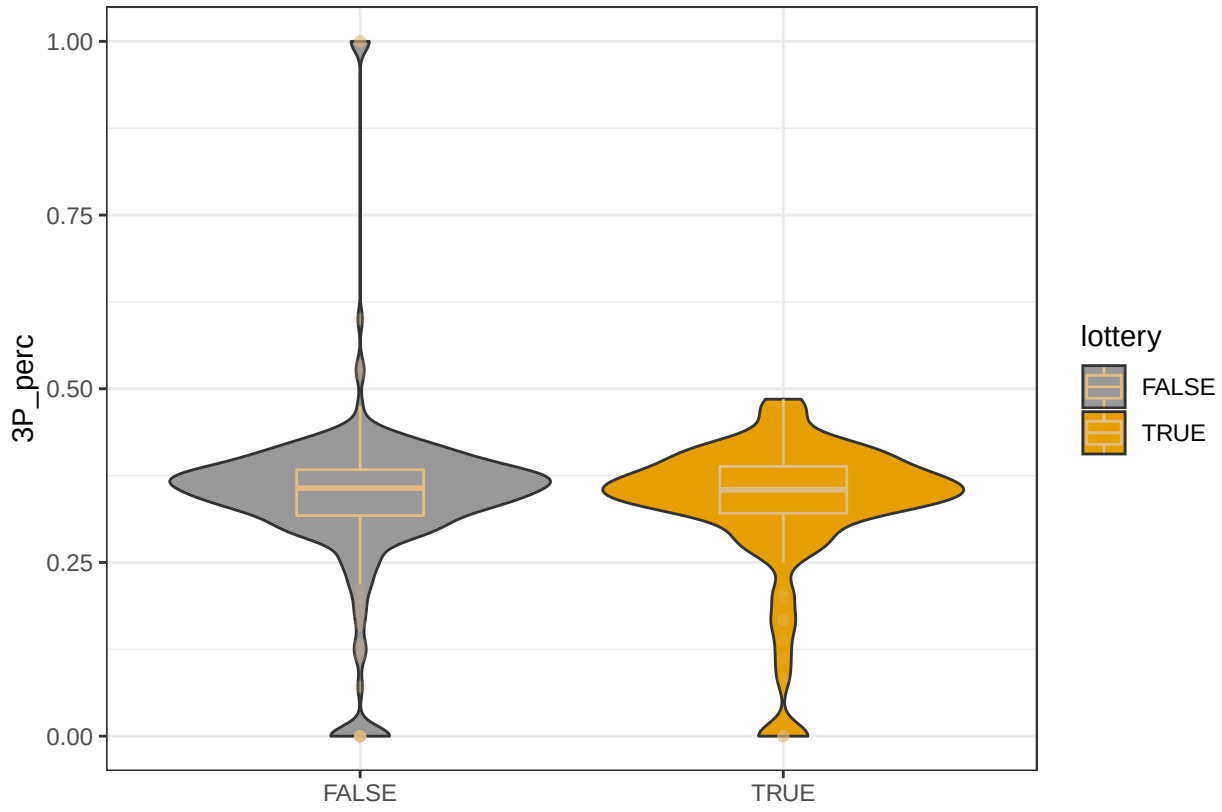
```
ggplot(df, aes(x=lottery, y=MP_college, fill=lottery)) +
  geom_violin() +
  geom_boxplot(width=0.4,color="grey", alpha=0.2) +
  scale_fill_manual(values=c("#999999", "#E69F00", "#56B4E9")) +
  theme_bw() +
  xlab("")
```



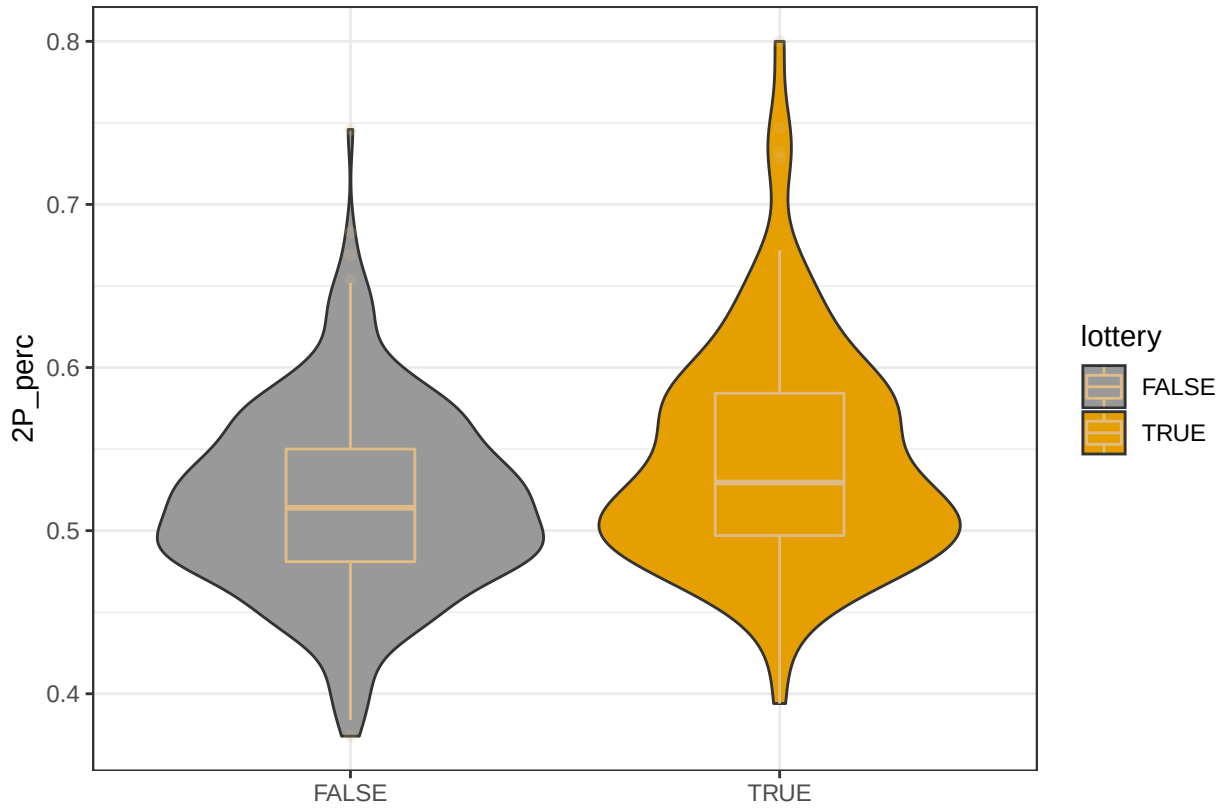
```
ggplot(df, aes(x=lottery, y=FG_college_perc, fill=lottery)) +
  geom_violin() +
  geom_boxplot(width=0.3,color="darkgrey", alpha=0.2) +
  scale_fill_manual(values=c("#999999", "#E69F00", "#56B4E9")) +
  theme_bw() +
  xlab("")
```



