

Stats-Project-2-Part-2

Inputing the data into Variables and running the Anova test

```
youtubeTimes <- c(72, 75, 72, 72, 72, 72, 72, 72)
prototypeTimes <- c(109, 182, 129, 201, 155, 180, 140, 90)

allTimes <- c(youtubeTimes, prototypeTimes)
groups <- c(rep("YouTube", length(youtubeTimes)),
            rep("Prototype", length(prototypeTimes)))

mean(youtubeTimes)

## [1] 72.375

sd(youtubeTimes)

## [1] 1.06066

mean(prototypeTimes)

## [1] 148.25

sd(prototypeTimes)

## [1] 38.44755

times.anova <- aov(allTimes ~ groups)
summary(times.anova)

##           Df Sum Sq Mean Sq F value    Pr(>F)
## groups      1  23028    23028   31.13 6.79e-05 ***
## Residuals   14  10355      740
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

t.test(youtubeTimes, prototypeTimes, paired = TRUE, alternative = "greater", conf.level = 0.95)

##
## Paired t-test
##
## data:  youtubeTimes and prototypeTimes
## t = -5.6351, df = 7, p-value = 0.9996
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  -101.3852      Inf
## sample estimates:
## mean difference
##      -75.875

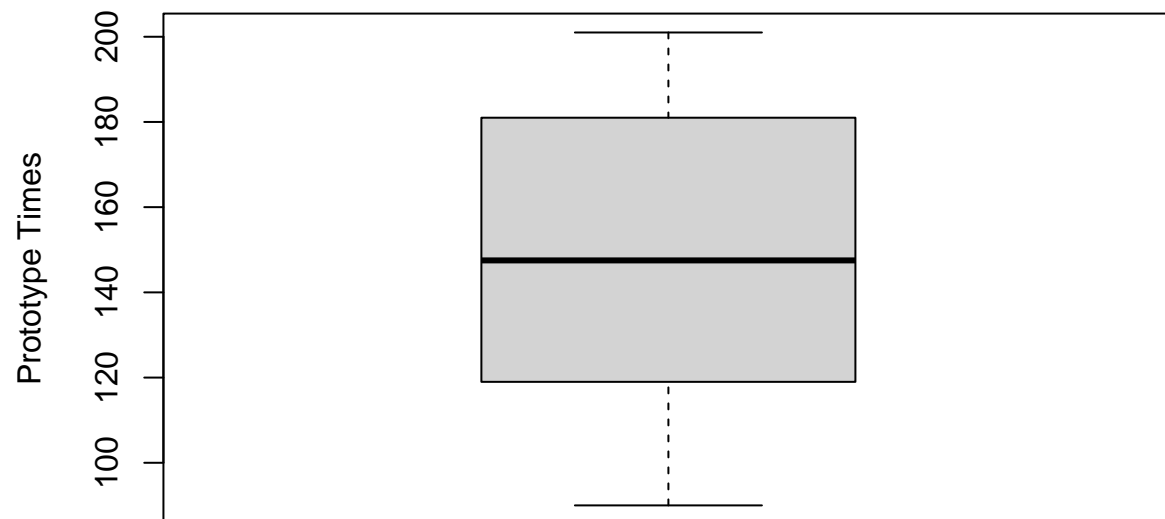
library(tidyverse)

results <- data.frame(youtubeTimes, prototypeTimes)
```

