

# Stereotype Graph - Both Genders

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```
#Women's Ankle Monitor(b) Data
```

```
library(ggplot2)
library(dplyr)
```

```
##
```

```
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
```

```
##
```

```
## filter, lag
```

```
## The following objects are masked from 'package:base':
```

```
##
```

```
## intersect, setdiff, setequal, union
```

```
AP378 = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/AP378 Test Data/AP378")
```

```
secs_df = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/AP378 Test Data/AP378")
```

```
secs_df = na.omit(secs_df)
```

```
secs_df = secs_df %>%
```

```
  filter(Observed.Sec > Real.Sec) %>%
```

```
  select("ID", "Real.Sec")
```

```
AP378$ID = as.numeric(gsub("[^0-9]", "", AP378$ID)) #change the ID to a regular number
```

```
females = AP378 %>%
```

```
  left_join(secs_df, by = "ID") %>% # Join to get the Real.Sec column
```

```
  group_by(ID) %>%
```

```
  filter(row_number() <= Real.Sec) %>% # Filter rows based on Real.Sec
```

```
  ungroup() %>%
```

```
  select(-Real.Sec)
```

```
females$ID = paste0(females$ID, "F")
```

```
masterfile_f = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/AP378 Test Data/AP378")
```

```
masterfile_f = masterfile_f %>%
```

```

select("ID...1", "Cond") %>%
rename(ID = "ID...1")

masterfile_f$ID = paste0(masterfile_f$ID, "F")

females = left_join(females, masterfile_f, by = "ID")

females

```

```

## # A tibble: 139,001 x 6
##   Seconds Y.axis X.axis Z.axis ID      Cond
##   <int>   <int> <int> <int> <chr> <chr>
## 1      0     0     0     0 0 1F  Threat
## 2      1     0     0     0 0 1F  Threat
## 3      2     0     0     0 0 1F  Threat
## 4      3     0     0     0 0 1F  Threat
## 5      4     0     0     0 0 1F  Threat
## 6      5     0     7     0 0 1F  Threat
## 7      6     0     0     0 0 1F  Threat
## 8      7     0     0     0 0 1F  Threat
## 9      8     0     0     0 0 1F  Threat
## 10     9     0     0     0 0 1F  Threat
## # i 138,991 more rows

```

*#Mens's Ankle Monitor(b) Data*

```
PA378 = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/PA378 Test Data/PA378")
```

```

secs_df = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/PA378 Test Data/PA378")
secs_df = na.omit(secs_df)
secs_df = secs_df %>%
  filter(Observed.Sec > Real.Sec) %>%
  select("ID", "Real.Sec")

```

```
PA378$ID = as.numeric(gsub("[^0-9]", "", PA378$ID)) #change the ID to a regular number
```

```

males = PA378 %>%
  left_join(secs_df, by = "ID") %>% # Join to get the Real.Sec column
  group_by(ID) %>%
  filter(row_number() <= Real.Sec) %>% # Filter rows based on Real.Sec
  ungroup() %>%
  select(-Real.Sec)

```

```
males$ID = paste0(males$ID, "M")
```

```
masterfile_m = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/PA378 Test Data/PA378")
```

```

masterfile_m = masterfile_m %>%
  select("ID...1", "Cond") %>%
  rename(ID = "ID...1")

```

```

masterfile_m$ID = paste0(masterfile_m$ID, "M")

males = left_join(males, masterfile_m, by = "ID")

males

```

```

## # A tibble: 117,209 x 6
##   Seconds Y.axis X.axis Z.axis ID    Cond
##   <int>   <int>   <int>   <int> <chr> <chr>
## 1      0     0     0     0  0 1M   Control
## 2      1     0     0     0  0 1M   Control
## 3      2     0     0     0  0 1M   Control
## 4      3     0     0     6  0 1M   Control
## 5      4     0     0     6  0 1M   Control
## 6      5     0     0     0  0 1M   Control
## 7      6     0     0     0  0 1M   Control
## 8      7     0     0     0  0 1M   Control
## 9      8     5     9    13  0 1M   Control
## 10     9     0     6    17  0 1M   Control
## # i 117,199 more rows

```

*#data frame with both male and female data alongside corresponding ID and Conditions*