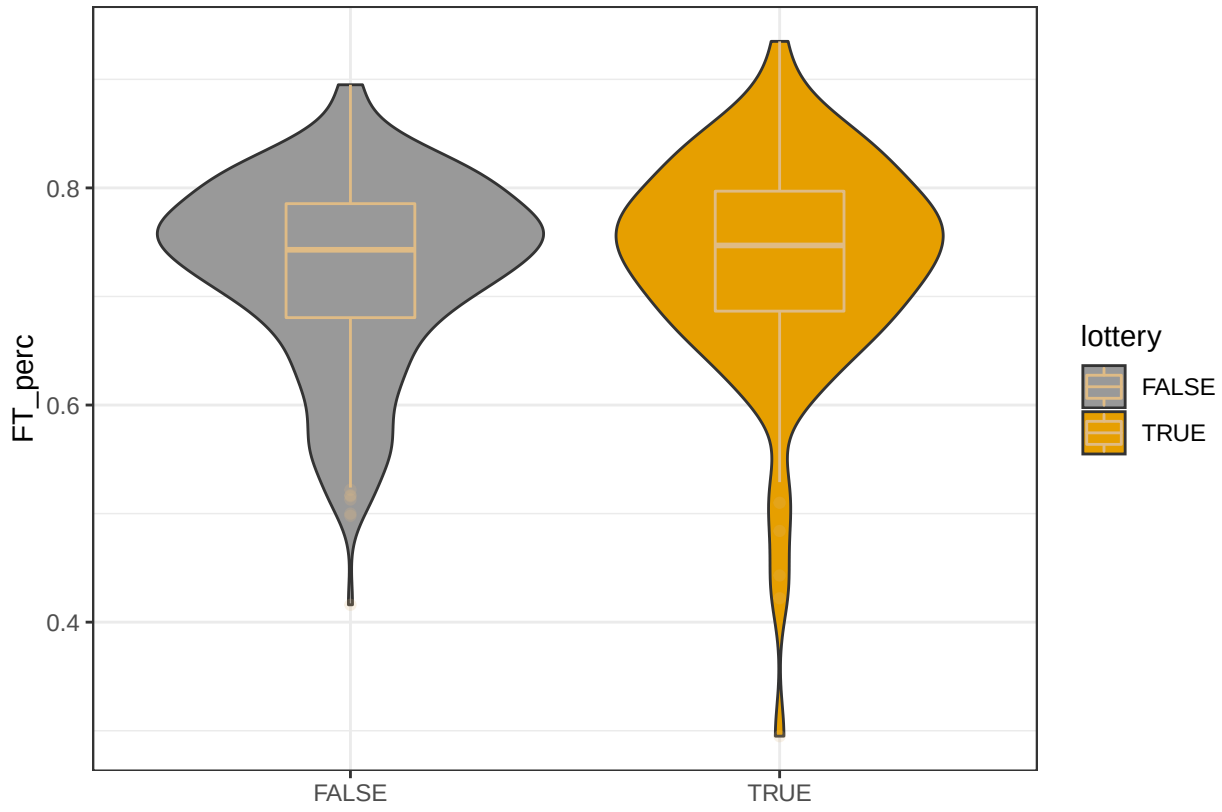

```
ggplot(df, aes(x=lottery, y=`3P_perc`, fill=lottery)) +
  geom_violin() +
  geom_boxplot(width=0.3,color="#dfbb85", alpha=0.2) +
  scale_fill_manual(values=c("#999999", "#E69F00", "#56B4E9")) +
  theme_bw() +
  xlab("")
```



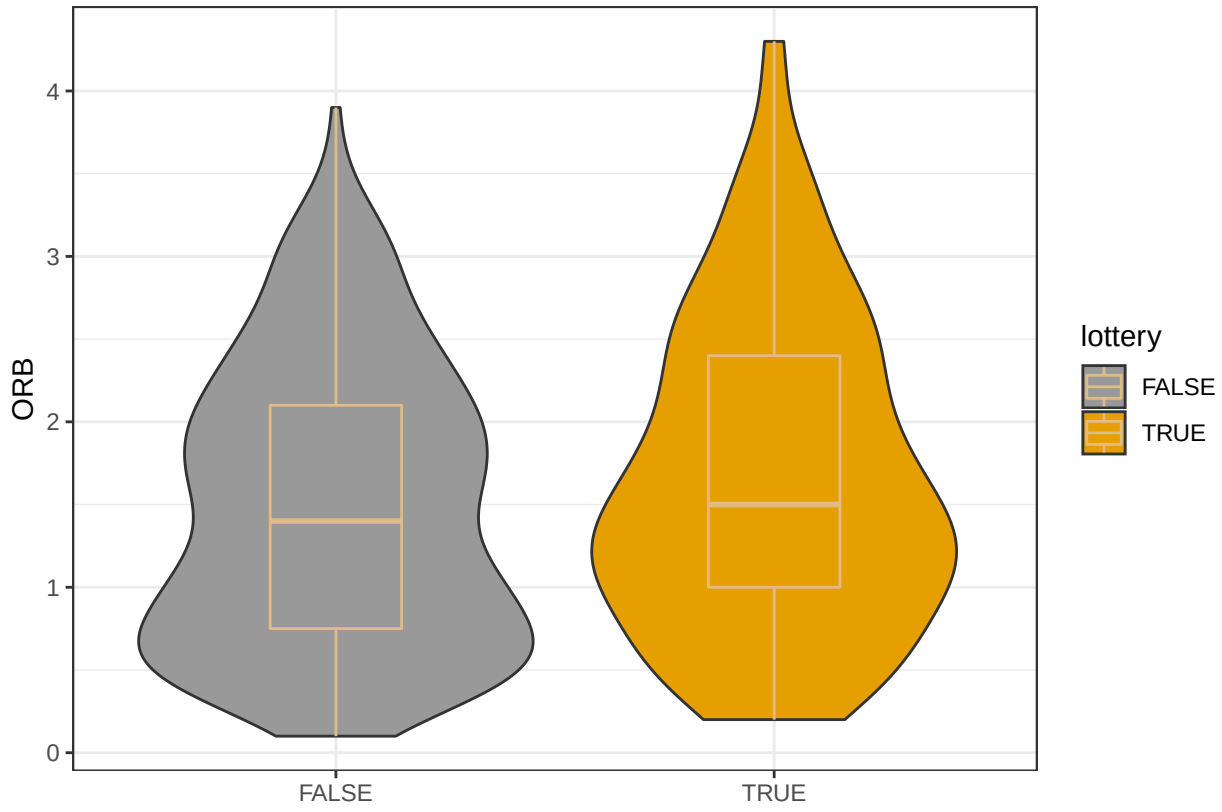

```
ggplot(df, aes(x=lottery, y=`2P_perc`, fill=lottery)) +
  geom_violin() +
  geom_boxplot(width=0.3,color="#dfbb85", alpha=0.2) +
  scale_fill_manual(values=c("#999999", "#E69F00", "#56B4E9")) +
  theme_bw() +
  xlab("")
```



