Lab XX – MATH 240 – Computational Statistics

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Abstract

In this lab we first created a batch file that we will use in our next lab to process data about specific songs. To achieve this, we first downloaded the directory of songs and subsequently altered the output, finally saving what we desired into our final batch-file. In the second section of the lab, we used the `jsonlite` package to extract important data about a specific song. This process will become very important in the next installment of this lab.

Keywords: Batch Files : JSON : Loops

1 Introduction

This lab originated from the question of which band, *The Front Bottoms*, or *Manchester Orchestra* contributed more to their collaboratory song Allen Town. One way to approach this question is to use a program to analyze all of each band's songs. The first step to this process is to create a batch file with all of these songs, which prompted the idea for the first part of this lab. We were tasked with downloading a fake directory of songs, and then subsequently formatting the list and processing it to a batch file. The second task of this lab sees us utilizing `jsonlite` to extract data about a specific Front Bottoms song. This part of the lab is directly applicable to the subsequent lab which we will be completing next week.

1.1 Intro Subsection

You might need/want to discuss the topics in subsections. Or, you may have multiple questions.

2 Methods

Describe the data you are working with, if applicable. Describe the specific process you will follow to answer the question at hand. This does not mean you should write something like this.

> *I did this and then I did that and then I did this other thing and then..., and then..., and then...*

Instead, it should provide a clear and concise narrative that flows from the problem specification in the Introduction to how you will approach answering it. This is where I would expect to see some citations for `R` packages you will use to conduct the statistical analysis reported in the Results section.

2.1 Methods Subsection

Much like the Introduction, subsections can be helpful for the Methods section. For example, you might describe data collection and the statistical analyses of the collected data in different subsections. Or, you may have different questions that require distinct methods.

3 Results

Tie together the Introduction – where you introduce the problem at hand – and the methods – what you propose to do to answer the question. Present your data, the results of your analyses, and how each reported aspect contributes to answering the question. This section should include table(s), statistic(s), and graphical displays. Make sure to put the results in a sensible order and that each result contributes a logical and developed solution. It should not just be a list. Avoid being repetitive.

3.1 Results Subsection

Subsections can be helpful for the Results section, too. This can be particularly helpful if you have different questions to answer.

4 Discussion

You should objectively evaluate the evidence you found in the data. Do not embellish or wish-terpet (my made-up phase for making an interpretation you, or the researcher, wants to be true without the data *actually* supporting it). Connect your findings to the existing information you provided in the Introduction.

Finally, provide some concluding remarks that tie together the entire paper. Think of the last part of the results as abstract-like. Tell the reader what they just consumed – what's the takeaway message?

Bibliography: Note that when you add citations to your bib.bib file *and* you cite them in your document, the bibliography section will automatically populate here.

5 Appendix

If you have anything extra, you can add it here in the appendix. This can include images or tables that don't work well in the two-page setup, code snippets you might want to share, etc.