Main Swing Data Analysis

Riya Nandakumar

7/31/2020

Swing Analysis

This is R Markdown document is for the purposes of examining the swing data and differences between the means of the four different types of swings (good swing, little pivot, wild pivot, back leg pick up). After examination, features for the machine learning model will be picked out and utilized in CreateML. This examination is for the datasets using the separate Accelerometer and Gyroscopic data, with intentions of uploading the trained model to the SensorLog app.

```
# install tidyverse
install.packages('tidyverse')
```

```
## Installing package into '/home/rstudio-user/R/x86_64-pc-linux-gnu-library/4.0'
## (as 'lib' is unspecified)
```

```
# load in tidyverse packages
library(tidyverse)
```

```
## -- Attaching packages ---------------------------- tidyverse 1.3.0 --
```

```
## v ggplot2 3.3.2     v purrr   0.3.4
## v tibble  3.0.3     v dplyr   1.0.1
## v tidyr   1.1.1     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.5.0
```

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

Differences in Accelerometer Axis X Means:

```
# list of all .csvs in the directory
file_names <- list.files(pattern = '*.csv')

ax_mean_results <- c()

for (file in file_names){
  # read in file
  ax_mean_results <- read_csv(file) %>%
    # means of accelerometer / gyroscope
    summarize(mean_aX = mean(accelerometerAccelerationX)) %>%
    # save file name
    mutate(file) %>%
    # remove the .csv ending part
    mutate(file = gsub('\\.csv', '', file),
           category = gsub('\\d', '', file)) %>%
    # append to previous results
```

```r
    bind_rows(ax_mean_results, .)
}
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

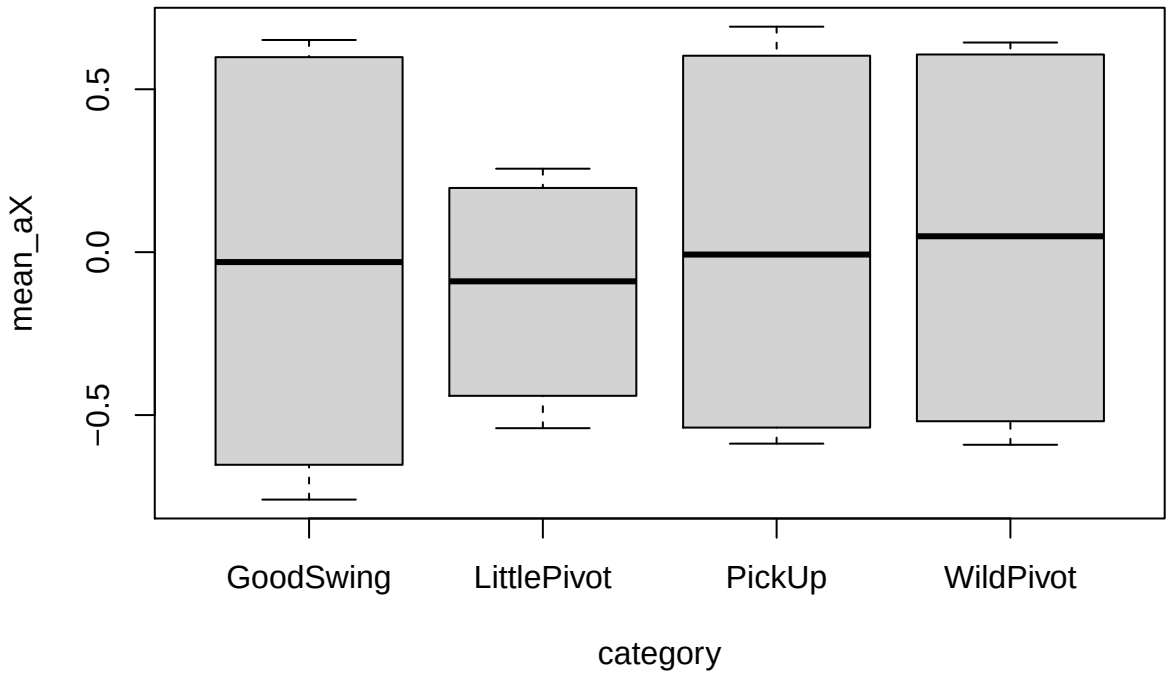
```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```r
# results visualization
boxplot(mean_aX ~ category, data = ax_mean_results, title = "Means of Accelerometer Axis X")
```



Differences in Accelerometer Axis Y Means:

