

Chick Analysis

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1/18/2018

Data

This was data provide to me by Dr. Sue McDonnell on chick growth. This was data from an experiment where...

```
data <- read.csv("rhea.tables.grams.20150626.csv")
levels(data$treatment) <- c("Control (n=17)\nInvoluntary Bucket",
                             "Treatment (n=18)\nVoluntary Walk-on")
# summary(data)
glimpse(data)

## Observations: 35
## Variables: 10
## $ treatment      <fct> Treatment (n=18)
## Voluntary Walk-on, Treatment (...
## $ chick          <int> 1667357, 1670335, 1680454, 1660777, 1680457, 16...
## $ breeding_group <fct> non, non, non, non, non, non, non, non, non, no...
## $ hatch_date     <fct> 5/29, 5/30, 5/30, 5/30, 5/31, 6/2, 6/8, 6/9, 6/...
## $ grams_day0     <dbl> 362.88, 408.24, 399.17, 449.06, 430.92, 435.46,...
## $ grams_day10    <dbl> 426.38, 444.53, 453.60, 453.60, 426.38, 435.46,...
## $ grams_day25    <dbl> 916.27, 1106.78, 1161.22, 1215.65, 1115.86, 952...
## $ pct_gain_10.25 <dbl> 114.89, 148.98, 156.00, 168.00, 161.70, 118.75,...
## $ gender         <fct> f, m, f, m, m, m, f, m, f, m, f, f, m, m, f, NA...
## $ color          <fct> b, b, b, b, b, w, b, b, b, b, b, w, b, b, b, w,...
```

Write a t-test comparing the control and treatment groups. Edit this text to describe the analysis.

```
# to do
```

Conduct an ANOVA on the percent gain as a function of treatment, breeding_group, gender and color.

```
# to do
```

Create a boxplot comparing the control and treatment groups.

```
# to do
```

This is a beanplot (sometimes called violin plot) that was used in the publication. What are the advantages of a beanplot over a boxplot?

```
library(beanplot)
beanplot(pct_gain_10.25~treatment, data=data,
         col=c("lightgray", "black", "black", "red"),
         ylab="percent",
         main="Percent Weight Gain Day 10 to Day 25,26")
abline(h=c(-1:4*100), lty=2, col="dark gray")
```

Percent Weight Gain Day 10 to Day 25,26

