Preliminary Investigation

Ethan Allavarpu (UID: 405287603)

10/27/2020

```
sample <- read.csv("sample.csv", stringsAsFactors = TRUE)
# sample
```

```
training <- read.csv("training.csv", stringsAsFactors = TRUE)
dim(training)
```

```
[1] 3177   99
```

```
names(training)[c(1, 99)]
```

```
[1] "id"    "class"
```

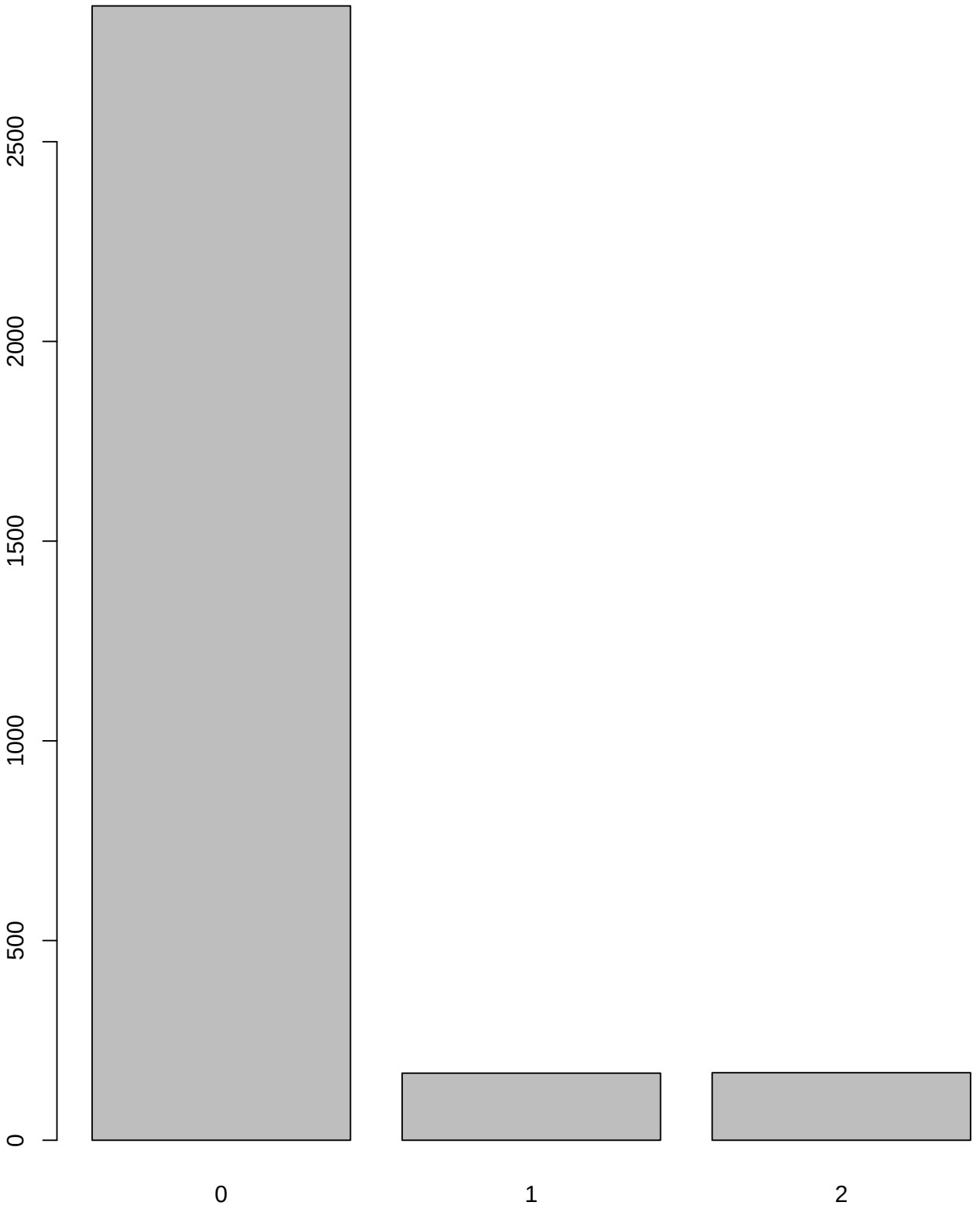
```
barplot(table(training$class))
table(training$class) / nrow(training)
```

```
         0          1          2
0.89392509 0.05288008 0.05319484
```

```
any(is.na(training))
```