```
ay_mean_results <- c()

for (file in file_names){

  ay_mean_results <- read_csv(file) %>%
    summarize(mean_aY = mean(accelerometerAccelerationY)) %>%
    mutate(file) %>%
    mutate(file = gsub('\\.csv', '', file),
           category = gsub('\\d', '', file)) %>%
    bind_rows(ay_mean_results, .)
}
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

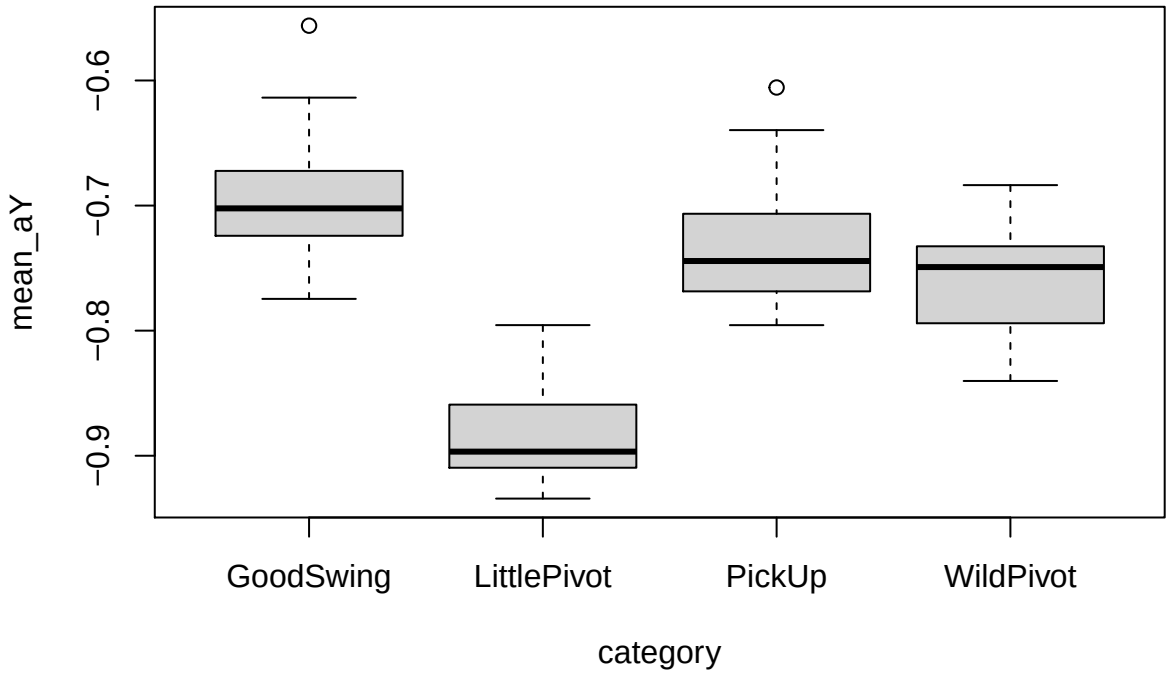
```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
boxplot(mean_aY ~ category, data = ay_mean_results, title = "Means of Accelerometer Axis Y")
```



Differences in Accelerometer Axis Z Means:

```
az_mean_results <- c()

for (file in file_names){

  az_mean_results <- read_csv(file) %>%
    summarize(mean_aZ = mean(accelerometerAccelerationZ)) %>%
    mutate(file) %>%
    mutate(file = gsub('\\.csv', '', file),
```

```r
            category = gsub('\\d', '', file)) %>%
    bind_rows(az_mean_results, .)
}
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
```

```
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
```

```
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
```

```
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
```

```
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
```

```
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
```

```
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
```

```
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
```

```
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
```

```
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
```

```
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
```

```
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
```

```
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
```

