

Lab 8 Instructions

[ECON 4753] — *University of Arkansas*

Time-series Analysis Project

This assignment will summarize the second part of the course where we studied time-series datasets. For this assignment, you will be asked to perform a lightly guided analysis of your choice of one of 3 possible datasets. I will give you some prompts to make sure you use the methods we covered in the class.

You should think of this as a project where you are trying to conduct inference about a time-series using the tools we have learned in class.

You will be graded, in part, on how professional your results look. All graphs should be labelled clearly and you should write in complete sentences in your writeup. I have provided a template that will hide your code in your results document that you submit (in the real world, your boss is not looking for your code).

Semi-guided questions

Please work through these questions and write up your results. See the template for an example of how I want this to look.

1. *Exploring a Single Variable:*

Choose one continuous variable from the dataset and explore its distribution. What can you tell me about its distribution? Try visualizing the data using a histogram and/or calculate the mean and variance.

Datasets

You have the choice of one of five datasets. You can see the brief overview of each as well as the *data dictionary* that describes each variable in the dataset by clicking on the links.

1. [AirBnB listings in Nashville](#) is a scrapped dataset from the website Inside Airbnb. It contains information about the listing as well as reviews received. I downloaded the current “snapshot” for Nashville, Tennessee.
2. The [NBA 2K25](#) dataset contains information about all the players in the NBA 2K25 video game. It contains info on the player (team, salary, years in nba) and their ratings.
3. [College Scorecard](#) is a dataset created by the US Education Department. The dataset was created to allow for potential college students to easily understand the cost-benefit of different colleges.
4. [iMDB](#) collects user reviews of movies as well as some basic info of the film.
5. The [CPS](#) contains survey data on workers collected by the US Government. This has characteristics of workers and their wages.