```

both_df = rbind(females, males)

both_df$Gender = ifelse(grepl("F$", both_df$ID), "Female", "Male")

both_df

```

```

## # A tibble: 256,210 x 7
##   Seconds Y.axis X.axis Z.axis ID    Cond  Gender
##   <int>   <int>   <int>   <int> <chr> <chr> <chr>
## 1      0     0     0     0  0 1F   Threat Female
## 2      1     0     0     0  0 1F   Threat Female
## 3      2     0     0     0  0 1F   Threat Female
## 4      3     0     0     0  0 1F   Threat Female
## 5      4     0     0     0  0 1F   Threat Female
## 6      5     0     7     0  0 1F   Threat Female
## 7      6     0     0     0  0 1F   Threat Female
## 8      7     0     0     0  0 1F   Threat Female
## 9      8     0     0     0  0 1F   Threat Female
## 10     9     0     0     0  0 1F   Threat Female
## # i 256,200 more rows

```

*# THREAT*

```

bruce_levels = c(540, 720, 900, 1080, 1260, 1440, 1620, 1800)

```

*#X AXIS*

```

threat_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Threat") %>%
  group_by(Seconds, Gender) %>%

```

```

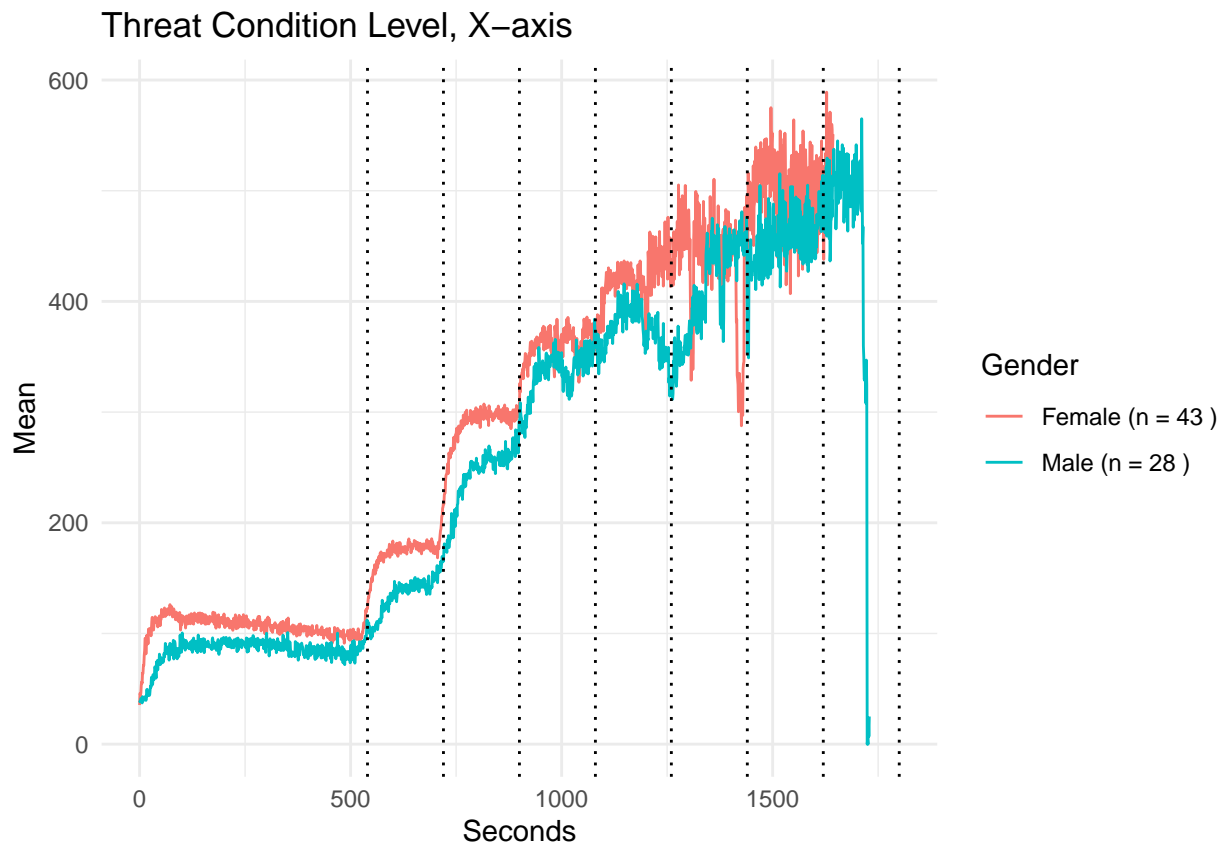
summarise(mean = mean(X.axis),
           .groups = "drop")

unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Threat") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
            .groups = "drop")

threat_df = threat_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(threat_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
       y = "Mean",
       title = "Threat Condition Level, X-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")

```



