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STAT 200: Introductory Statistics

Practicum 5: A Three-Way Study

November 15, 2018

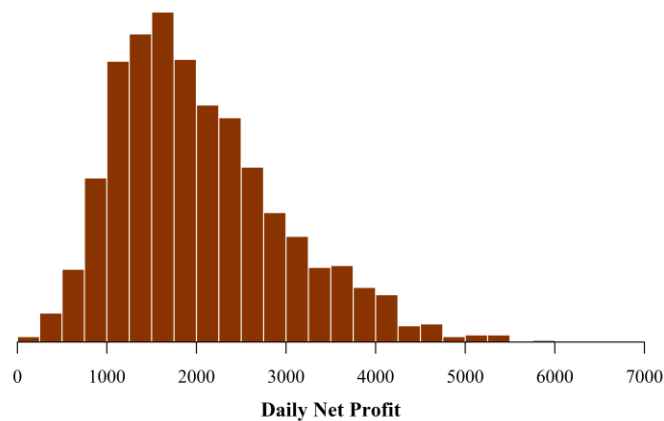
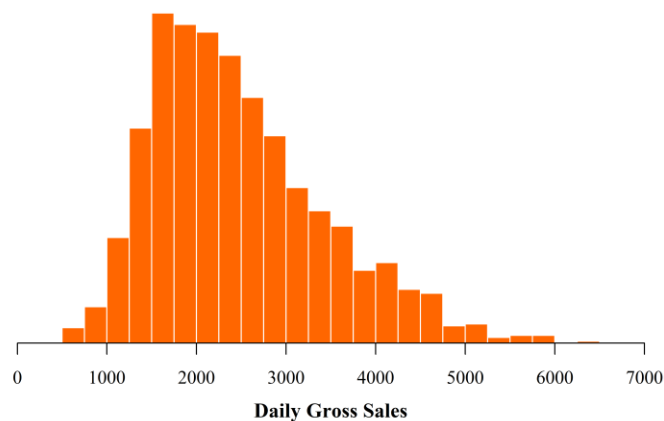
The Introduction

This section should start with the research question and describe the variable of interest (which is the variable of interest?). In the second paragraph, explain your analysis plan.

The Variable of Interest

You, of course, will not use this as the actual title for this section. You will use the actual name of the variable of interest (not the code name). Here, you will provide summary statistics for that variable before and after the Trivia Nights started.

You also need to include a univariate graphic of the before and after data. After the graphics, you will need to properly describe the distributions using statistical language. I am including a couple unrelated histograms to give you some ideas on how to make them look a bit more professional than the utilitarian histograms we have seen.



The Analysis

This would be an appropriate section title. In this section, do the analysis you planned in the introduction and explain your steps. Explicitly provide statistics (including p-values and/or test statistic values in parentheses). The statistics are only the support for your explanation of your analysis.

The Conclusion

The last prose section is the conclusion. In this, you provide the full statistical conclusion, the answer to the research question. That is the first paragraph. The second paragraph needs to reflect on the analysis you did and explain what you would like to do differently in the future. This could be to use a different variable, to include a second independent variable, or to question the representativeness of the data. All three of these should be considered in any analysis — *any* analysis.

Appendix: R Script

```
##### Practicum Five
#####

### Preamble

source("http://rfs.kvasaheim.com/stat200.R")

dt = read.csv("lamplighterSales1903.csv")
summary(dt)
attach(dt)

### Creating the two groups

Some code to create the two groups, named (perhaps)
after = ...
before = ...

### Creating the graphics

# Nice-looking graphic for before
par(mar=c(4,1,1,1))
par(family="serif")
par(cex.lab=1.1, font.lab=2)

histogram(before, col="#ff6600", breaks=seq(0,7000,250))

axis(1)
title(xlab="Servers before Trivia Started", line=2.5)

# Nice-looking graphic for after
par(mar=c(4,1,1,1))
par(family="serif")
par(cex.lab=1.1, font.lab=2)

histogram(after, col="#ff0066", breaks=seq(0,7000,250))

axis(1)
title(xlab="Servers after Trivia Started", line=2.5)

### The analysis

Include your analysis in this part. Make sure you
are clear in what you are doing (comment well)
```