

# Lab 2 – MATH 240 – Computational Statistics

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## Abstract

Will fill out at the end of the lab once we are done with all the tasks.

## 1 Introduction

Through this lab, we will be exploring who contributed more to the song "Allen Town". Was it The Front Bottoms or Manchester Orchestra? To answer the question at hand, we will analyze all the songs released, excluding all joint albums, live albums, and single releases contained in a full album or an Extended Play (EP), by both bands before Allen Town. Through the analysis, we will aim to determine the style of each band which will allow us to compare Allen Town's style with each band. The comparison will allow us to determine which band's style matches the most with Allen Town, leading to the conclusion of which band contributed in a greater quantity.

## 2 Methods

To accomplish this lab, we will first need to create a `batfile.txt` file which we can execute in the command line to produce a `.json` file. Using the R package `jsonlite` (Ooms, 2014) we will gather all relevant information needed, such as tempo in beats per minute, musical key) or musical mode, to analyze the similarities between the each band's style and

Allen Town's style. The production of the `.json` file from a `batfile.txt` file will be carried out in future portions of this lab.

To create the `batfile.txt` file, I downloaded all the given songs which were assorted by artist with a sub folder for each album. Each album folder contains all the songs in that given album. We retrieved the artist name, album name, and each track's name from the file path to create a file name for each song's `.json` file. Each song's file path and `.json` file name were pasted into an executable `batfile.txt` file which will be used to create the necessary `.json` file for each song.

## 3 Results

No results yet.

## 4 Discussion

No results yet to analyze for a discussion.

**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.

## References

Ooms, J. (2014). The `jsonlite` package: A practical and consistent mapping between json data and r objects. *arXiv:1403.2805 [stat.CO]*.

## 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.