

HW4 Hints - Lesson 5

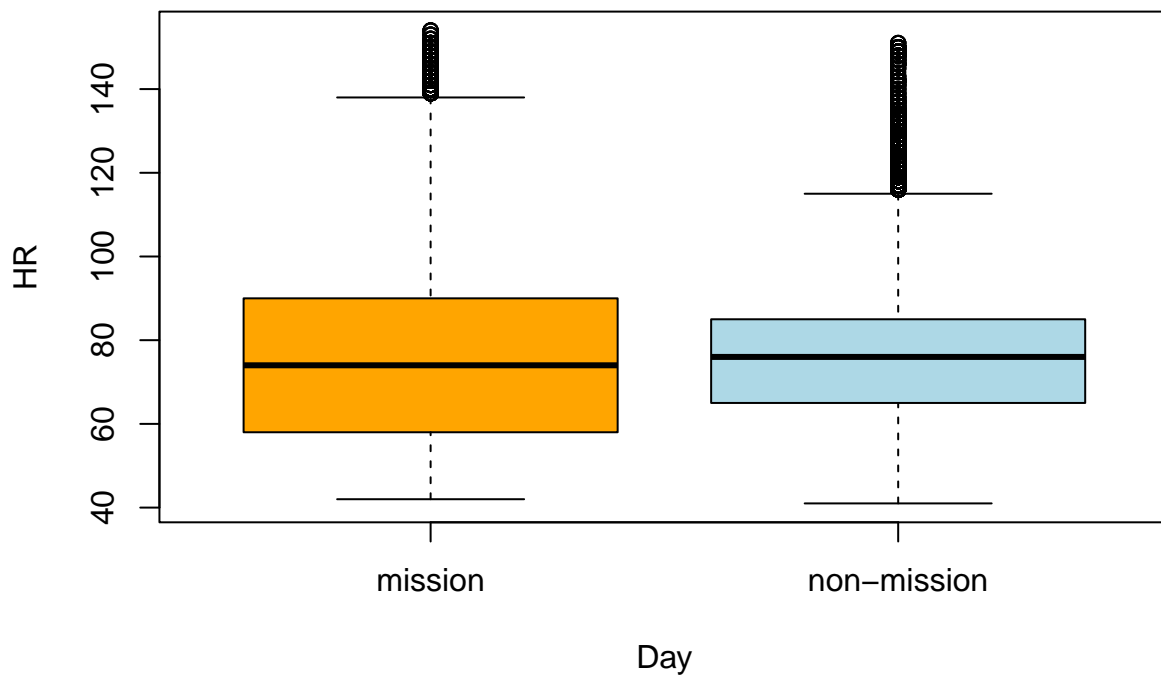
COSC6323/Spring 2024

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Q1 unpaired t-test

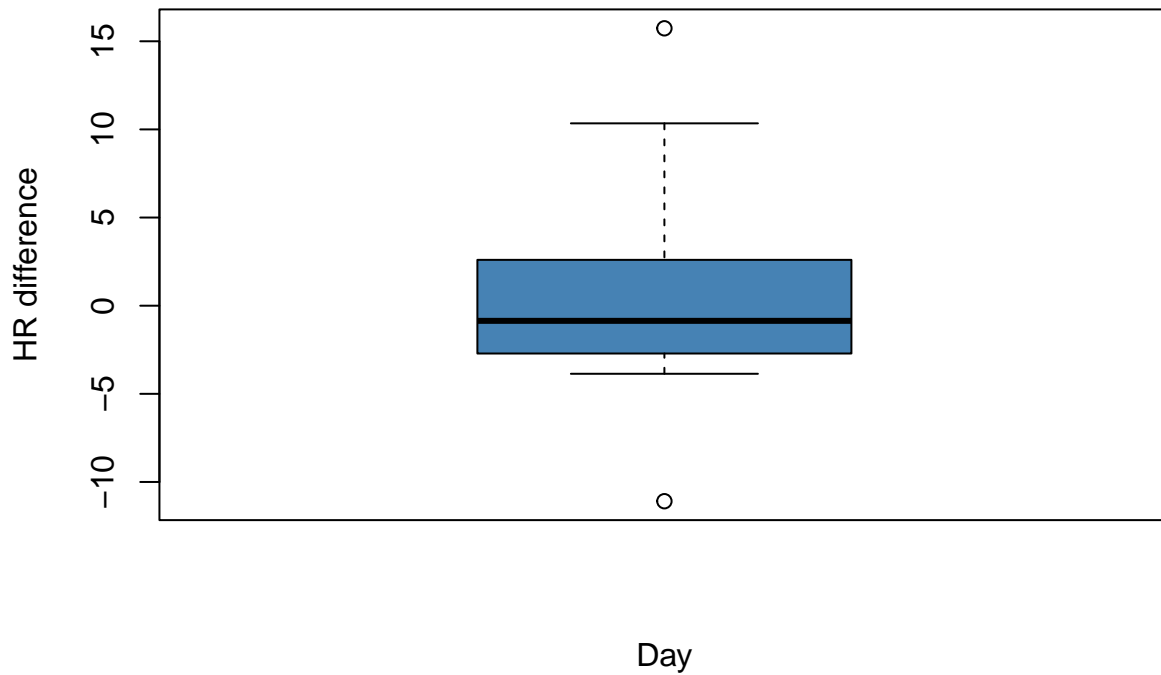
```
##  
## Welch Two Sample t-test  
##  
## data:  mis_HR and non_HR  
## t = 1.725, df = 593820, p-value = 0.08454  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.008146041  0.127725933  
## sample estimates:  
## mean of x mean of y  
## 75.14543 75.08564
```