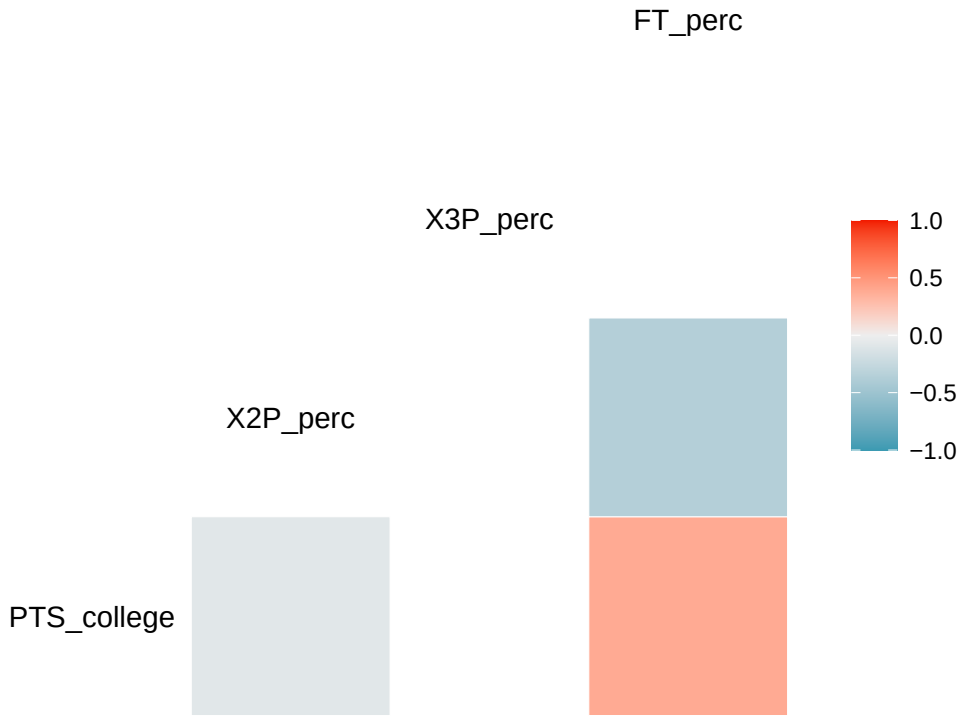

```
ggplot(df, aes(x=lottery, y=FT_perc, fill=lottery)) +
  geom_violin() +
  geom_boxplot(width=0.3,color="#dfbb85", alpha=0.2) +
  scale_fill_manual(values=c("#999999", "#E69F00", "#56B4E9")) +
  theme_bw() +
  xlab("")
```




```
ggplot(df, aes(x=lottery, y=`ORB`, fill=lottery)) +
  geom_violin() +
  geom_boxplot(width=0.3,color="#dfbb85", alpha=0.2) +
  scale_fill_manual(values=c("#999999", "#E69F00", "#56B4E9")) +
  theme_bw() +
  xlab("")
```

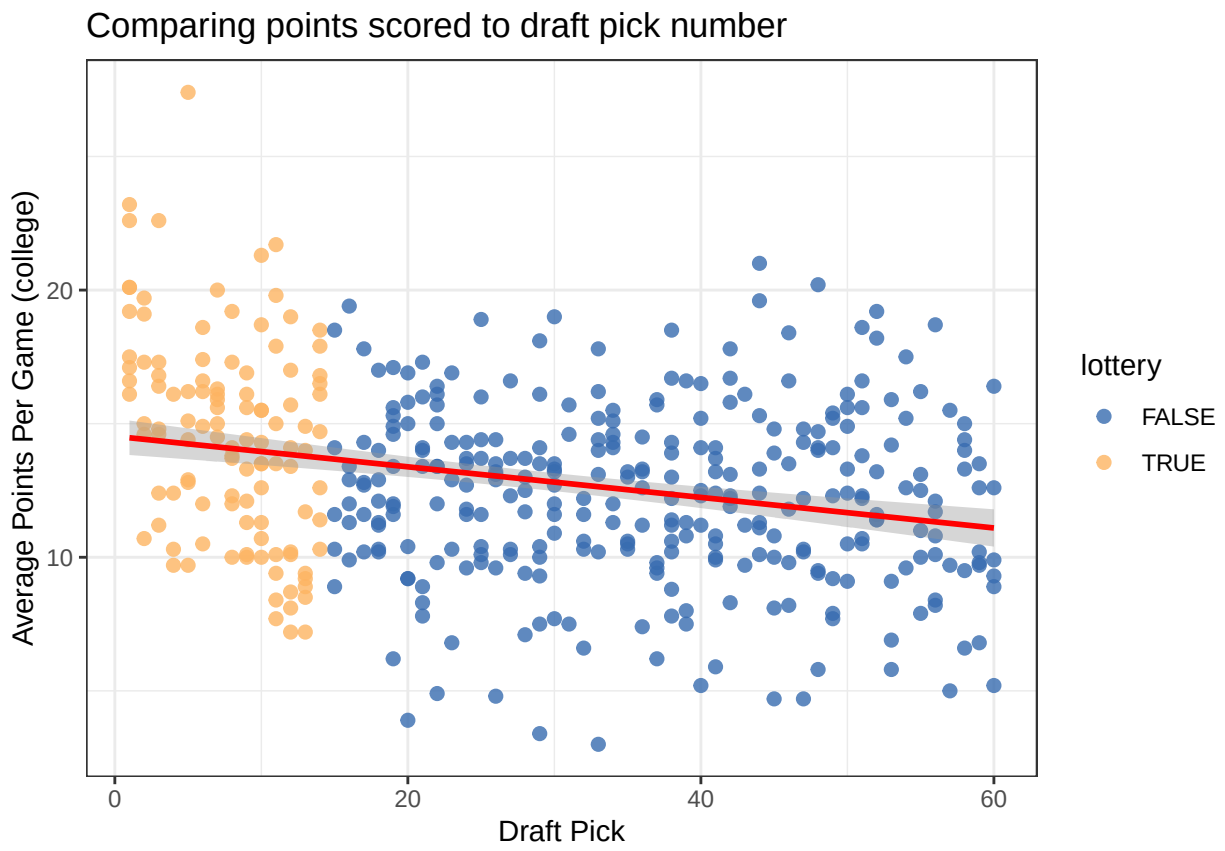



```
## CORRELATION MATRIX ----

df.subset <- df[c('PTS_college',"2P_perc","3P_perc","FT_perc")]
ggcorr(df.subset, method = c("everything", "pearson"))
```




```
## AVERAGE POINT PER GAME VS DRAFT PICK----
# points <- df$PTS_college
# draft.pick <- df$Pk

ggplot(df, aes(x=Pk, y=PTS_college)) +
  geom_point(
    aes(color=lottery),#, shape=lottery),
    size=2,
    alpha=0.8,
  ) +
  scale_color_manual(
    values = c("#386cb0", "#fdb462", "#7fc97f")
  ) +
  geom_smooth(method = lm, col='red') + # add linear trend line
  theme_bw() +
  xlab("Draft Pick") +
  ylab("Average Points Per Game (college)") +
  ggtitle("Comparing points scored to draft pick number")
```