```

#Y AXIS
threat_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Threat") %>%
  group_by(Seconds, Gender) %>%

```

```

summarise(mean = mean(Y.axis),
           .groups = "drop")

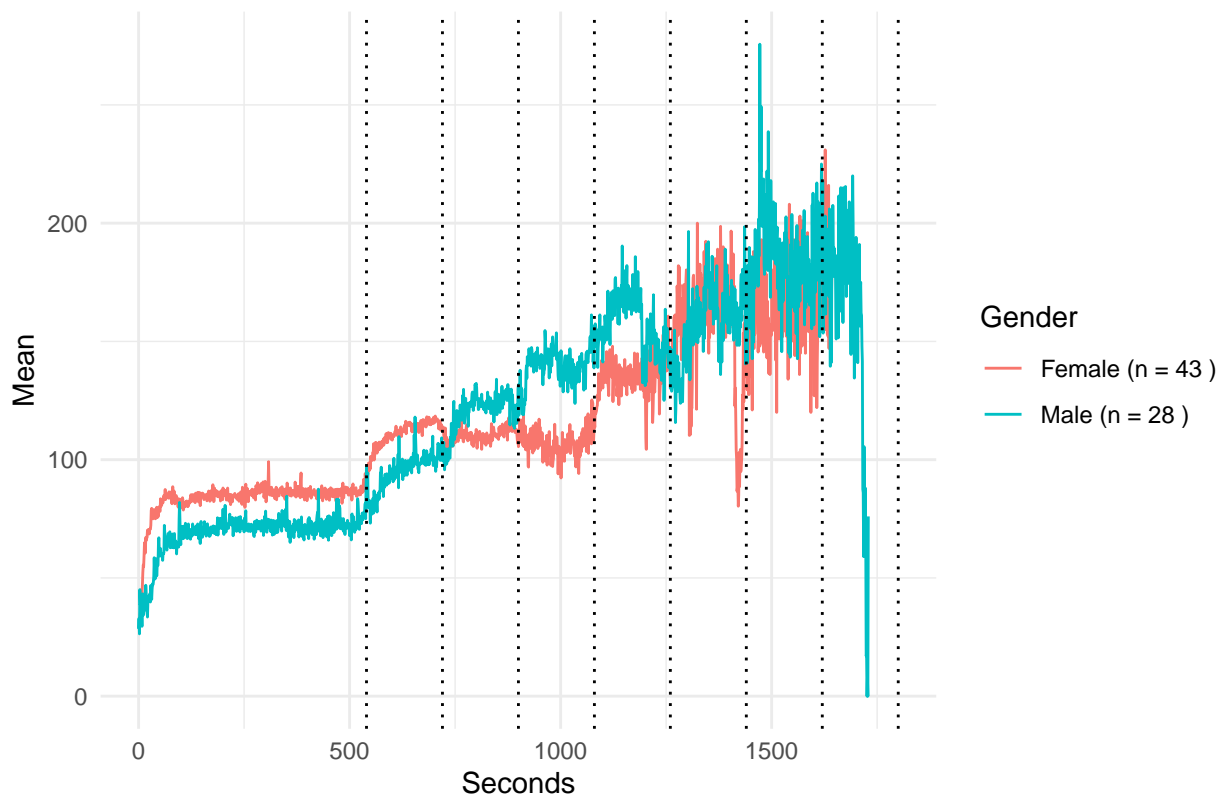
unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Threat") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
            .groups = "drop")

threat_df = threat_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(threat_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
       y = "Mean",
       title = "Threat Condition Level, Y-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")

```

Threat Condition Level, Y-axis



```

#Z AXIS
threat_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Threat") %>%
  group_by(Seconds, Gender) %>%

```

