

# kobe\_byrant.R

*SuchitraD*

```
#visualizing the types of shots of Kobe Bryant during his career
```

```
library("ggplot2")
```

```
library("knitr")
```

```
library("latticeExtra")
```

```
## Loading required package: RColorBrewer
```

```
## Loading required package: lattice
```

```
##
```

```
## Attaching package: 'latticeExtra'
```

```
##
```

```
## The following object is masked from 'package:ggplot2':
```

```
##
```

```
##     layer
```

```
library("dplyr")
```

```
##
```

```
## 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
```

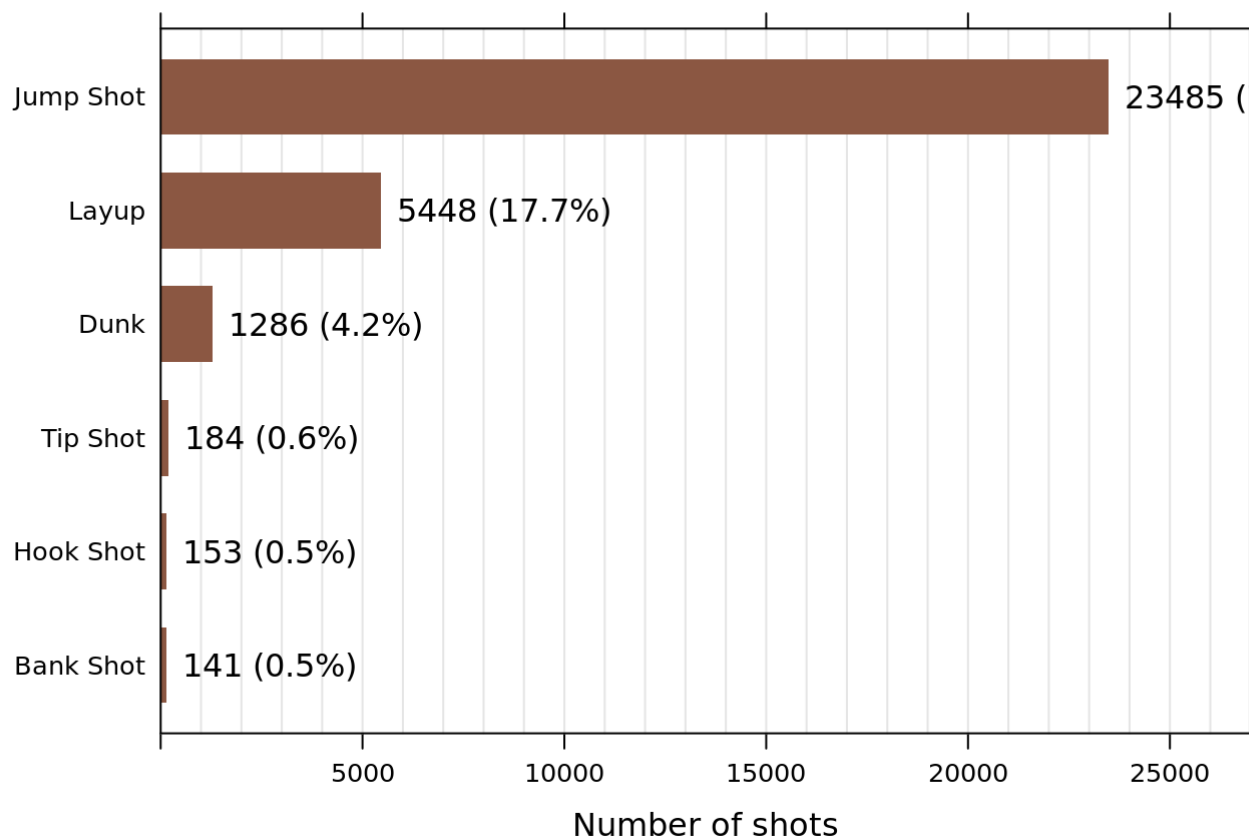
```

library("hexbin")
# barchart showing the number of shots of each shot type of kobe bryant

mydata = read.csv("data.csv")
barchart(sort(table(mydata$combined_shot_type))
, col = "lightsalmon4"
, border = "transparent"
, xlim = c(0, 27000)
, xlab = "Number of shots"
, main = "Number of shots by shot type"
, panel = function(...){
  panel.abline(v = seq(0, 26000, 1000), col = "gray90")
  args <- list(...)
  panel.text(
    args$x, args$y, paste0(args$x, " (", round(prop.table(args$x), 3)*100, "%)")
    , pos = 4)
  panel.barchart(...)}