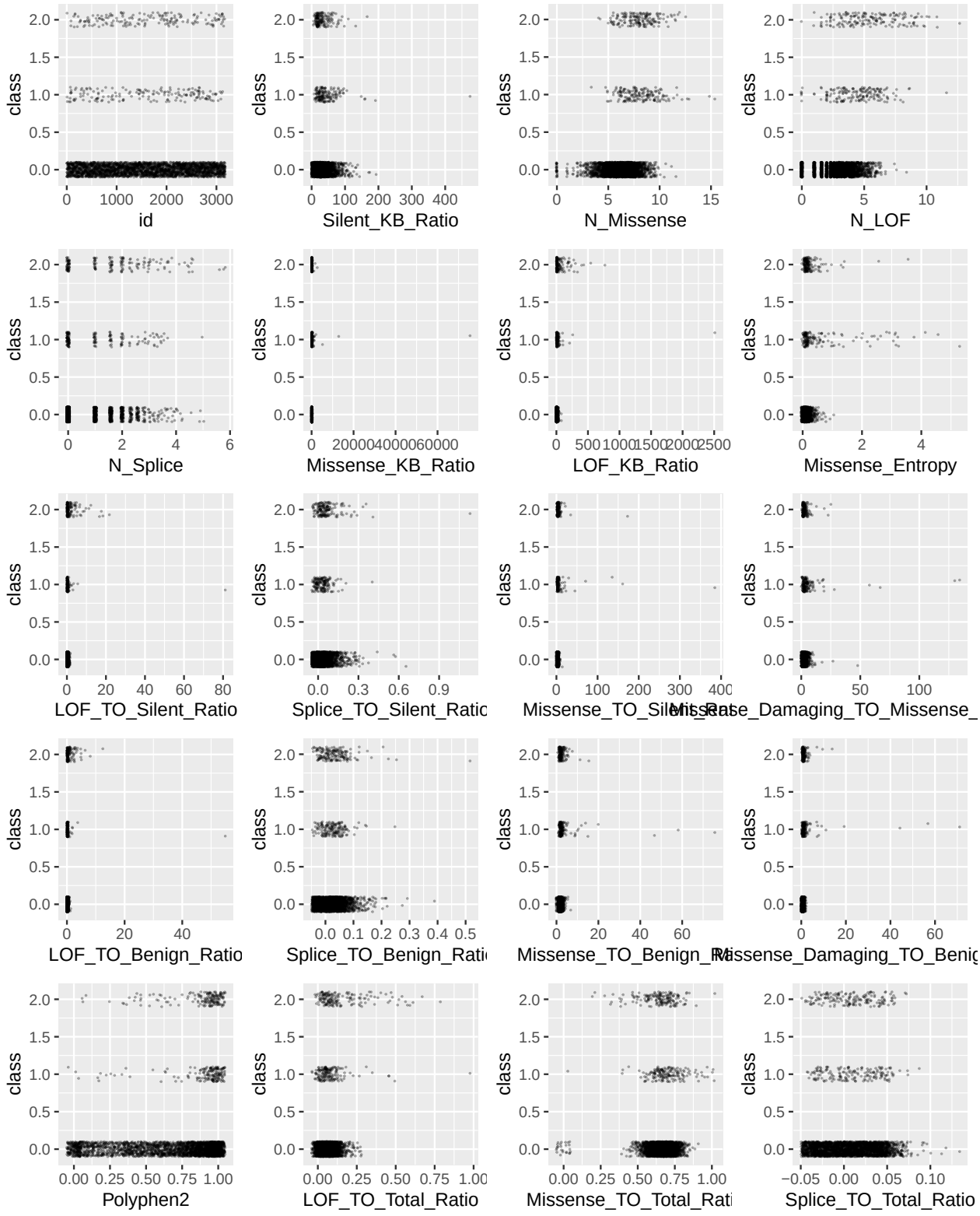
```
[1] FALSE
```

```
library(ggplot2)
```

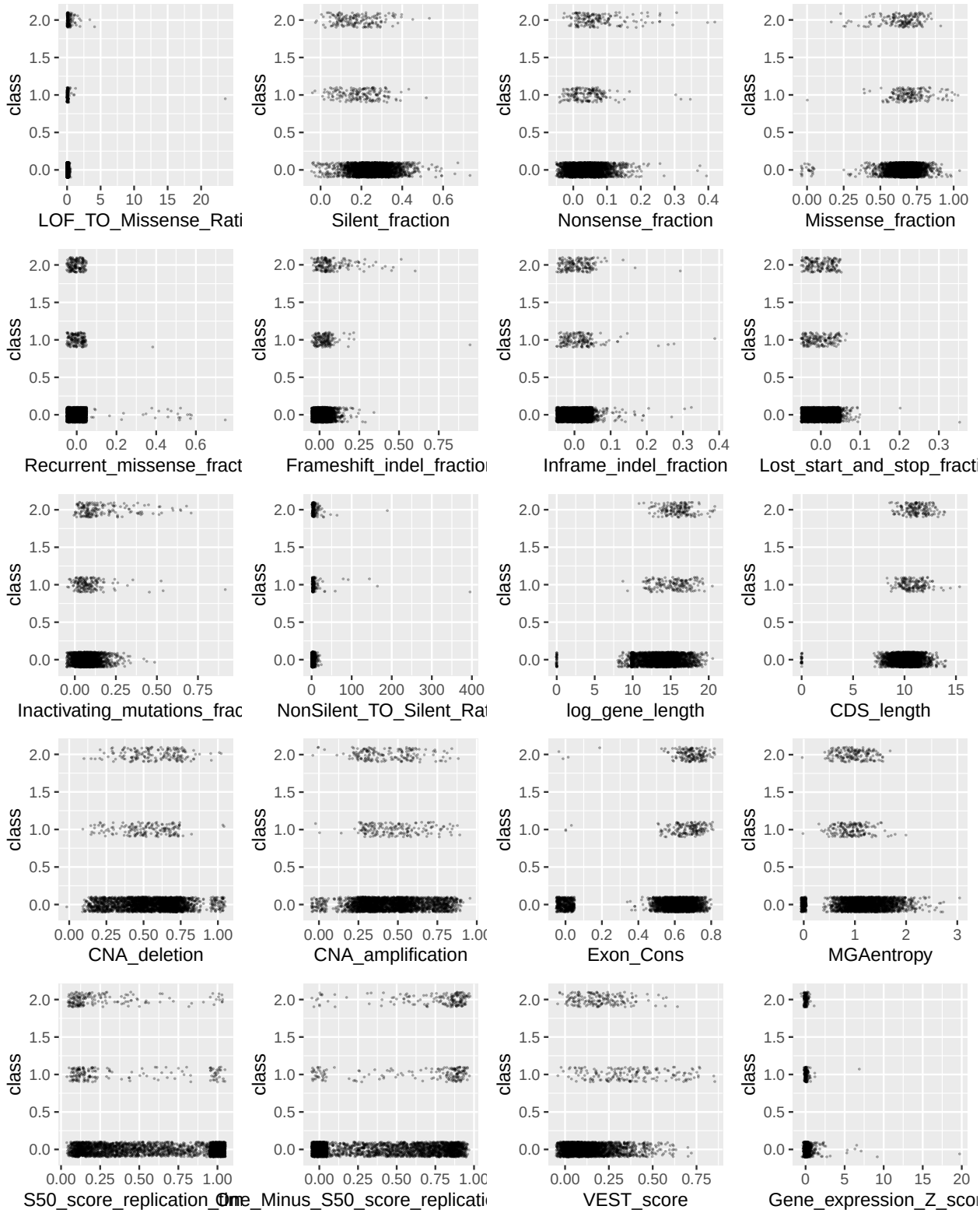



```
scatter <- function(var) {
  ggplot(training, aes_string(var, "class")) +
    geom_jitter(width = 0.05, height = 0.1, size = 0.1,
                colour = rgb(0, 0, 0, alpha = 1 / 3))