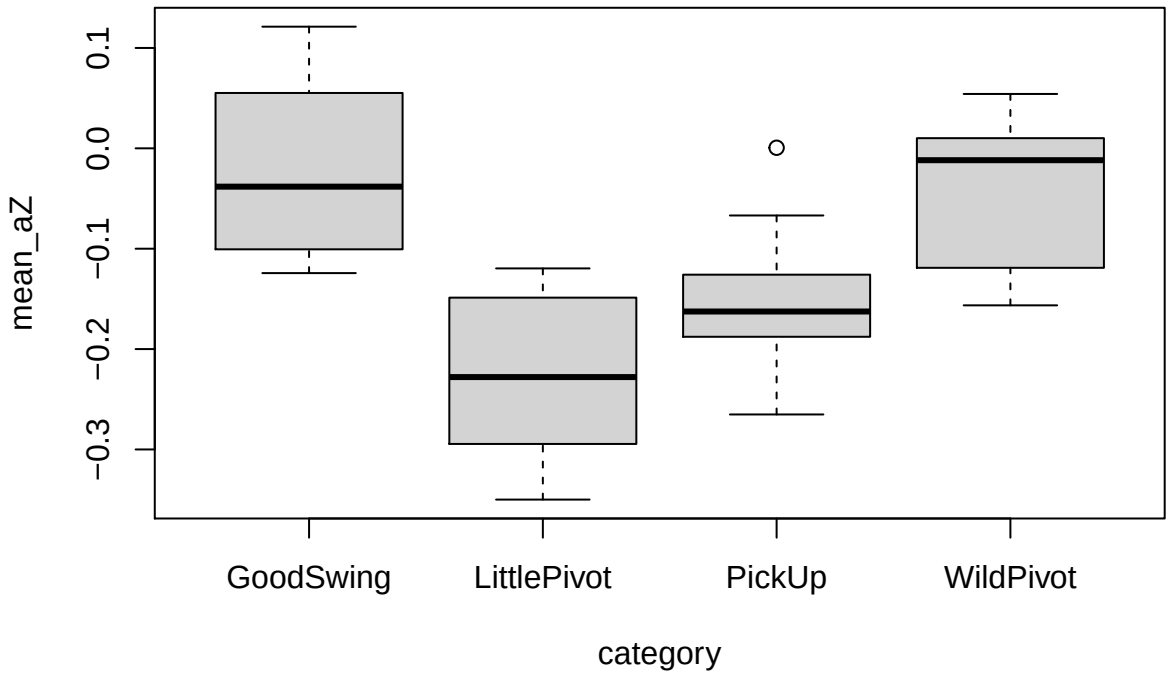
```
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
```

```
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
boxplot(mean_aZ ~ category, data = az_mean_results, title = "Means of Accelerometer Axis Z")
```



Differences in Gyroscope Axis X Means:

```
gx_mean_results <- c()

for (file in file_names){

  gx_mean_results <- read_csv(file) %>%
    summarize(mean_gX = mean(gyroRotationX)) %>%
    mutate(file) %>%
    mutate(file = gsub('\\.csv', '', file),
           category = gsub('\\d', '', file)) %>%
    bind_rows(gx_mean_results, .)
}
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

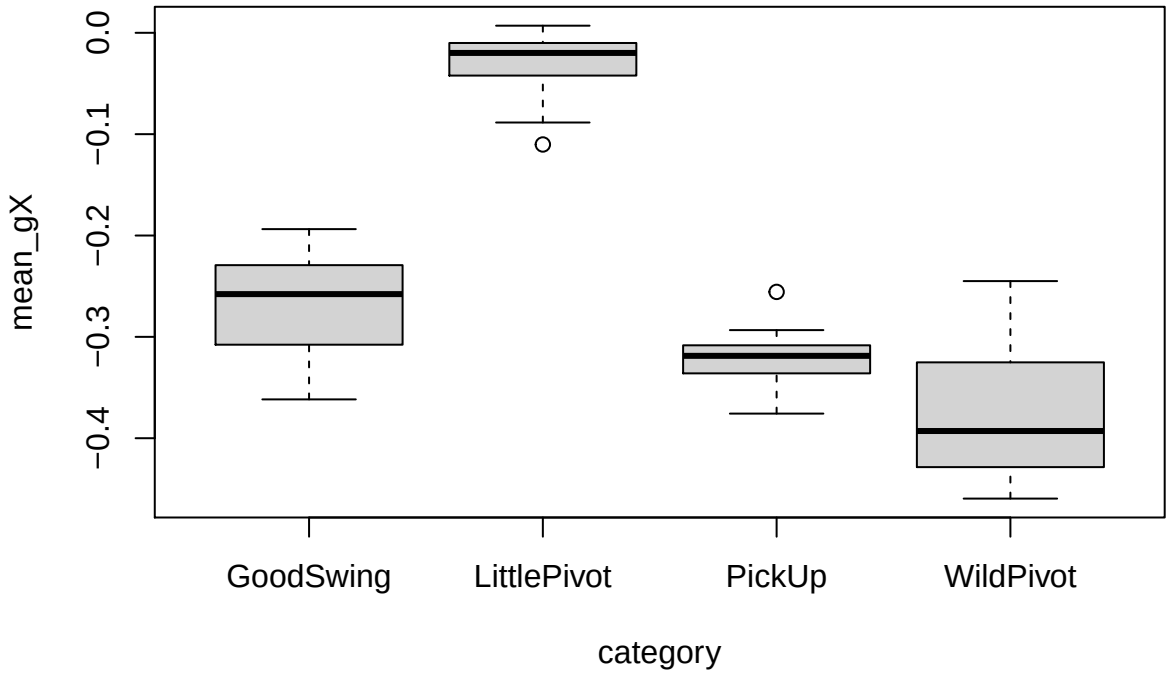
```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
boxplot(mean_gX ~ category, data = gx_mean_results, title = "Means of Gyroscope Axis X")
```



Differences in Gyroscope Axis Y Means:

