# STAT 6170 Statistical Report

STAT7123/STAT8123

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## Abstract

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## Introduction

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## Methods

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## Results

### Preliminary Data Exploration

```
## # A tibble: 6 x 5
##   ID    species weight albedo territory
##   <chr> <chr>    <dbl>  <dbl>     <dbl>
## 1 subj1 Striped   235.   40.3      27.8
## 2 subj2 Spotted   158.   50.0      17
## 3 subj3 Spotted   202.   35.8      18.4
## 4 subj4 Striped   208.   27.8      25.8
## 5 subj5 Spotted   168.   32.4      17.2
## 6 subj6 Spotted   138.   29.3      16.2
```

```
##
##  Shapiro-Wilk normality test
##
## data:  data$weight[data$species == "Spotted"]
## W = 0.98572, p-value = 0.1888
```

```
##
##  Shapiro-Wilk normality test
##
## data:  data$weight[data$species == "Striped"]
## W = 0.98295, p-value = 0.1204
```

```
##
##  Shapiro-Wilk normality test
##
## data:  data$territory[data$species == "Spotted"]
## W = 0.97934, p-value = 0.04324
```

```
##
##  Shapiro-Wilk normality test
##
## data:  data$territory[data$species == "Striped"]
## W = 0.98857, p-value = 0.3915
```