```

## Number of shots by shot type



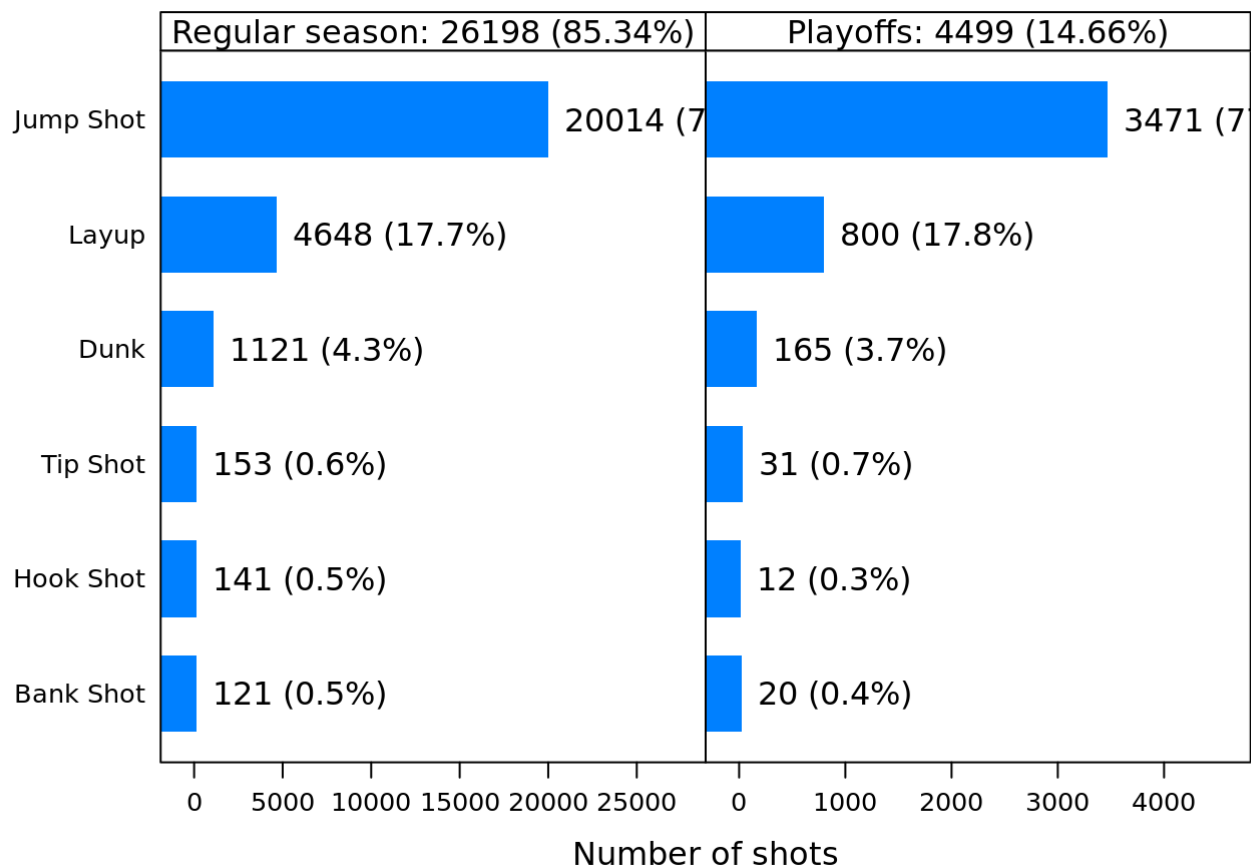
*#comparing the type of shots of kobe bryant during regular season and playoffs*

```
comparision <- as.data.frame(xtabs(~ playoffs + combined_shot_type, mydata))
comparision $combined_shot_type <- factor(comparision $combined_shot_type, levels(comparision $c
ombined_shot_type)[c(1, 3, 6, 2, 5, 4)])
levels(comparision $playoffs) <- c("Regular season", "Playoffs")

levels(comparision $playoffs) <- paste0(levels(comparision $playoffs), ": "
                                     , table(mydata$playoffs), " (", round(prop.table(table(m
ydata$playoffs)), 4)*100, "%)")

barchart(combined_shot_type ~ Freq | playoffs
          , col = "#0080ff"
          , border = "transparent"
          , scales = list(x = "free")
          , xlim = list(c(0, 27000), c(0, 4500))
          , strip = strip.custom(bg = "white")
          , xlab = "Number of shots"
          , main = "Number of shots, regular season vs playoffs"
          , comparision
          , panel = function(...){
            args <- list(...)
            panel.text(
              args$x, args$y, paste0(args$x, " (", round(prop.table(args$x), 3)*100, "%)")
              , pos = 4)
            panel.barchart(...)}
          )
```