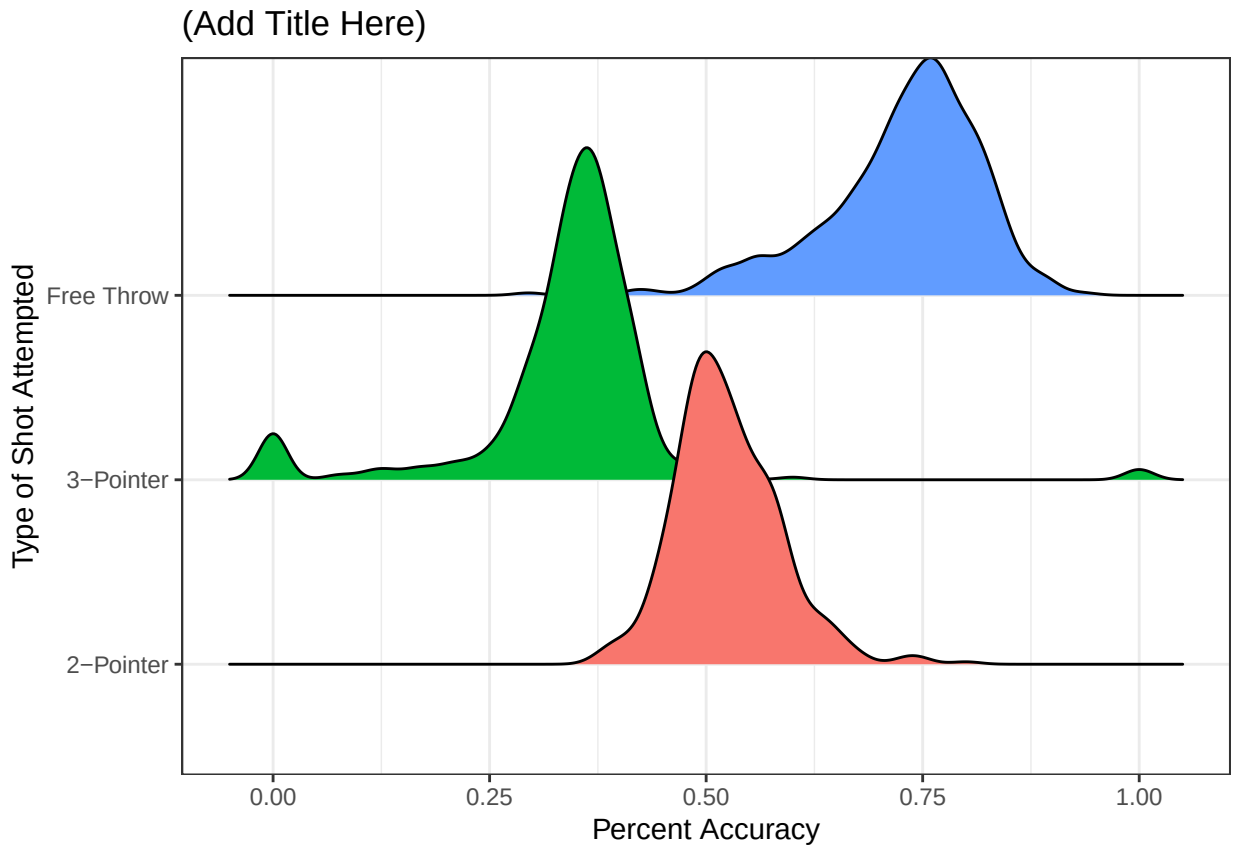
```
## `geom_smooth()` using formula 'y ~ x'
```




```
## SMALL MULTIPLES----
df.subset <- df[c('Pk','2P_perc','3P_perc','FT_perc')]
df.percent <- df.subset %>% pivot_longer(!Pk, names_to = "PointType", values_to = "Percent")

library(ggridges)
ggplot(df.percent, aes(x = Percent, y = PointType, fill = PointType)) +
  geom_density_ridges() +
  theme_bw() +
  scale_y_discrete(labels=c("FT_perc" = "Free Throw", "3P_perc" = "3-Pointer", "2P_perc" = "2-Pointer"))
  xlab("Percent Accuracy") +
  ylab("Type of Shot Attempted") +
  ggtitle("(Add Title Here)") +
  theme(legend.position = "none") # remove legend
```

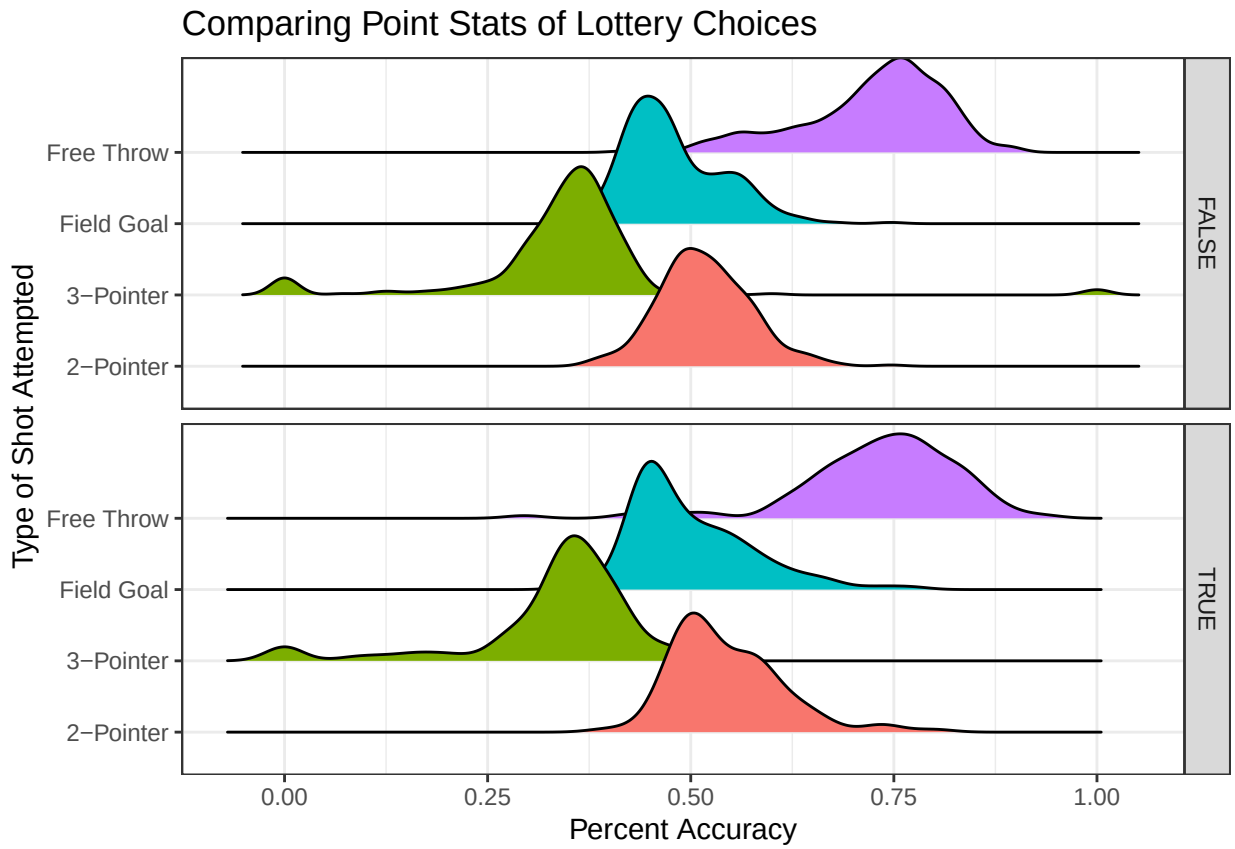
```
## Picking joint bandwidth of 0.0167
```

```
## Warning: Removed 22 rows containing non-finite values (stat_density_ridges).
```