```

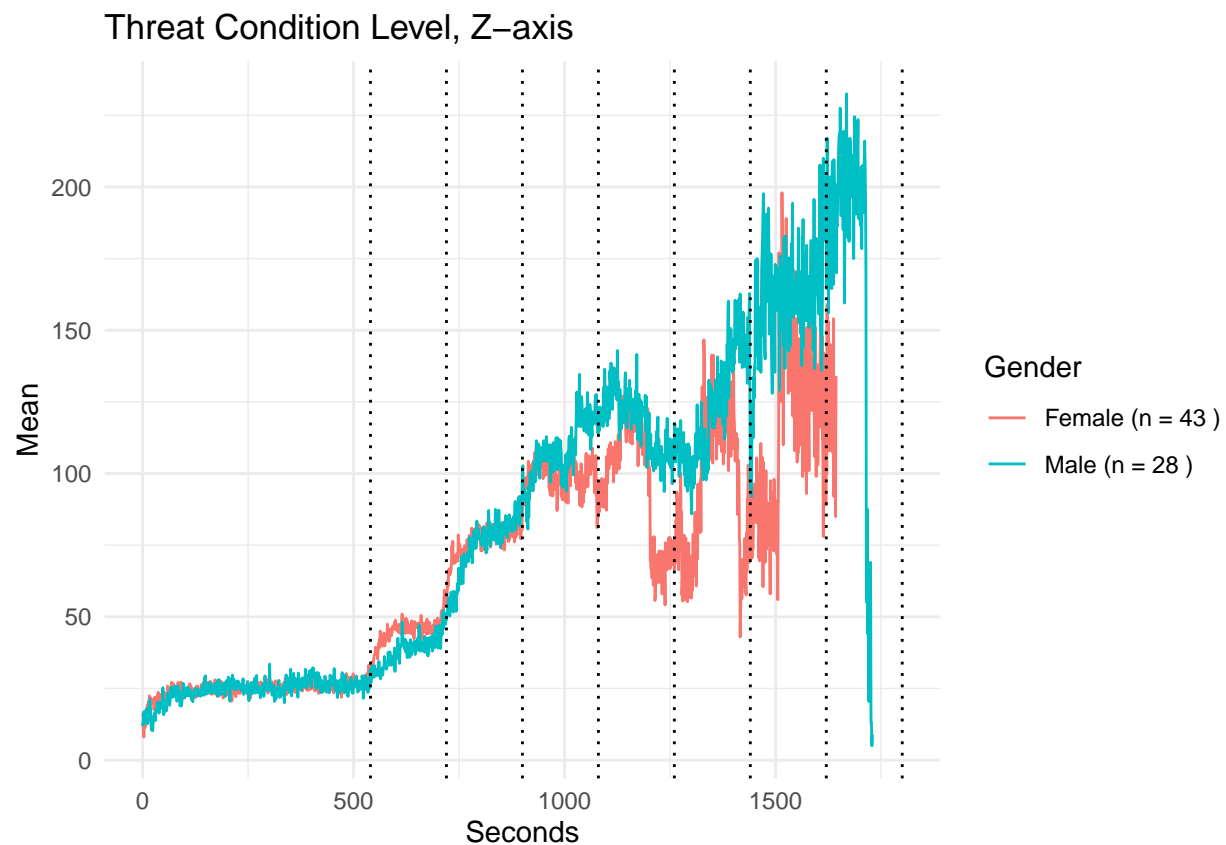
summarise(mean = mean(Z.axis),
           .groups = "drop")

unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Threat") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
           .groups = "drop")

threat_df = threat_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(threat_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
       y = "Mean",
       title = "Threat Condition Level, Z-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")

```



