Chick Analysis

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# 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...  
## $ breading\_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, breading\_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")