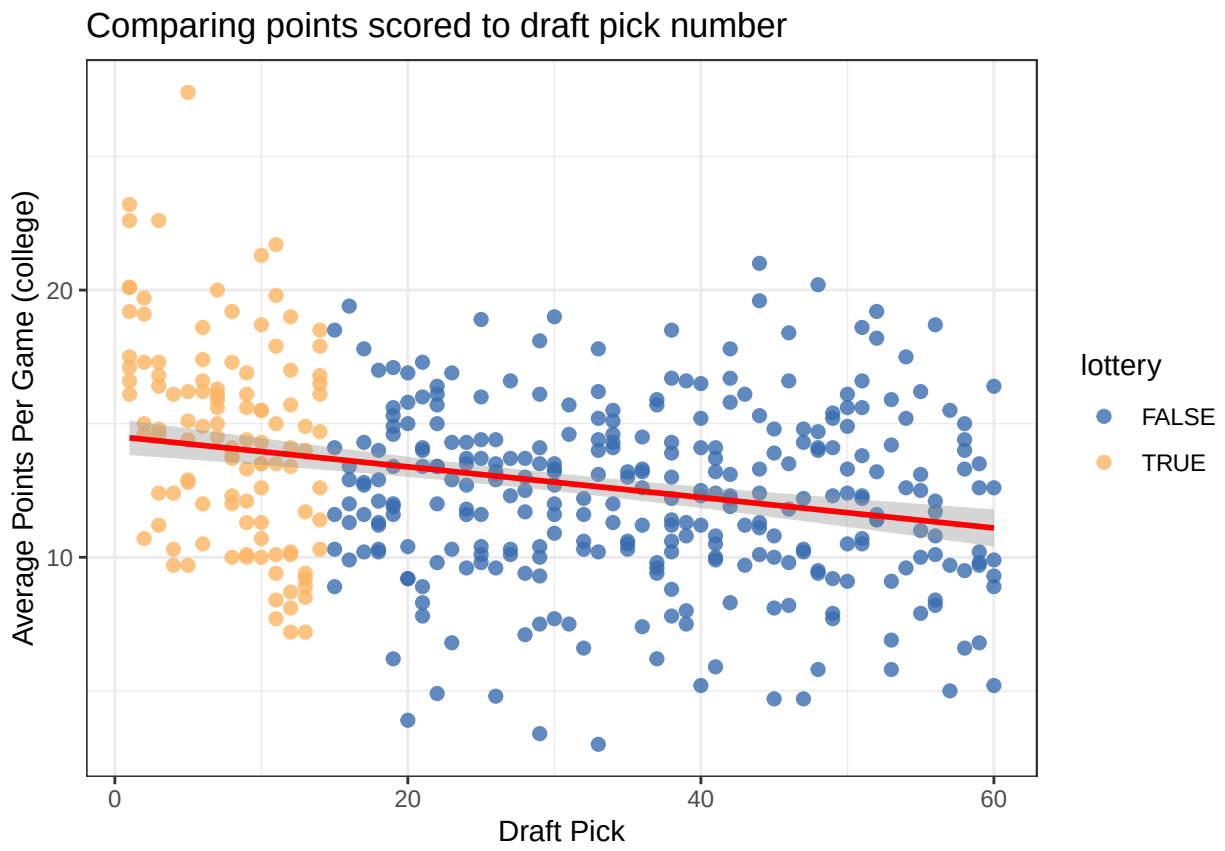

```
## RIDGELINE PLOT(SMALL MULTIPLES) ----
df.subset2 <- df[c('lottery',"2P_perc","3P_perc","FT_perc", "FG_college_perc")]
df.percent2 <- df.subset2 %>% pivot_longer(!lottery, names_to = "PointType", values_to = "Percent")

ggplot(df.percent2, aes(x = Percent, y = PointType, fill = PointType)) +
  geom_density_ridges() +
  facet_grid(lottery ~ .) +
  theme_bw() +
  scale_y_discrete(labels=c("FT_perc" = "Free Throw", "3P_perc" = "3-Pointer", "2P_perc" = "2-Pointer",
  xlab("Percent Accuracy") +
  ylab("Type of Shot Attempted") +
  ggtitle("Comparing Point Stats of Lottery Choices") +
  theme(legend.position = "none") # remove legend
```

```
## Picking joint bandwidth of 0.0172

## Picking joint bandwidth of 0.0234

## Warning: Removed 22 rows containing non-finite values (stat_density_ridges).
```

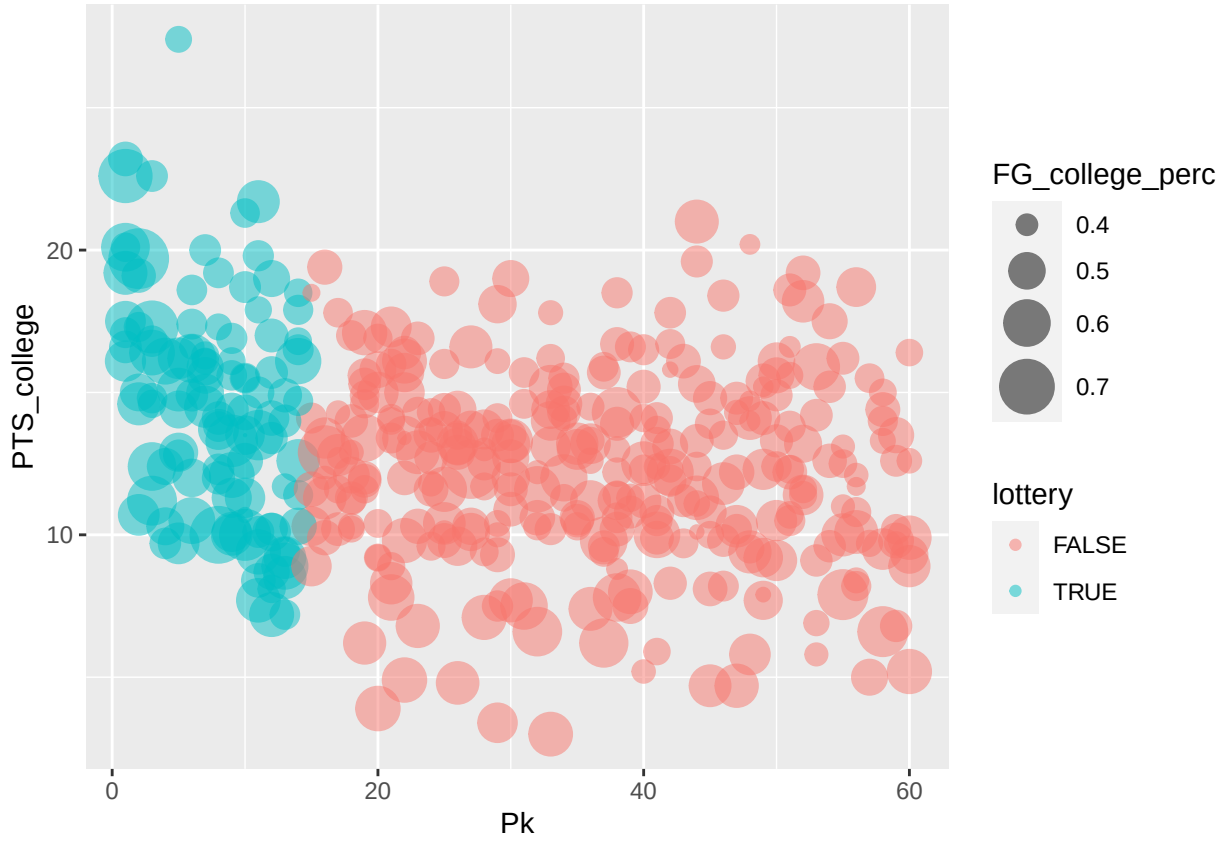



```
## BUBBLE CHART----
##
ggplot(df, aes(x=Pk, y=PTS_college, size=MP_college, color=lottery)) +
  geom_point(
    aes(color=lottery),#, shape=lottery),
    size=2,
    alpha=0.8,
  ) +
  scale_color_manual(
    values = c("#386cb0", "#fdb462", "#7fc97f")
  ) +
  geom_smooth(method = lm, col='red') + # add linear trend line
  theme_bw() +
  xlab("Draft Pick") +
  ylab("Average Points Per Game (college)") +
  ggtitle("Comparing points scored to draft pick number") +
  scale_size(range = c(.1, 24), name="Population (M)")
```

