

## ECE 568 - Software Engineering II Web Application HW3

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I get a plenty of GOOGLE's stock data. I split them into small files, each file has 30 records. You can find them under ./datasets/.

We can see that the average relative error is very small, which indicates that the model does a quite good job.

However, when the dataset becomes very big, it performs not that good. (See the last one, GOOG\_rest.csv). I think this is because the stock price has nothing to do with the price that years ago.

### GOOG\_0.csv

The prediction of N+1 time is 1137.5622658557475  $\pm$  1.079966153007218

The real value is [1109.5706]

The absolute mean error is 14.029698824821207

The average relative error is 0.012747816925347766

### GOOG\_1.csv

The prediction of N+1 time is 1158.4906701752361  $\pm$  1.079966153007218

The real value is [1106.26]

The absolute mean error is 8.01373907700924

The average relative error is 0.007652285125664171

### GOOG\_2.csv

The prediction of N+1 time is 1065.479199956443  $\pm$  1.079966153007218

The real value is [1040.61]

The absolute mean error is 7.443262109858147

The average relative error is 0.007430422533287313

### GOOG\_2.csv

The prediction of N+1 time is 1065.479199956443  $\pm$  1.079966153007218

The real value is [1040.61]

The absolute mean error is 7.443262109858147

The average relative error is 0.007430422533287313

### GOOG\_3.csv

The prediction of N+1 time is 986.1155711315788  $\pm$  1.079966153007218

The real value is [987.83]

The absolute mean error is 4.84641039079398

The average relative error is 0.005161820932998995

### GOOG\_4.csv

The prediction of N+1 time is  $919.6007068934292 \pm 1.079966153007218$   
The real value is [929.57]  
The absolute mean error is 5.707116524153043  
The average relative error is 0.006125144493441668

#### **G00G\_5.csv**

The prediction of N+1 time is  $964.9016684624768 \pm 1.079966153007218$   
The real value is [970.89]  
The absolute mean error is 9.67206942035096  
The average relative error is 0.01024697656430585

#### **G00G\_6.csv**

The prediction of N+1 time is  $966.1891054051707 \pm 1.079966153007218$   
The real value is [976.57]  
The absolute mean error is 5.893187485277359  
The average relative error is 0.006331651936854224

#### **G00G\_7.csv**

The prediction of N+1 time is  $855.572185128956 \pm 1.079966153007218$   
The real value is [862.76]  
The absolute mean error is 5.746651241703344  
The average relative error is 0.00690393363812001

#### **G00G\_8.csv**

The prediction of N+1 time is  $851.7006364070584 \pm 1.079966153007218$   
The real value is [843.25]  
The absolute mean error is 2.8220579976470797  
The average relative error is 0.0034543295821272374

#### **G00G\_9.csv**

The prediction of N+1 time is  $855.7898050472741 \pm 1.079966153007218$   
The real value is [832.15]  
The absolute mean error is 4.237340739683775  
The average relative error is 0.0053323799520013215

#### **G00G\_10.csv**

The prediction of N+1 time is  $814.3945912319482 \pm 1.079966153007218$   
The real value is [789.27]  
The absolute mean error is 7.266052296209778  
The average relative error is 0.00949381683833397

#### **G00G\_rest.csv**

The prediction of N+1 time is  $844.758113683085 \pm 0.29009841932875124$   
The real value is [795.37]

The absolute mean error is 23.33845040254234

The average relative error is 0.037015930947026855