**7.1**

I could apply exponential smoothing to my cycling power output data to determine whether my training is effective. I track my average power outputs over various of time periods, and ideally these should be increasing if the training is effective. However, there is a lot of variation in daily output based on things like rest, nutrition, weight and where I am in my monthly and annual training cycles.

I would need at least a few years’ worth of power output data. Ideally I would also have data on my sleep, weight, and calorie intake so I could compare them to the smoothed data and see how strongly any of them correlated to periods of good performance.

The Alpha would probably be closer to 0 than 1, as the data is fairly noisy and would need a decent amount of smoothing to find a trend.

**7.2**

Please review the included R file (7.2.R) and Excel file (seasonality.xlsx) along with this submission.