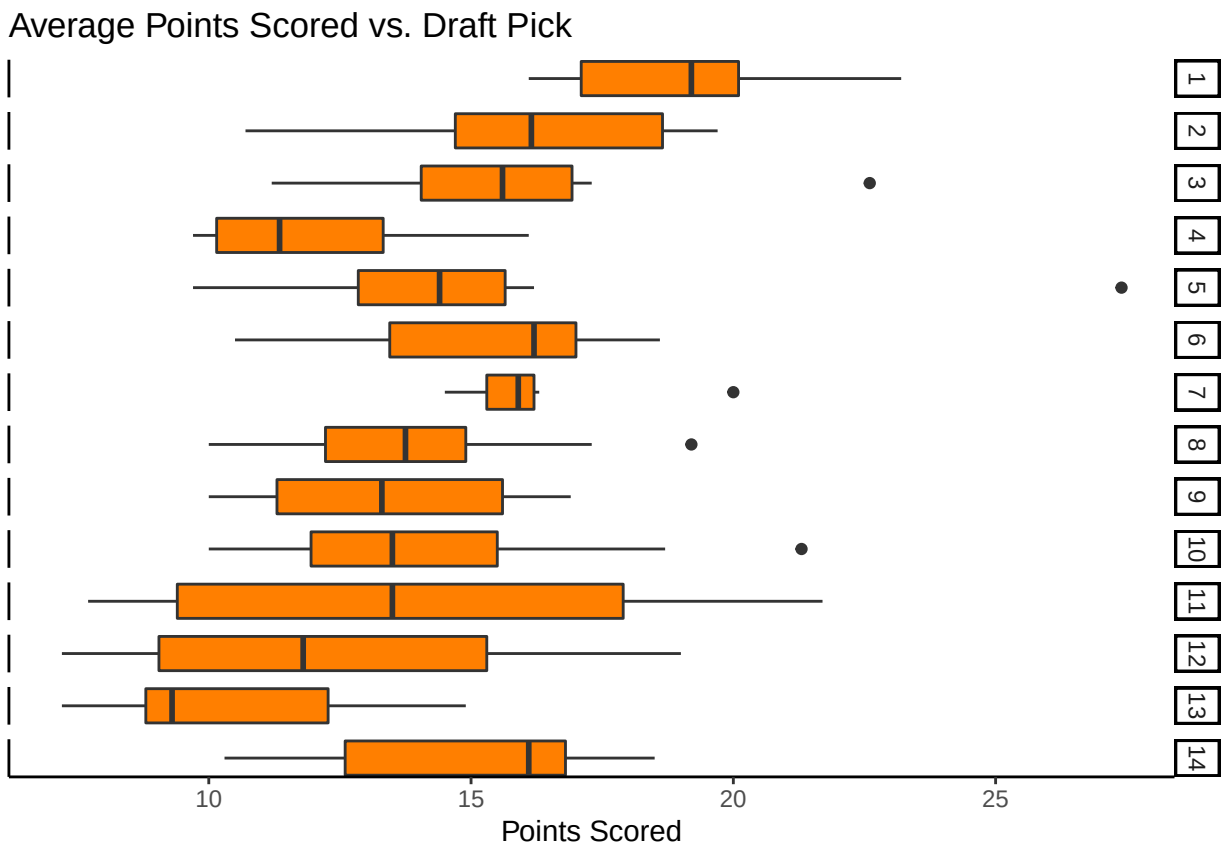
```
## `geom_smooth()` using formula 'y ~ x'
```



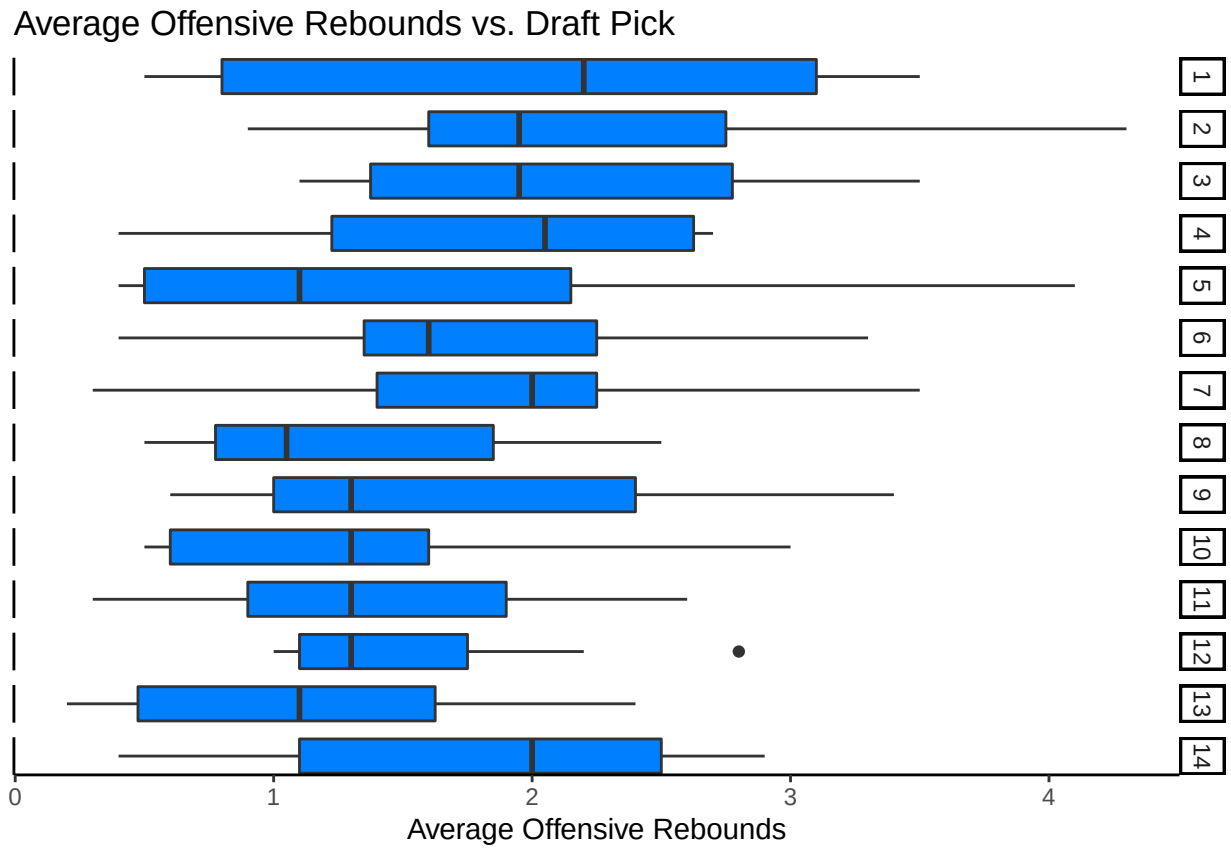

```
ggplot(df, aes(x=Pk, y=PTS_college, size=FG_college_perc, color=lottery)) +
    geom_point(alpha=0.5) +
    scale_size(range = c(.1, 10), name="FG_college_perc")
```