```
gy_mean_results <- c()

for (file in file_names){

  gy_mean_results <- read_csv(file) %>%
    summarize(mean_gY = mean(gyroRotationY)) %>%
    mutate(file) %>%
    mutate(file = gsub('\\.csv', '', file),
```

```r
            category = gsub('\\d', '', file)) %>%
    bind_rows(gy_mean_results, .)
}
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
```

```
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
```

```
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
```

```
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
```

```
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
```

```
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
```

```
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
```

```
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
```

```
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
```

```
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
```

```
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
```

```
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
```

```
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
```

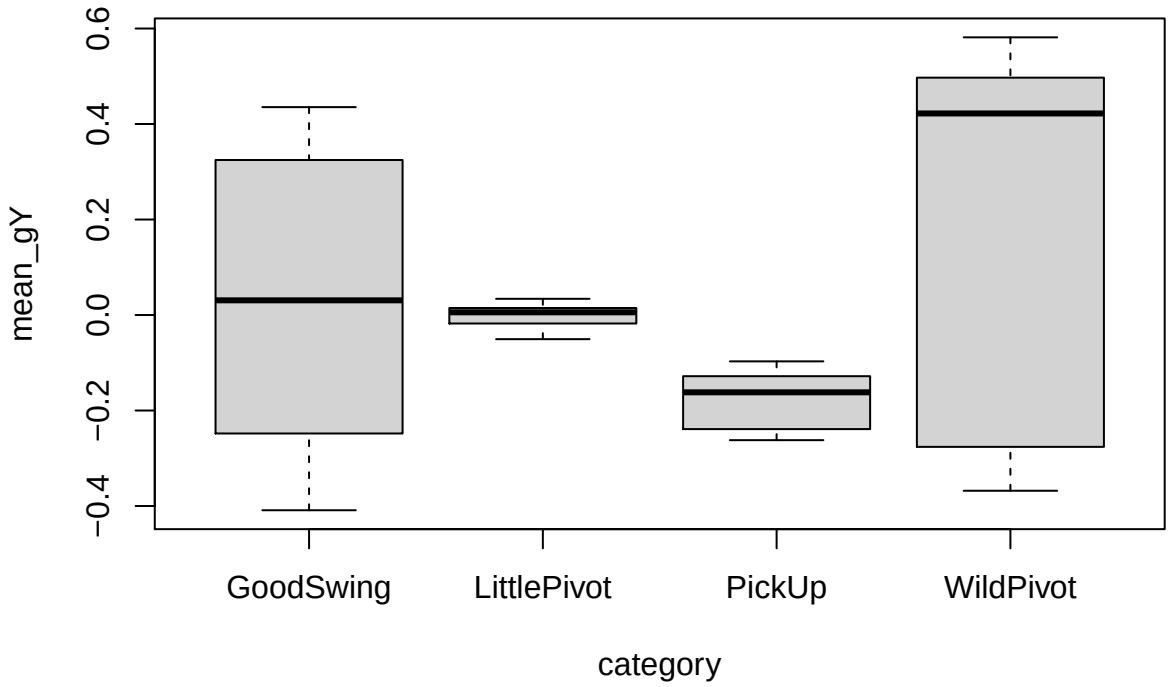
```
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
```

