中国科学技术大学
University of Science and Technology of China

# Experiment Report

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1-D input(Only input the highest price)

## Training strategy:

- The input shape is (20,), while the label is (20,)

- The layer number is 1, which has 10 LSTM cells
- We use the last 1000 data to compare whether the predictions are good or not.

Red Line: Real Value
Blue Line: Prediction
3.0
2.5
2.0
1.5
1.0
0.5
0.0
5200
5400
5600
5800
6000
6200

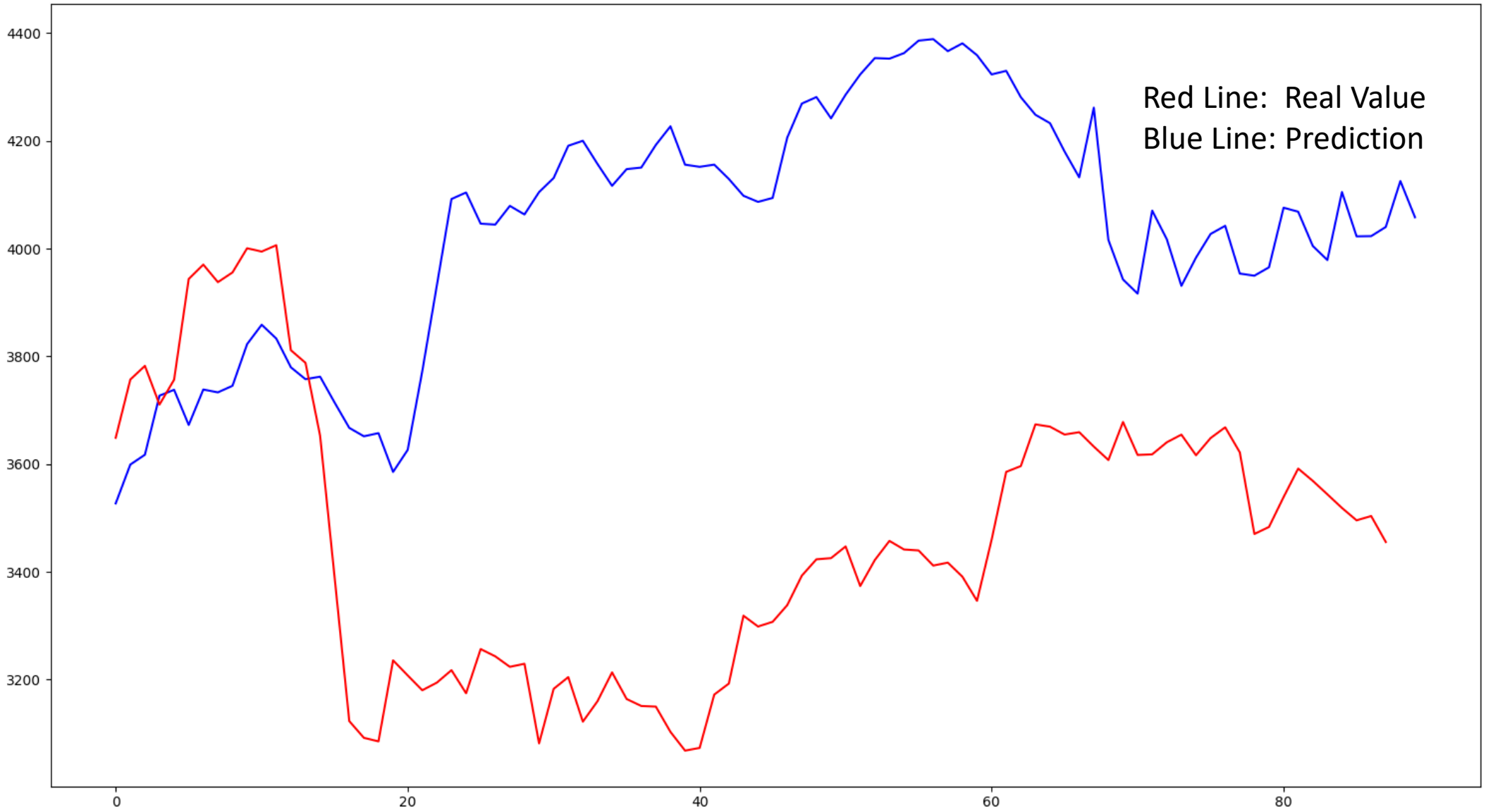
# Training Strategy:

- The input size's shape is (90,7), the networks's output is (90,1), while the label is (90,1)

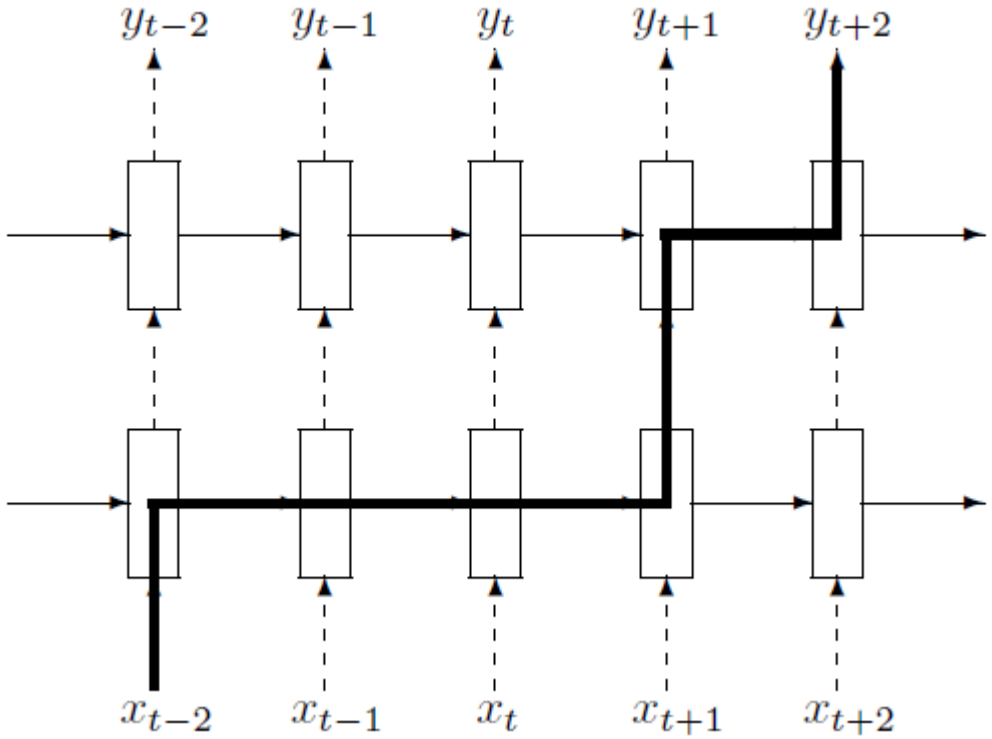
Input Data(90) Label(90)

- According to the previous project, we extend the layer number to 2, each layer has 10 LSTM cells