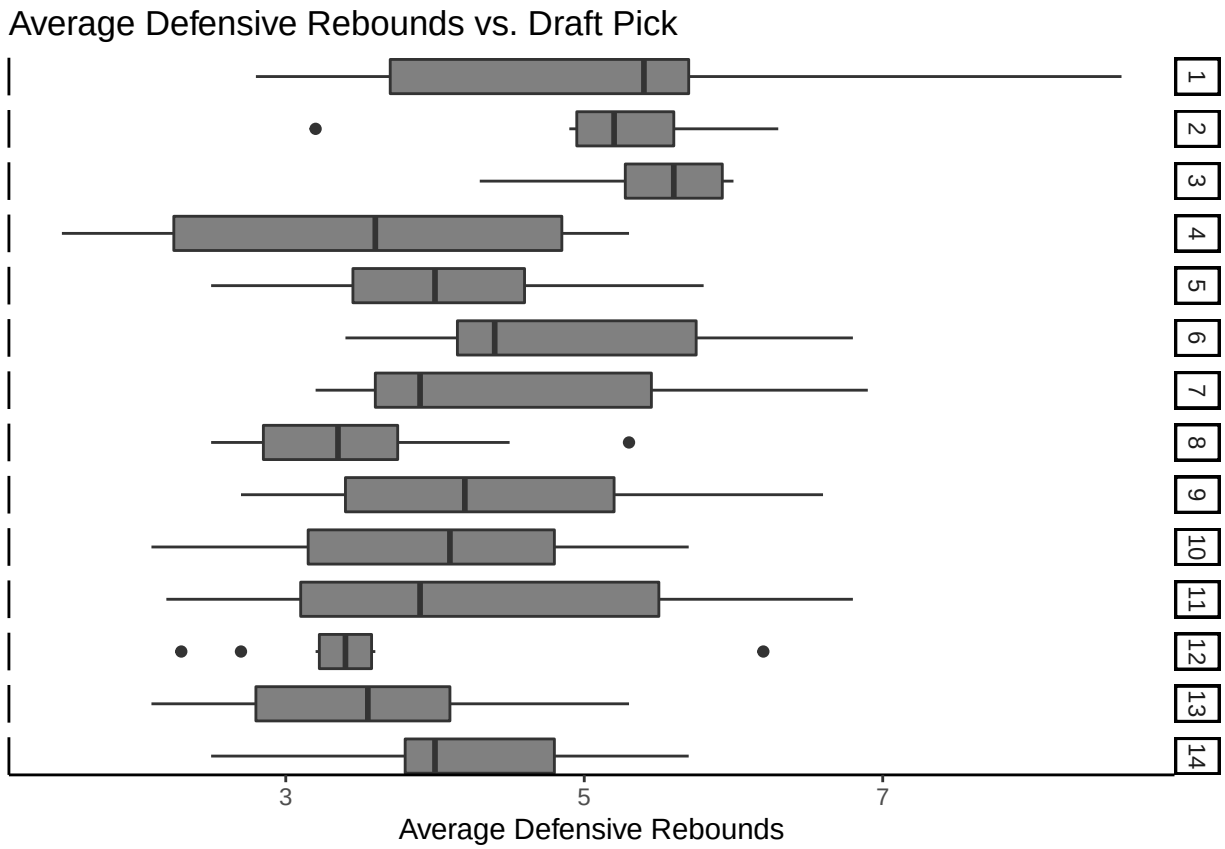

```
df.lotteryT <- df[which(df$lottery == "TRUE"),]

ggplot(df.lotteryT, aes(x = PTS_college)) +
  geom_boxplot(fill="#ff7f00") +
  facet_grid(Pk ~ .) +
  # theme_bw() +
  theme_classic() +
  xlab("Points Scored") +
  ggtitle("Average Points Scored vs. Draft Pick") +
  # theme(legend.position = "none") + # remove legend
  theme(axis.title.y=element_blank(),
        axis.text.y=element_blank(),
        axis.ticks.y=element_blank())
```



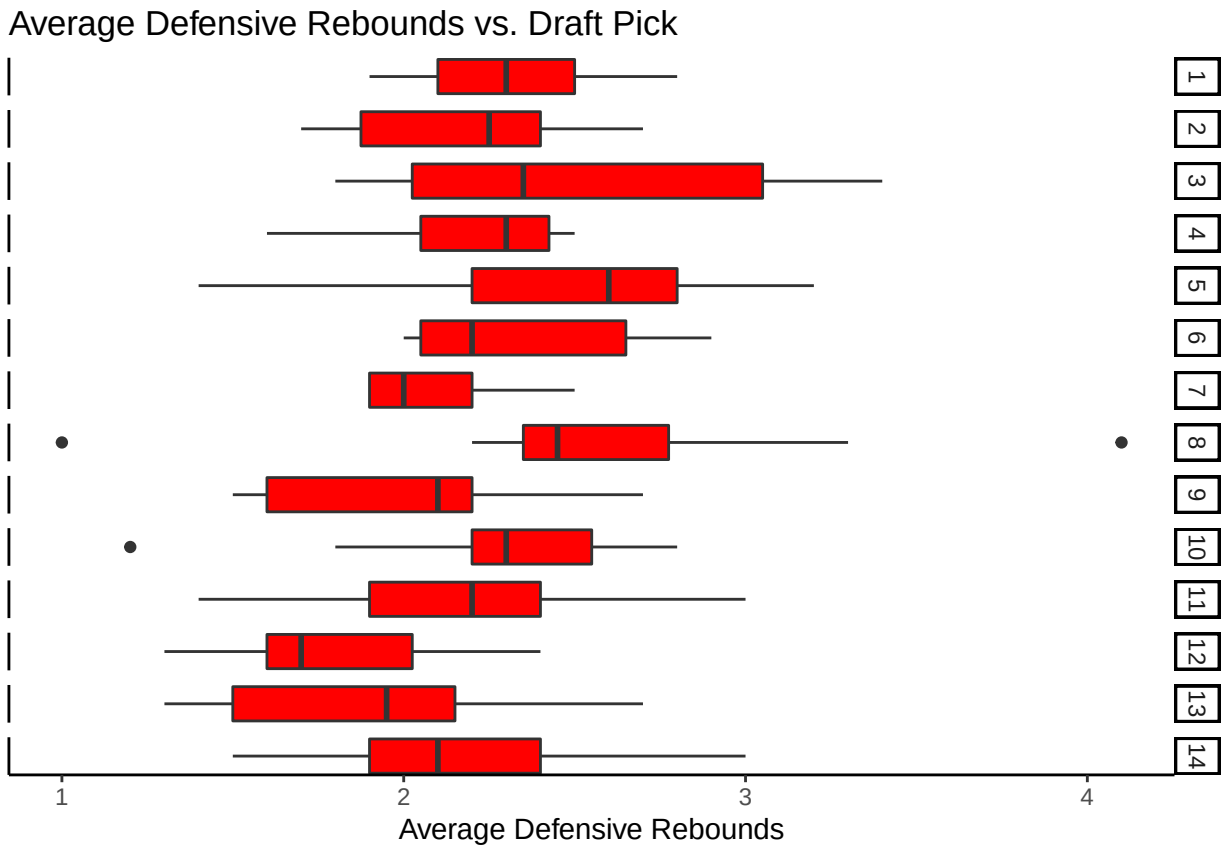

```
ggplot(df.lotteryT, aes(x = ORB)) +
  geom_boxplot(fill="#0080ff") +
  facet_grid(Pk ~ .) +
  # theme_bw() +
  theme_classic() +
  xlab("Average Offensive Rebounds") +
  ggtitle("Average Offensive Rebounds vs. Draft Pick") +
  # theme(legend.position = "none") + # remove legend
  theme(axis.title.y=element_blank(),
        axis.text.y=element_blank(),
        axis.ticks.y=element_blank())
```