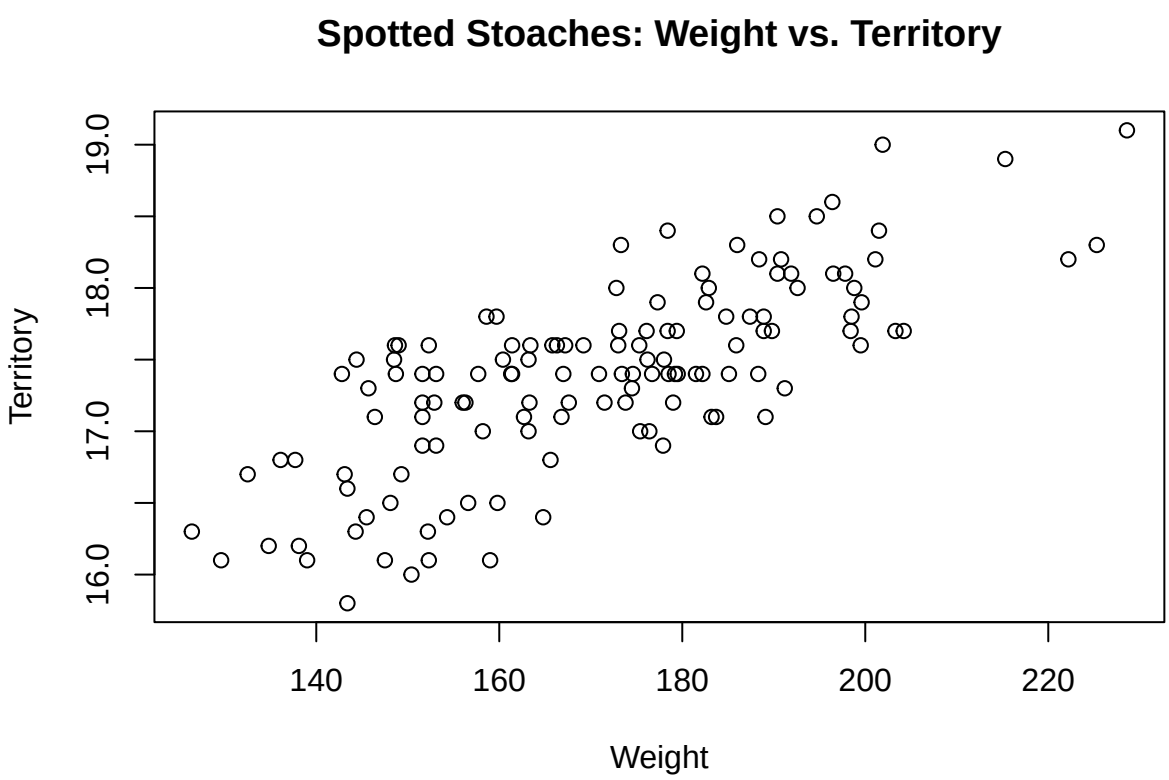
```
## Levene's Test for Homogeneity of Variance (center = median)
##        Df F value    Pr(>F)
## group   1  21.594 5.425e-06 ***
##       253
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

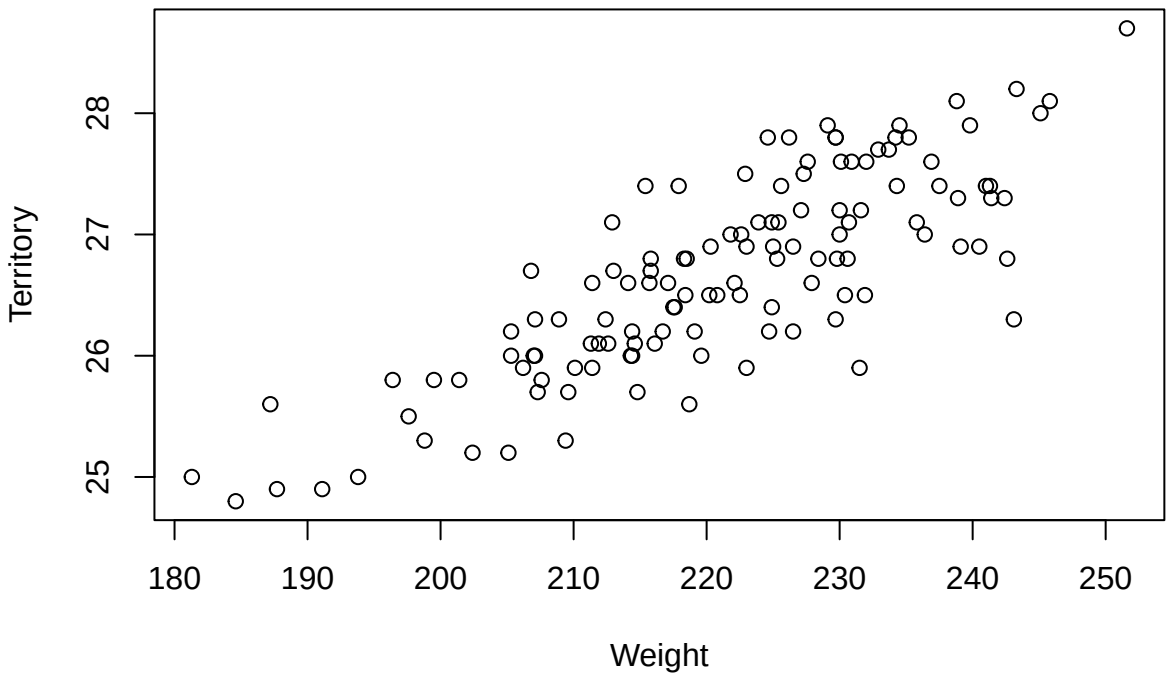
```
## Levene's Test for Homogeneity of Variance (center = median)
##        Df F value   Pr(>F)
## group   1  9.9979 0.001758 **
##       253
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

## Analyses

```
## [1] "Mean albedo of Spotted Stoaches:  33.5095419847328"
```

```
## [1] "Mean albedo of Striped Stoaches:  33.6886290322581"
```


Spotted Stoaches: Weight vs. Territory
Territory
16.0
17.0
18.0
19.0
140
160
180
200
220
Weight




```
##
##  Pearson's product-moment correlation
##
## data:  data$weight[data$species == "Spotted"] and data$territory[data$species == "Spotted"]
## t = 13.137, df = 129, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.6721647 0.8214167
## sample estimates:
##       cor
## 0.7564738
```

```
##
##  Pearson's product-moment correlation
##
## data:  data$weight[data$species == "Striped"] and data$territory[data$species == "Striped"]
## t = 15.627, df = 122, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.7479889 0.8679557
## sample estimates:
##       cor
## 0.8166088
```

# Conclusions and Further Discussion

### Conclusion

# References

### References

# Appendix

### Appendix