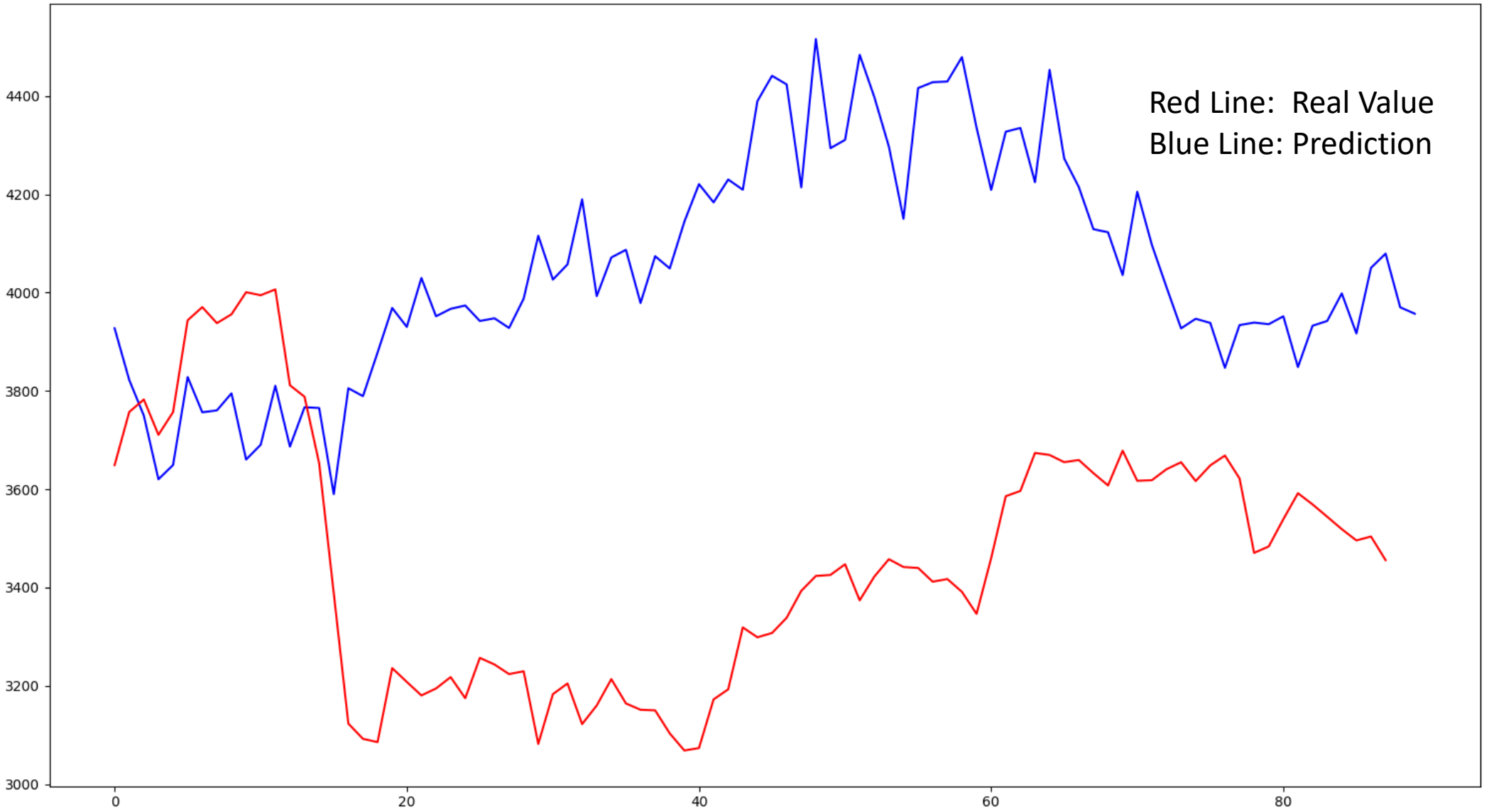
- We use the last 180s data for test and compare. The first 90s data are used to input into the network, the it will predict the next 90 days. So the last 90s data are used to compare to the predictions in order to check whether the predictions are good or not.


Red Line: Real Value
Blue Line: Prediction
4400
4200
4000
3800
3600
3400
3200
0
20
40
60
80

# Dropout in Recurrent Neural Network




- Dropout only occur when information transport between the layers.
- For the tensorflow, we use **input_keep_prob**(Decide how much input information will be dropped.) **output_keep_prob**(Decide how much output information of the cell will deliver to the next layer's cell.)


Red Line: Real Value
Blue Line: Prediction
4400
4200
4000
3800
3600
3400
3200
3000
0
20
40
60
80