FIN 740 Financial Analytics
Fall AP1 2020
PROJECT
Due Date: 10/4, 2020, 11:59 PM CST

Please use the following instructions.

1. Find **any stock you want to research**. You can find ticker symbol from Google, Yahoo! finance, MSN money, and so on (i.e. The ticker symbol of Apple Inc. is "AAPL").

2. Run the following steps.
   1) Install package 'quantmod' and load it.
   ```
   install.packages("quantmod")
   library(quantmod)
   ```
   2) From Yahoo! finance, download daily prices of stock (from Jan. 1, 2010 to Jun. 30, 2020) you selected to research.
   3) Obtain monthly log stock returns. For example, if you decide to do research on Apple, Inc. whose ticker is "AAPL", then you will need to run the following:
   ```
   AAPL.rtn <- monthlyReturn(AAPL$AAPL.Adjusted, subset=NULL, type='log',
   leading=TRUE)
   ```
   4) Change the data type to ts. Again, for example, if you decide to do research on Apple, Inc.,
   ```
   rtn <- ts(AAPL.rtn, frequency = 12, start = c(2010,1))
   ```

3. Using monthly time series data `rtn` you obtained above, find a best model for the series. For example, AR(1), AR(2), MA(3), ARMA(2, 3), ARIMA(2, 1, 5), **or whatever**. Justify your selection for a best model.

※ IMPORTANT:

- Please show all works and explanations for full credit.

- Use all your knowledge you learned from Chapter 1 to Chapter 5.