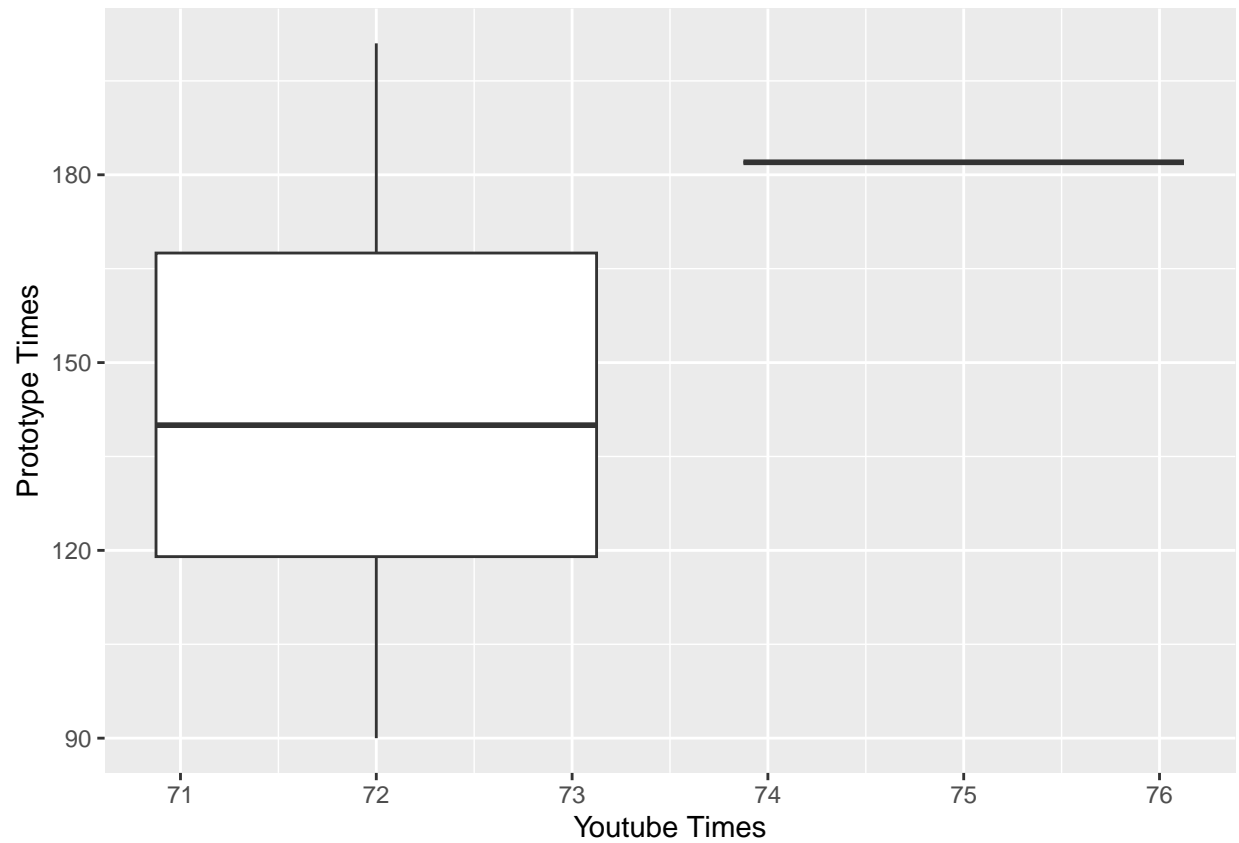
```
results
```

```
##  youtubeTimes prototypeTimes
## 1          72          109
## 2          75          182
## 3          72          129
## 4          72          201
## 5          72          155
## 6          72          180
## 7          72          140
## 8          72           90
```

```
boxplot(results$prototypeTimes, ylab = "Prototype Times")
```



```
g <- ggplot(results, aes(x = youtubeTimes, y = prototypeTimes, group = youtubeTimes))
g + geom_boxplot() + labs(x = "Youtube Times", y = "Prototype Times")
```



```

youtubeTimes <- c(72, 75, 72, 72, 72, 72, 72, 72)
prototypeTimes <- c(109, 182, 129, 201, 155, 180, 140, 90)

df <- data.frame(Group = c(rep("YouTube", length(youtubeTimes)), rep("Prototype", length(prototypeTimes))),
                  Time = c(youtubeTimes, prototypeTimes))

library(ggplot2)

ggplot(df, aes(x = Group, y = Time)) +
  geom_boxplot() +
  labs(x = "Group", y = "Time")

```