}
```

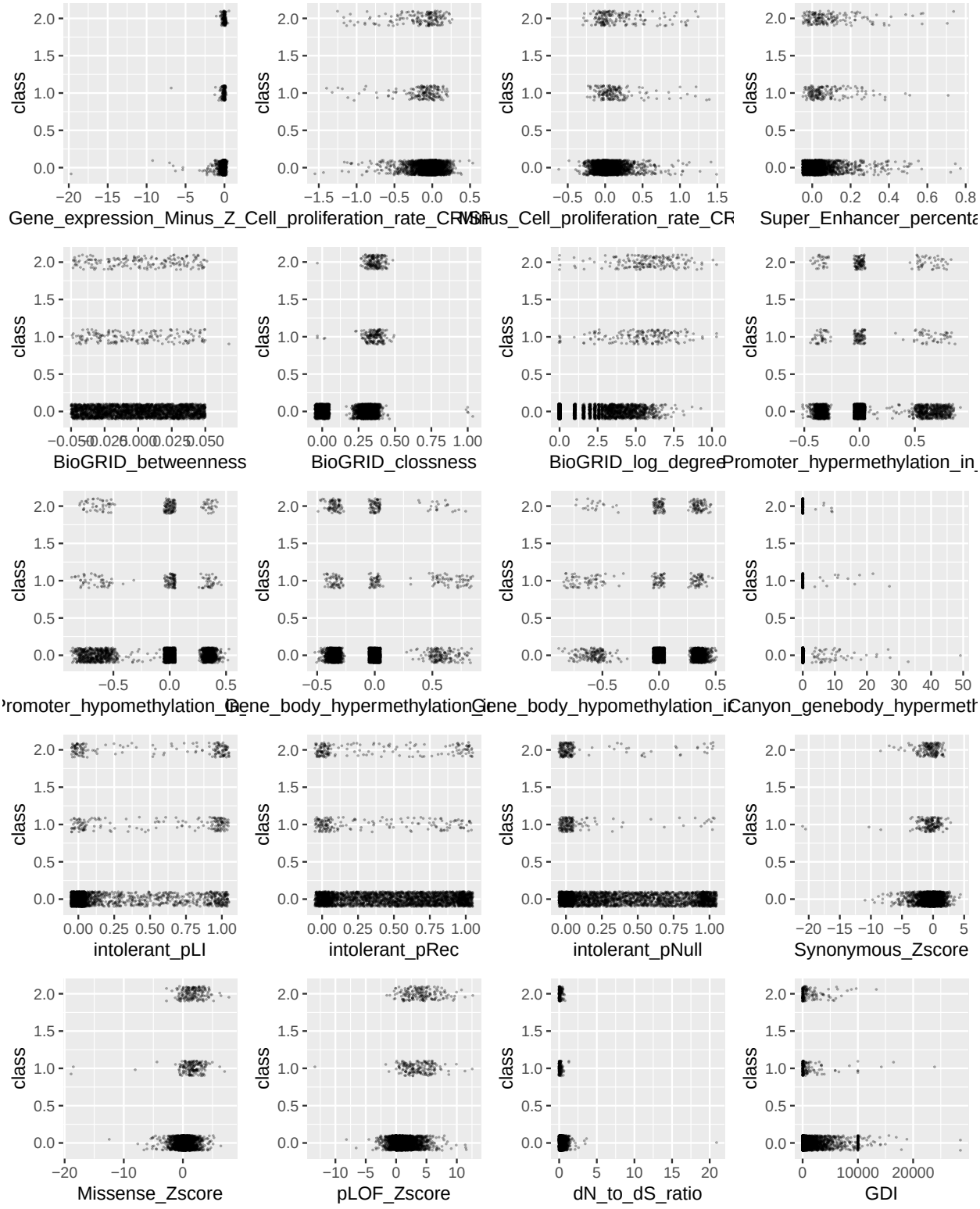
```
scat_plot <- lapply(names(training)[-99], scatter)
library(gridExtra)
grid.arrange(grobs = scat_plot[1:20], ncol = 4)
```



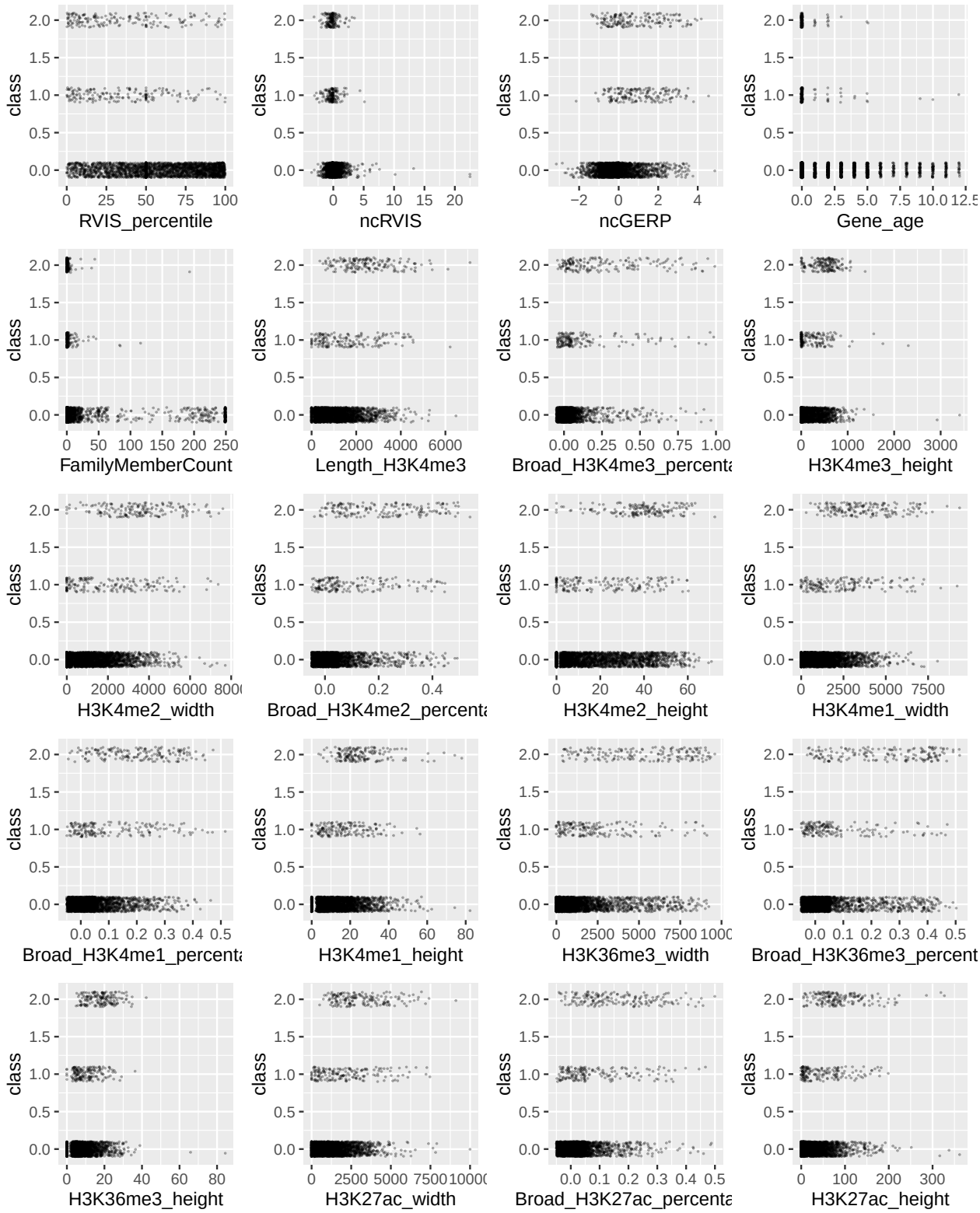
```
grid.arrange(grobs = scat_plot[21:40], ncol = 4)