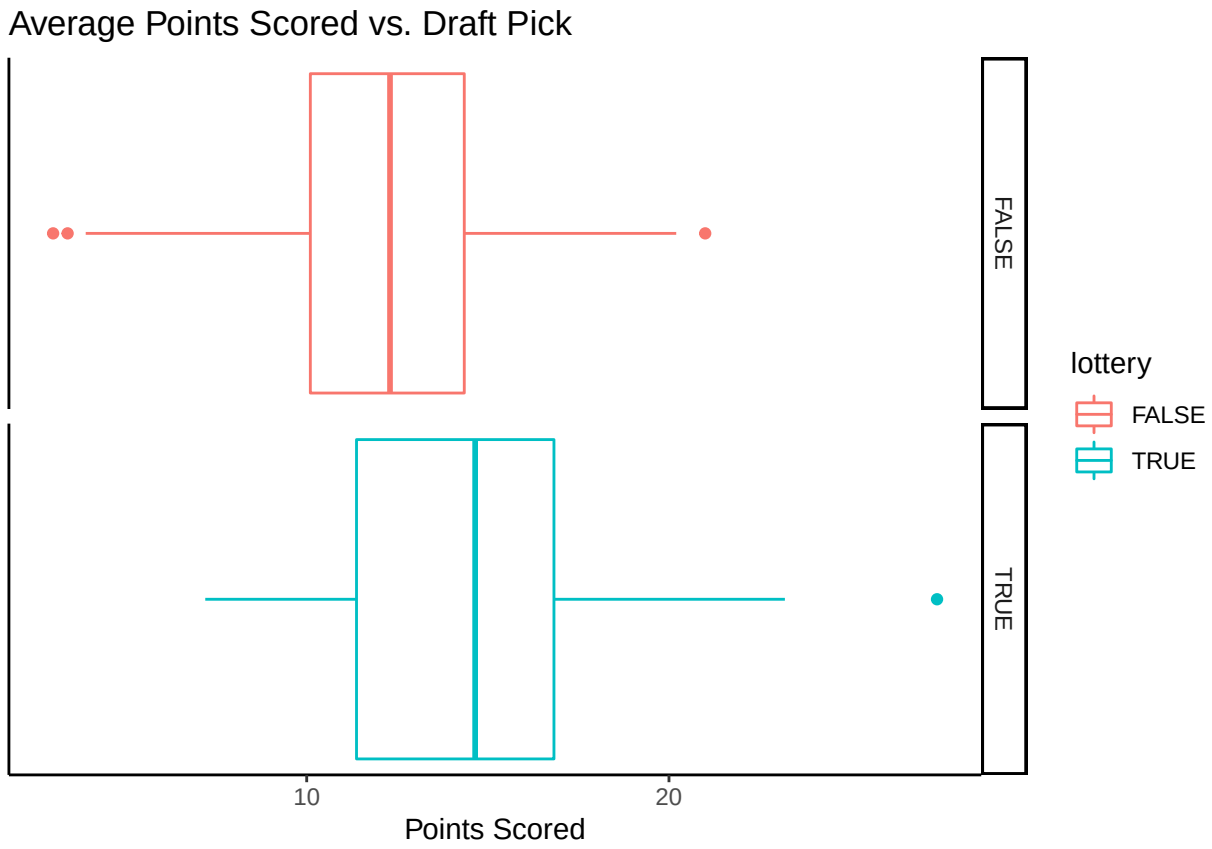

```
ggplot(df.lotteryT, aes(x = DRB)) +
  geom_boxplot(fill="#808080") +
  facet_grid(Pk ~ .) +
  # theme_bw() +
  theme_classic() +
  xlab("Average Defensive Rebounds") +
  ggtitle("Average Defensive Rebounds vs. Draft Pick") +
  # theme(legend.position = "none") + # remove legend
  theme(axis.title.y=element_blank(),
        axis.text.y=element_blank(),
        axis.ticks.y=element_blank())
```



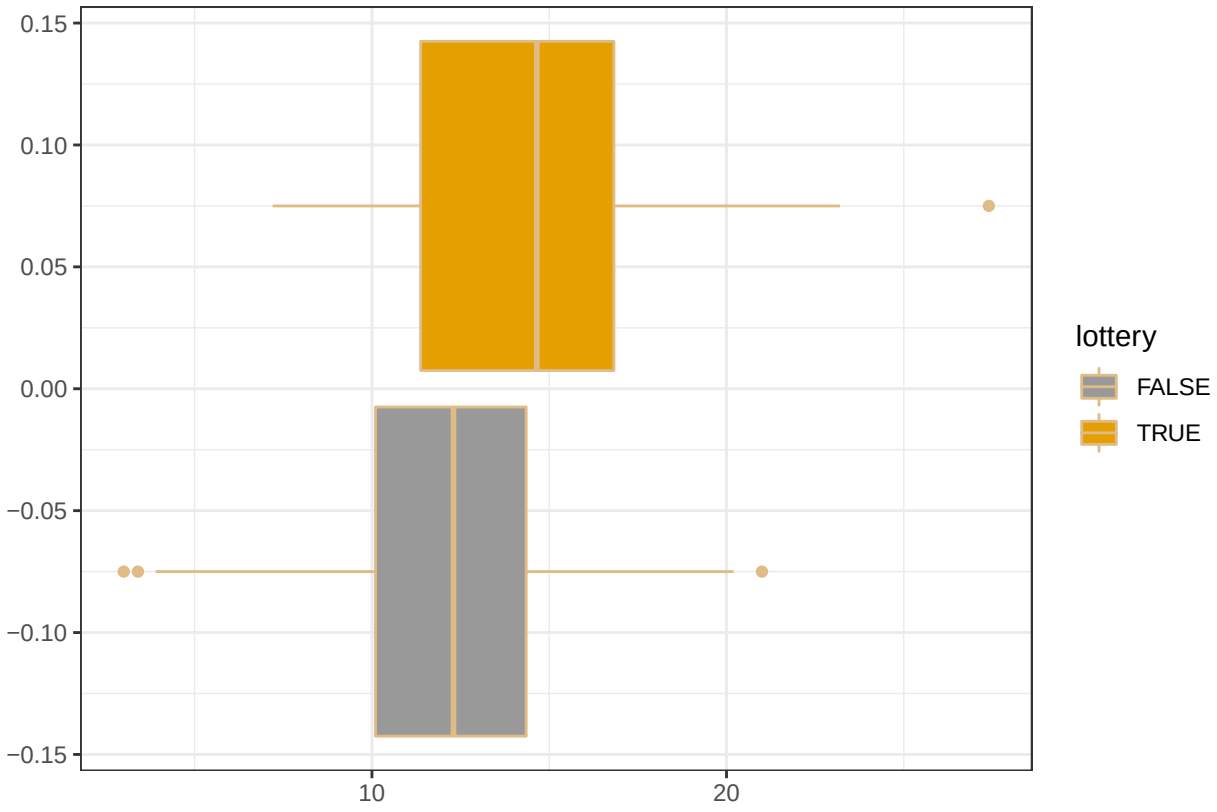

```
ggplot(df.lotteryT, aes(x = PF)) +
  geom_boxplot(fill="#ff0000") +
  facet_grid(Pk ~ .) +
  # theme_bw() +
  theme_classic() +
  xlab("Average Defensive Rebounds") +
  ggtitle("Average Defensive Rebounds vs. Draft Pick") +
  # theme(legend.position = "none") + # remove legend
  theme(axis.title.y=element_blank(),
        axis.text.y=element_blank(),
        axis.ticks.y=element_blank())
```




```
ggplot(df, aes(x = PTS_college)) +
  geom_boxplot(aes(color=lottery)) +
  facet_grid(lottery ~ .) +
  # theme_bw() +
  theme_classic() +
  xlab("Points Scored") +
  ggtitle("Average Points Scored vs. Draft Pick") +
  # theme(legend.position = "none") + # remove legend
  theme(axis.title.y=element_blank(),
        axis.text.y=element_blank(),
        axis.ticks.y=element_blank()) +
  scale_fill_manual(values=c("#999999", "#E69F00"))
```




```
ggplot(df, aes(x=PTS_college, fill=lottery)) +
  # geom_violin() +
  geom_boxplot(width=0.3,color="#dfbb85", alpha=1) +
  scale_fill_manual(values=c("#999999", "#E69F00")) +
  theme_bw() +
  xlab("")
```



Top variables: GS,MP_college,two_P_perc,three_P,FTA,ORB,STL,SOS