## Number of shots, regular season vs playoffs



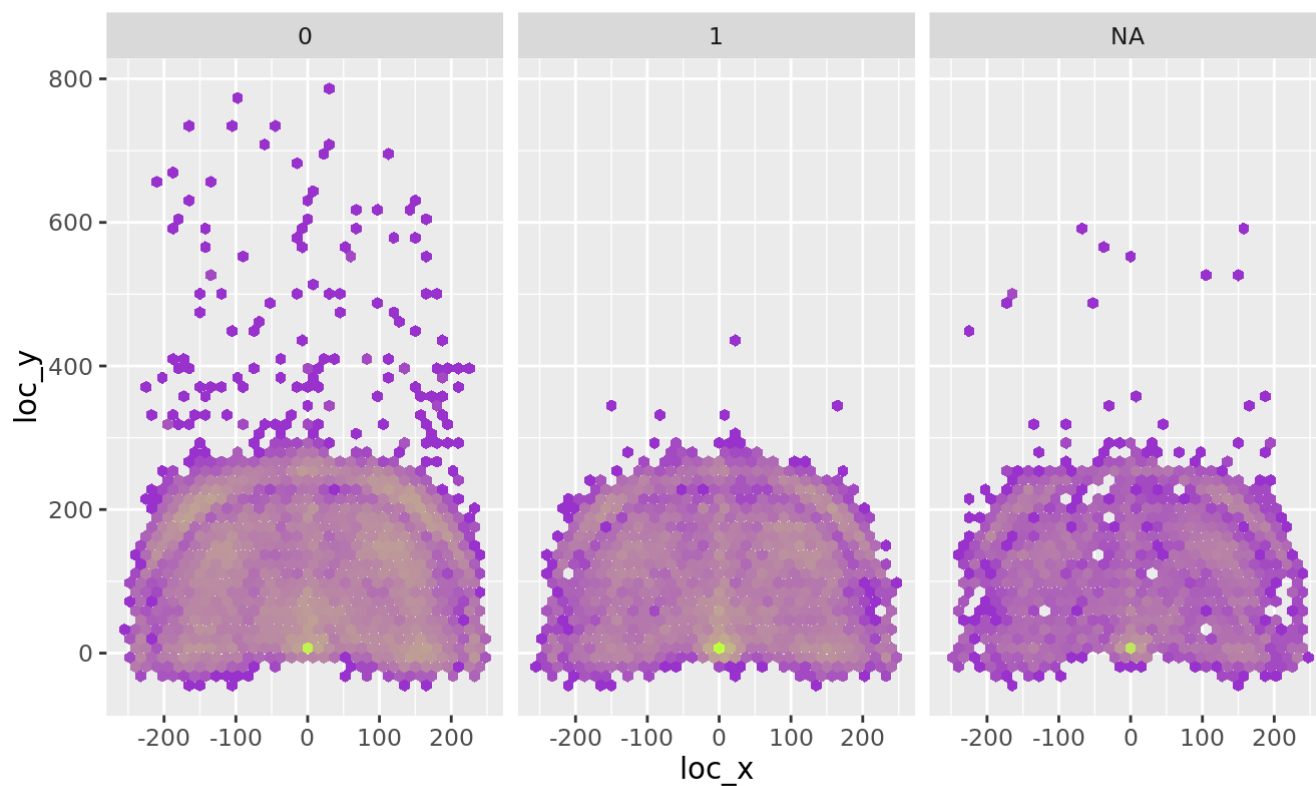
*# visualizing kobe bryant's hits vs misses data*

```
hitvsmismiss <- ggplot(data = mydata) +
  geom_hex(aes(x=loc_x, y=loc_y), binwidth = c(15,15)) +
  scale_fill_gradient(trans = "log", low = "darkorchid", high = "olivedrab1") +
  theme(legend.position="none") +
  facet_wrap(~ shot_made_flag) +
  coord_fixed() +
  ggtitle(paste("Misses vs Hits"))
```

*# hitvsmismiss graph*

```
hitvsmismiss
```

## Misses vs Hits



*#visualizing the plot that maps position by feature*

```
shotplot <- function(feats) {
  feat <- substitute(feats)
  mydata %>%
    ggplot(aes(x = lon, y = lat)) +
    geom_point(aes_q(color = feat), alpha = 0.7, size = 3) +
    ylim(c(33.7, 34.0883)) +
    scale_color_brewer(palette = "Set1") +
    theme_void() +
    ggtitle(paste(feats))
}
#position by feature plot
shotplot (combined_shot_type)
```

## Warning: Removed 120 rows containing missing values (geom\_point).