```



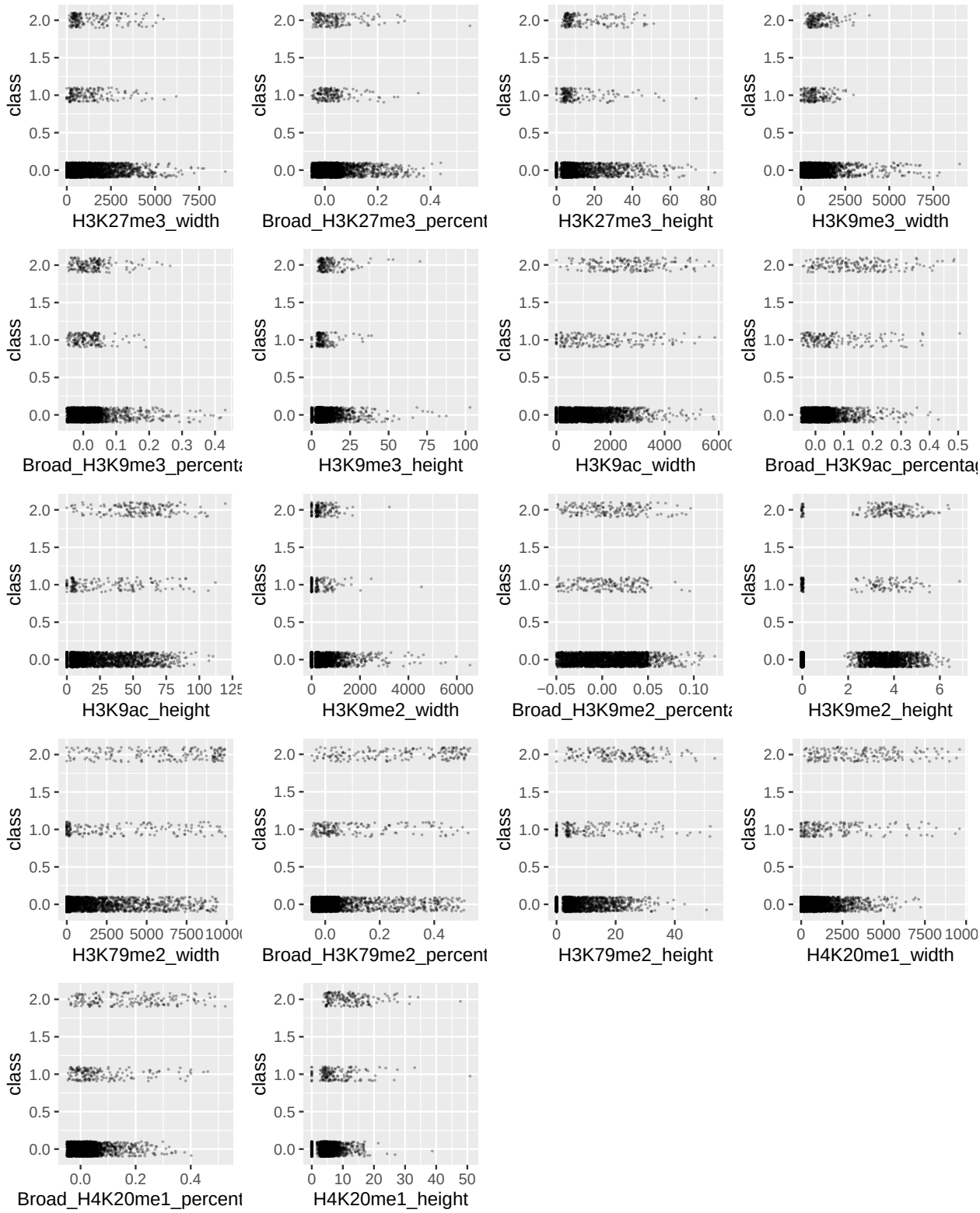
```
grid.arrange(grobs = scat_plot[41:60], ncol = 4)
```




```
grid.arrange(grobs = scat_plot[61:80], ncol = 4)
```




```
grid.arrange(grobs = scat_plot[81:98], ncol = 4)
```


class
H3K27me3_width
Broad_H3K27me3_percent
H3K27me3_height
H3K9me3_width
Broad_H3K9me3_percenta
H3K9me3_height
H3K9ac_width
Broad_H3K9ac_percentag
H3K9ac_height
H3K9me2_width
Broad_H3K9me2_percenta
H3K9me2_height
H3K79me2_width
Broad_H3K79me2_percent
H3K79me2_height
H4K20me1_width
Broad_H4K20me1_percent
H4K20me1_height