Economics 144: Project 3 Winter 2022, UCLA Instructor: Dr. Rojas

Due Date: March 10, 2022

For this project you will fit several forecasting models to any data of your choice (except any data used in class and/or previous homework assignments). At a minimum, you should include ARIMA, ETS, Holt-Winters, NNETAR, Prophet, and a forecast combination (you can decide which forecasts to combine). Make sure to identify your preferred model based on training and testing errors. Unlike the previous projects, for this one you will decide on how to approach your analysis and what diagnostics to use.

The assignment that you will submit, consists of a written report which includes answers to the respective questions (including plots), and source code (must be your own) you wrote to execute the computations.

Make sure all the plots conform to the standards delineated in Chapter  $4^b$ , e.g., correct time units, axis labels, legends, etc.

Your report needs to be typed (no limit on the number of pages) and will consist of 5 parts:

- I. (5%) Introduction (describe the data, provide some background on the topic, etc.).
- II. (80%) Results (answers and plots).
- III. (5%) Conclusions and Future Work.
- IV. (5%) References (include the source of your data and any other resources).
- V. (5%) R Source code. Although the code is only worth 5%, if you do not submit your code, you will not receive credit for the assignment.