## Sandbox

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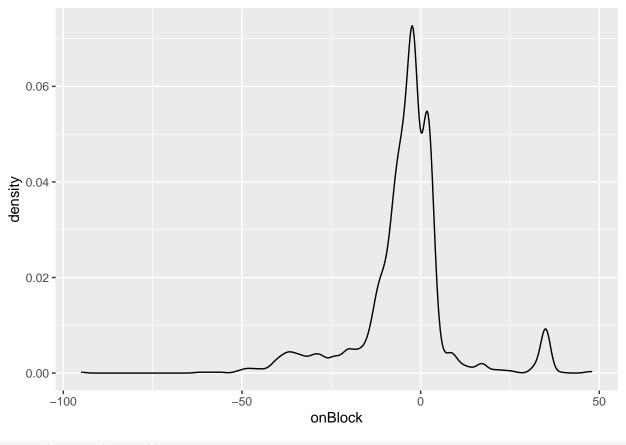
## The data

```
library(tidyverse)
```

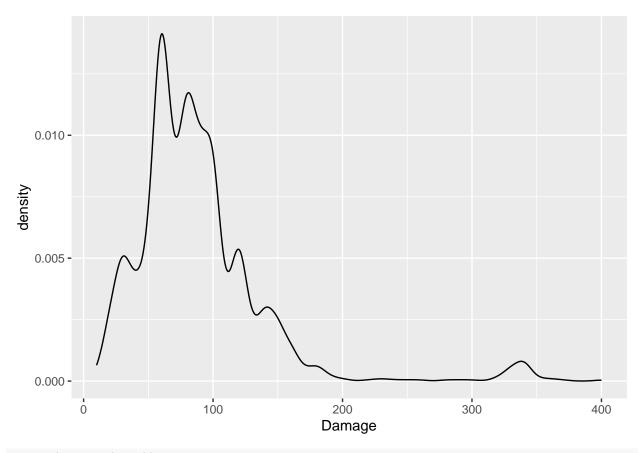
## Clean it

```
df <- read.csv("data/all.csv", stringsAsFactors = FALSE)</pre>
df$Damage <- gsub(".*\\((\\d+)\\).*", "\\1", df$Damage)</pre>
dfDamage <- gsub("(\d+)\s*\((\d+)\)", "pmax(\1, \2)", dfDamage)
df$Damage <- gsub("(\\d+)\\*(\\d+)", "\\1+\\2", df$Damage)</pre>
df$Damage <- gsub("(\\d+)x(\\d+)", "\\1*\\2", df$Damage)
df$Damage <- sapply(df$Damage, function(x) eval(parse(text = x)))</pre>
df$Damage <- as.numeric(df$Damage)</pre>
df$Stun <- gsub(".*\\((\\d+)\\).*", "\\1", df$Stun)</pre>
df$Stun <- gsub("(\\d+)\\s*\\((\\d+)\\)", "pmax(\\1, \\2)", df$Stun)
df$Stun <- gsub("(\\d+)\\*(\\d+)", "\\1+\\2", df$Stun)
df\$Stun \leftarrow gsub("(\d+)x(\d+)", "\1*\2", df\$Stun)
df$Stun <- sapply(df$Stun, function(x) eval(parse(text = x)))</pre>
df$Stun <- as.numeric(df$Stun)</pre>
df$health <- as.numeric(df$health)</pre>
df$stun <- as.numeric(df$stun)</pre>
df$vgauge1 <- as.numeric(df$vgauge1)</pre>
df$vgauge2 <- as.numeric(df$vgauge2)</pre>
df$fDash <- as.numeric(df$fDash)</pre>
df$bDash <- as.numeric(df$bDash)</pre>
df$fWalk <- as.numeric(df$fWalk)</pre>
df$bWalk <- as.numeric(df$bWalk)</pre>
df$throwHurt <- as.numeric(df$throwHurt)</pre>
df$throwRange <- as.numeric(df$throwRange)</pre>
na_rows <- df[!complete.cases(df), ]</pre>
na_rows
write.csv(df, "data/all.csv", row.names = FALSE)
df <- read.csv("data/all.csv", stringsAsFactors = FALSE)</pre>
# Replace values in parentheses with the minimum value
regx <- ".*?(\\-?\\d+)\\((\\-?\\d+)\\).*"
df$onBlock <- gsub(regx, "\\1", df$onBlock)</pre>
dfonBlock <- gsub("(\\-?\\d+)[\\*/](\\-?\\d+)", "\\1", df$onBlock)
# Use ifelse to replace NA values \ensuremath{\textit{w/}}\xspace NA and non-NA values with the minimum value
df$onBlock <- ifelse(</pre>
```

```
is.na(df$onBlock), # condition: check if value is NA
  NA, # value to replace with if condition is TRUE
  # value to replace with if condition is FALSE
  pmin(as.numeric(df$onBlock), as.numeric(gsub(regx, "\\2", df$onBlock)))
# Convert column to numeric
df$onBlock <- as.numeric(df$onBlock)</pre>
write.csv(df, "data/all.csv", row.names = FALSE)
df <- read.csv("data/all.csv", stringsAsFactors = FALSE)</pre>
# Check for missing values
na_rows <- df[!complete.cases(df), ]</pre>
na_rows
## [1] Character Move
                              onBlock
                                         plnCmd
                                                    airmove
                                                                followUp
## [7] projectile moveType
                              health
                                         stun
                                                                vgauge2
                                                    vgauge1
## [13] fDash
                  bDash
                              fWalk
                                         bWalk
                                                    throwHurt throwRange
## [19] Damage
                   Stun
## <0 rows> (or 0-length row.names)
nrow(df)
## [1] 1809
ncol(df)
## [1] 20
KDE
ggplot(df, aes(onBlock)) +
geom_density()
```



ggplot(df, aes(Damage)) +
 geom\_density()



ggplot(df, aes(Stun)) +
 geom\_density()