```
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
boxplot(mean_gY ~ category, data = gy_mean_results, title = "Means of Gyroscope Axis Y")
```



Differences in Gyroscope Axis Z Means:

```
gz_mean_results <- c()

for (file in file_names){

  gz_mean_results <- read_csv(file) %>%
    summarize(mean_gZ = mean(gyroRotationZ)) %>%
    mutate(file) %>%
    mutate(file = gsub('\\.csv', '', file),
           category = gsub('\\d', '', file)) %>%
    bind_rows(gz_mean_results, .)
}
```

```
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
```

```
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
```

```
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
```

```
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
```

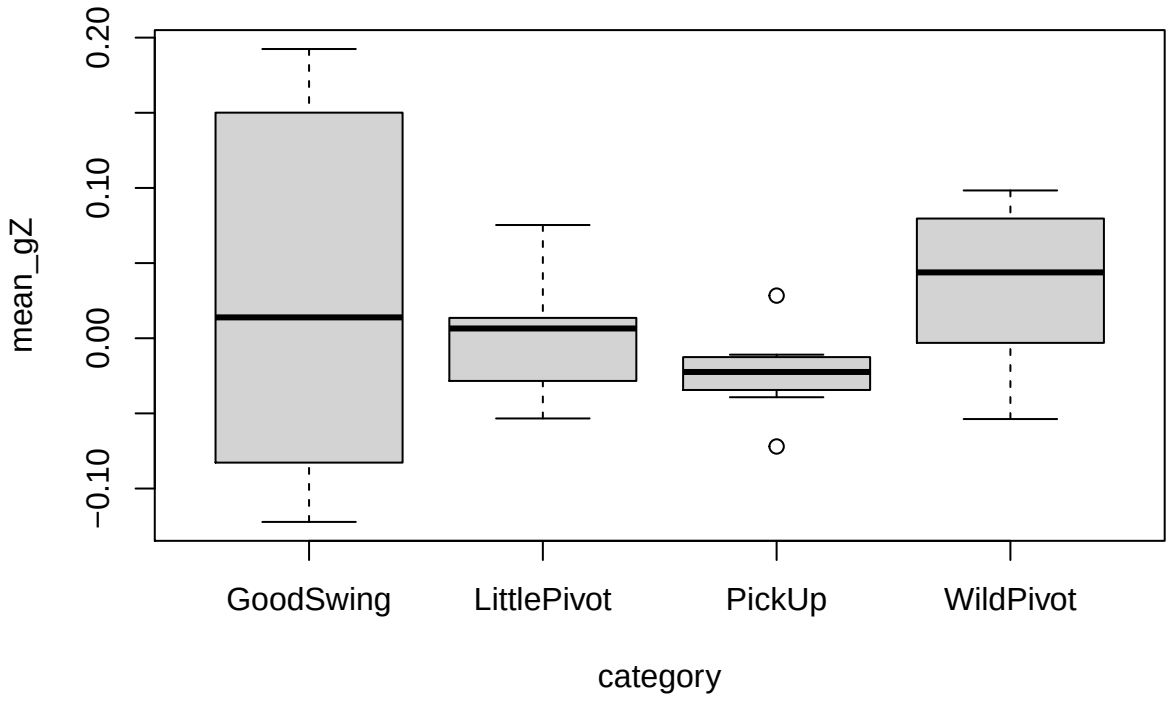
```
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
```

```
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
```

```
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
```

```
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
## Parsed with column specification:
## cols(
##   loggingTime = col_double(),
##   loggingSample = col_double(),
##   identifierForVendor = col_double(),
##   accelerometerTimestamp_sinceReboot = col_double(),
##   accelerometerAccelerationX = col_double(),
##   accelerometerAccelerationY = col_double(),
##   accelerometerAccelerationZ = col_double(),
##   gyroTimestamp_sinceReboot = col_double(),
##   gyroRotationX = col_double(),
##   gyroRotationY = col_double(),
##   gyroRotationZ = col_double()
## )
```

```
boxplot(mean_gZ ~ category, data = gz_mean_results, title = "Means of Gyroscope Axis Z")
```



Summary: From the data visualization presented above, the features I will strive to use in my machine learning model are the accelerometer's Z axis and the gyroscope's X axis. These axises have the biggest differences between swing types, making classification much easier. If needed, the CreateML model can easily utilize the other discarded features; however I will only add these in if the model could improve significantly. (apologies for the pages of column pasring specifications in the knitted pdf)