Boxplot of HR in mission and non-mission



Q2 - paired t-test

Boxplot of HR difference between mission and non-mission



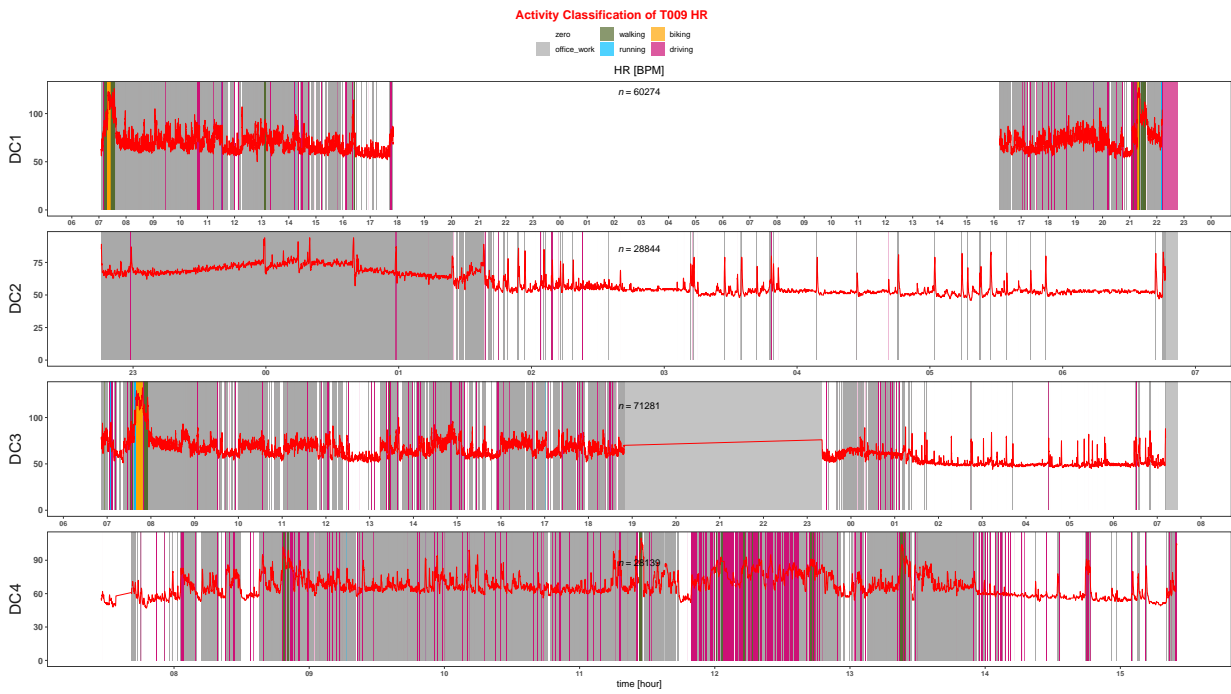
Q2 - Paired test results

```
##
## Paired t-test
##
## data: missions_HR and non_missions_HR
## t = 0.30722, df = 11, p-value = 0.7644
## alternative hypothesis: true mean difference is not equal to 0
## 95 percent confidence interval:
## -3.767845  4.990359
## sample estimates:
## mean difference
##      0.6112569
```

Table 1: Paired t-test

| Activity | | pre_mis_p | df | CI |
|----------|----|-----------|----|---------------|
| df | HR | 0.764 | 11 | -3.768 - 4.99 |

Q3 - Plots and Proportion test



Q3 - proportion test

```
## 'summarise()' has grouped output by 'Day'. You can override using the '.groups'
## argument.
```

2-sample test for equality of proportions with continuity correction

```
##
## 2-sample test for equality of proportions with continuity correction
##
## data:  c(mission_prop * sum(proportion_mission$n), non_mission_prop * sum(proportion_nonMission$n))
## X-squared = 1659.7, df = 1, p-value < 2.2e-16
## alternative hypothesis: two.sided
## 95 percent confidence interval:
##  0.1365081 0.1434919
## sample estimates:
## prop 1 prop 2
##    0.98    0.84
```