```

# CONTROL

bruce_levels = c(540, 720, 900, 1080, 1260, 1440, 1620, 1800)

```

```

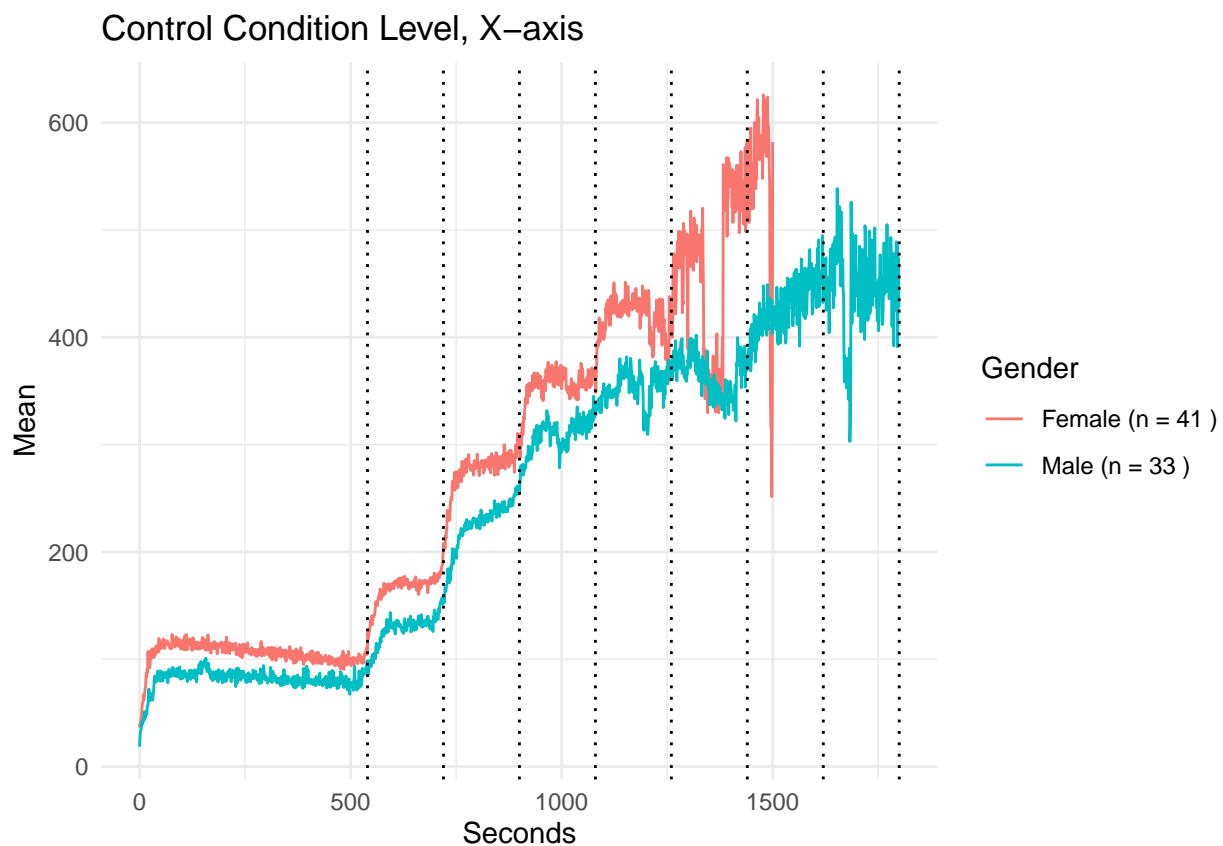
#X AXIS
control_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Control") %>%
  group_by(Seconds, Gender) %>%
  summarise(mean = mean(X.axis),
            .groups = "drop")

unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Control") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
            .groups = "drop")

control_df = control_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(control_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
       y = "Mean",
       title = "Control Condition Level, X-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")

```



```

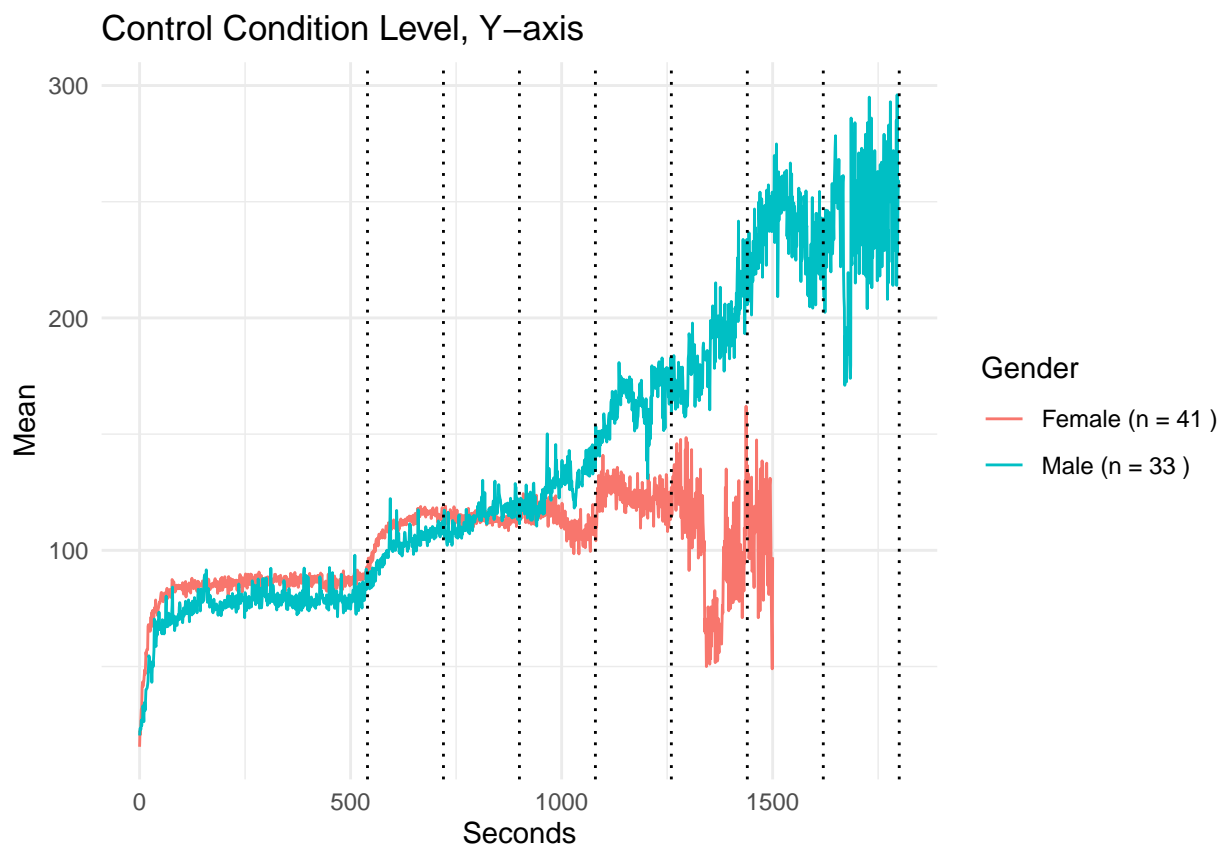
#Y AXIS
control_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Control") %>%
  group_by(Seconds, Gender) %>%
  summarise(mean = mean(Y.axis),
    .groups = "drop")

unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Control") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
    .groups = "drop")

control_df = control_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(control_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
    y = "Mean",
    title = "Control Condition Level, Y-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")

```





```

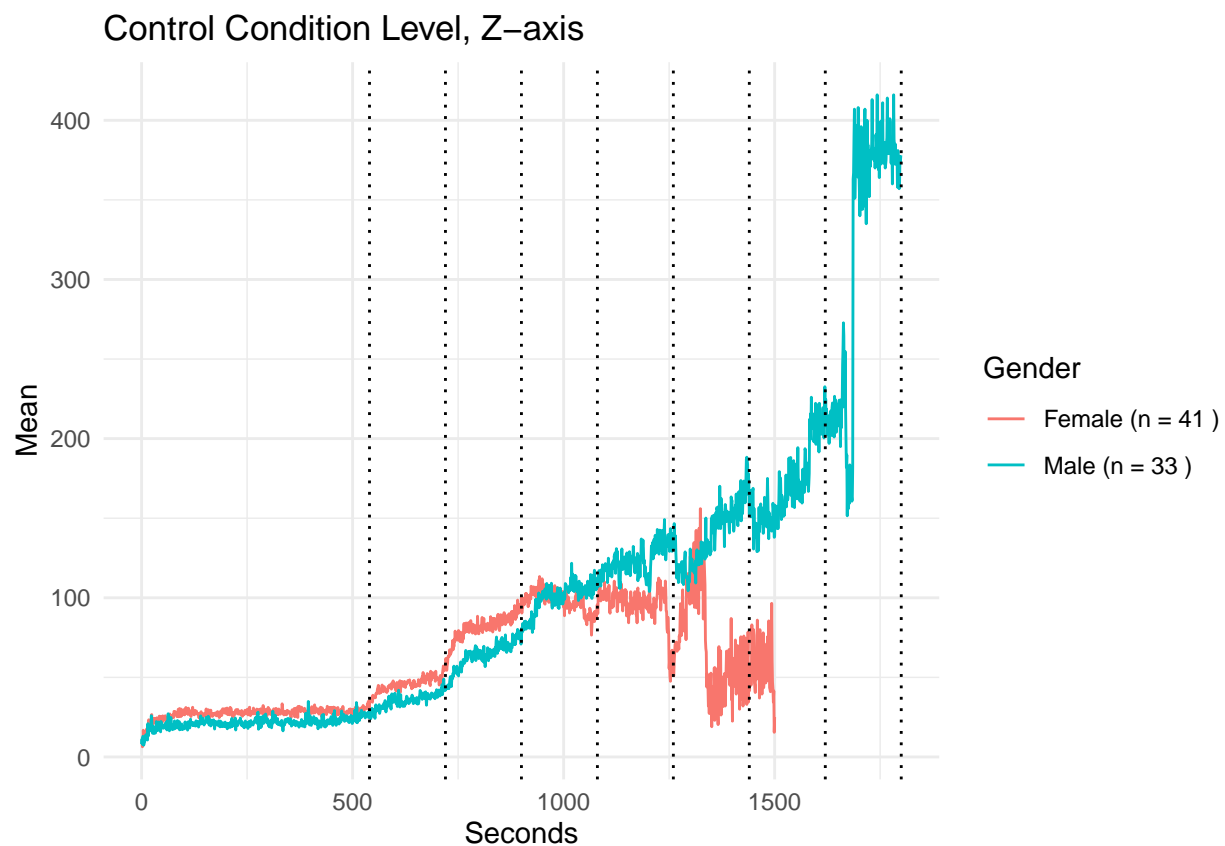
#Z AXIS
control_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Control") %>%
  group_by(Seconds, Gender) %>%
  summarise(mean = mean(Z.axis),
            .groups = "drop")

unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Control") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
            .groups = "drop")

control_df = control_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(control_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
       y = "Mean",
       title = "Control Condition Level, Z-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")

```



