R Workshop: Worksheet

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24 March 2016

To Submit

Create an R Markdown file in which may be found the answers to the hypotheses and problems posed below. In the R Markdown document, please ensure that your R code appears within R code chunks and that any accompanying text is interspersed between these code chunks. Present your work in a consistently professional manner and remember to provide structure using appropriate headings and so forth. You need to submit both the markdown file and the compiled product in the format of your choice (i.e. html, pdf or doc) before 17:00 on Wednesday (30/03/2016).

Null Hypotheses

Please address the following null hypotheses in your report:

- There is no significant difference in effect size between chew times for sweet1, sweet2 and sweet3.
- There is no significant correlation between effect size of chew times for sweet1, sweet2 or sweet3.
- There is no significant difference between consecutive chewing times or gender for sweet3.
- There is no significant interaction between chewing times and gender for sweet3.

Answer the following questions

1. Provide some exploratory graphical summaries of your data. You do not need to polish these figures.
2. Show the steps taken to convert the raw data into a format suitable for statistical analysis and graphing. Please provide notes on your thought process.
3. Provide a justification for selecting the statistical analyses that you have chosen.
4. Discuss in full your findings resulting from the statistical analyses.
5. Provide publication quality graphs of two key figures that support your findings. Remember that you may use the ggplot2 web site to create more beautiful figures.