COMP7409A 2024-25

Assignment 2

Due Date: 23:59 Nov 25, 2024

Question 1 In the lecture we have implemented a few ML models, one using Tensorflow for predicting tomorrow's price the stock mtr (0066.HK).
This question asks you to implement yet another ML model using any regression method available in the scikit-learn library, excluding Linear Regression and Neural Networks with the same set of stock price (i.e., 0066.HK between "2010-01-01" and "2020-06-30"). You should submit a Jupyter notebook that includes the three ML models (i.e., the Tensorflow implementation from the lectures and your implementations using sklearn), and compare their accuracy on predicting the price of 0066.HK during the period "2021-01-01" and "2021-04-30".

Question 2 Choose a suitable method (except neural network) from sklearn to train a Machine Learning model using the MNIST data set for hand-written digit classification. Provide a brief explanation of your chosen method and why it is suitable for this task.

The MNIST dataset can be downloaded at http://yann.lecun.com/exdb/mnist/

Submit 2 ipynb files to Assignment 2 (Jupyter Notebook format and 1 Jupyter notebook for each question; programs in code cell and answers to the questions written in the text cell). Please note that the ipynb files should already be run on Colab with clear output data/graph. All the submissions via Moodle.