```

# LIFT

bruce_levels = c(540, 720, 900, 1080, 1260, 1440, 1620, 1800)

#X AXIS
lift_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Lift") %>%
  group_by(Seconds, Gender) %>%
  summarise(mean = mean(X.axis),
    .groups = "drop")

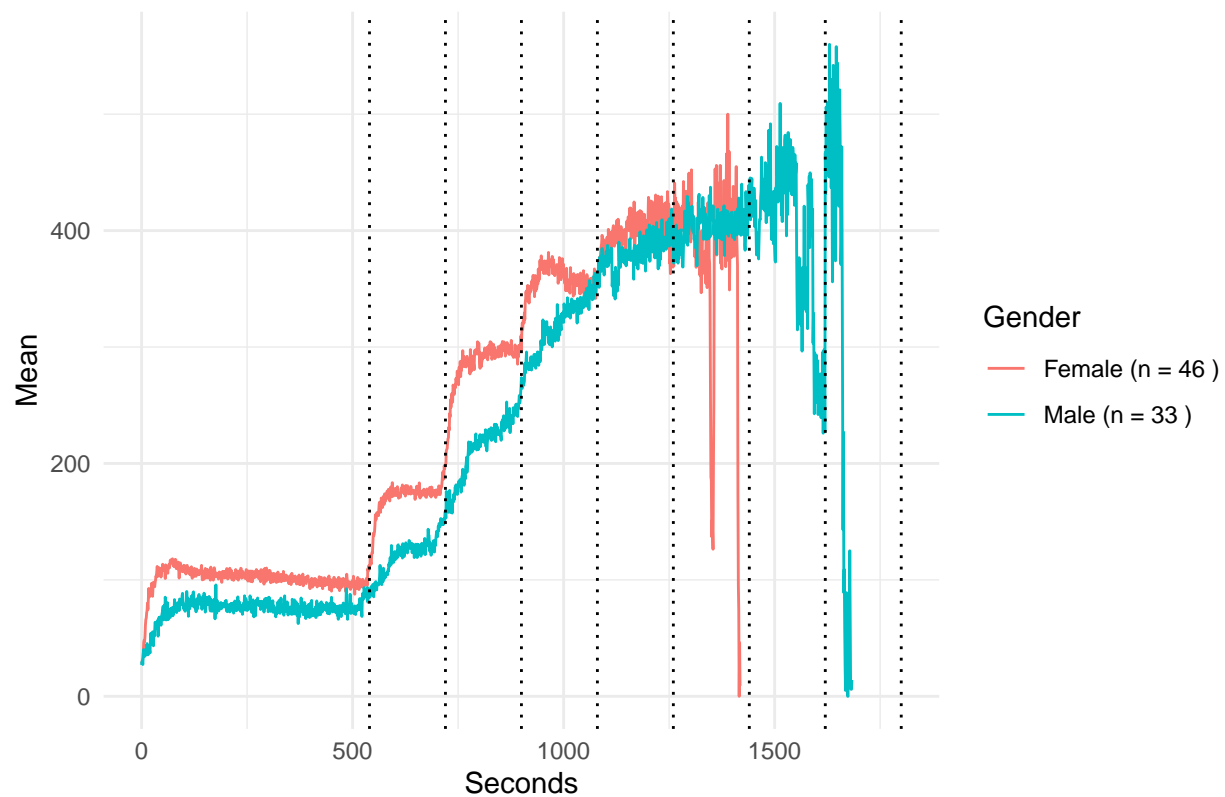
unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Lift") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
    .groups = "drop")

