

CS 201  
**Homework 3-27-2022**

*Important! Study the posted classwork code before working on this homework assignment.*

Task 1

Using PDR's `.get_data_tiingo()`, download the stock data for Microsoft from January 1<sup>st</sup>, 2010 to the present time.

Task 2

Convert the data to a numpy array. Generate daily change in the stock price. Generate four lags for the CHANGE in the stock price. After that don't forget to delete the first five rows since we do not have all of the lags for those days.

Task 3

Generate new variables for your data: if the price of the stock went up, code it as 1; if it went down, code it as 0. Do this for all lags (in other words, you will have five new columns: one for the current change in price coded as 0 or 1, and four columns for the four lags, also coded as 0 or 1).

Task 4

Using sklearn's `train_test_split()`, divide your data into a training set and a test set. Feel free to choose your own `test_size` value. Using the SVC model with the integer values that you generated in Task 3, see if you can predict change in the stock price using its lags.