lift_df = lift_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(lift_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
    y = "Mean",
    title = "Lift Condition Level, X-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")

```

Lift Condition Level, X-axis

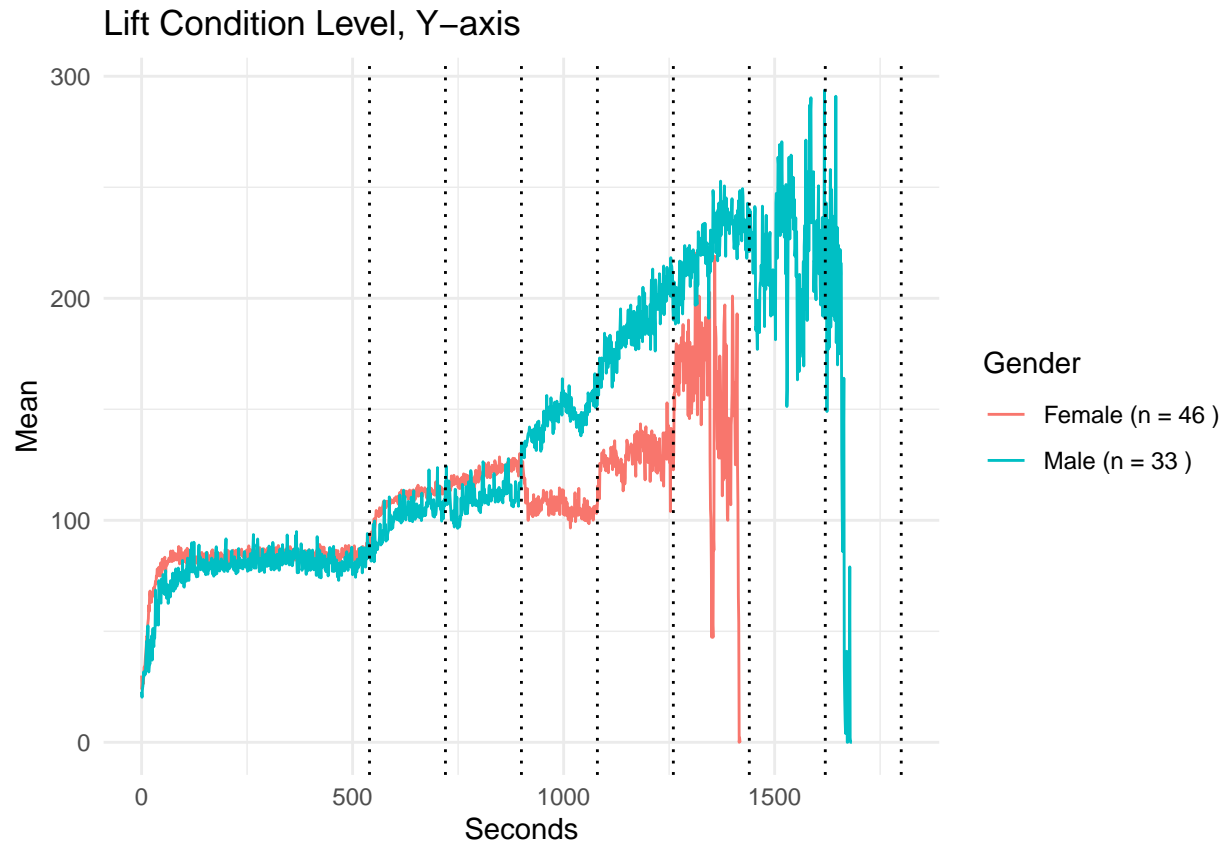


```
#Y AXIS
lift_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Lift") %>%
  group_by(Seconds, Gender) %>%
  summarise(mean = mean(Y.axis),
            .groups = "drop")

unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Lift") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
            .groups = "drop")

lift_df = lift_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(lift_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
       y = "Mean",
       title = "Lift Condition Level, Y-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")
```



```
#Z AXIS
lift_df = both_df %>% #mean of both gender data by second by gender
  filter(Cond == "Lift") %>%
  group_by(Seconds, Gender) %>%
  summarise(mean = mean(Z.axis),
    .groups = "drop")

unique_ids_summary = both_df %>% #how many unique IDs per condition per gender
  filter(Cond == "Lift") %>%
  group_by(Gender) %>%
  summarise(unique_IDs = n_distinct(ID),
    .groups = "drop")

lift_df = lift_df %>% #adding gender into the data frame as well as labeling it alongside gender
  left_join(unique_ids_summary, by = "Gender") %>%
  mutate(Gender = paste(Gender, "(n =", unique_IDs, ")"))

ggplot(lift_df, mapping = aes(x = Seconds, y = mean, color = Gender)) +
  geom_line() +
  labs(x = "Seconds",
    y = "Mean",
    title = "Lift Condition Level, Z-axis") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted")
```

