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From D:
WL2-06
Introduction

In a financial market, investors fill with anxiety about the future. A prediction tool is useful and important to know what will happen in the foreseeable future. It helps the investors to minimize the probability of losing money and make the greatest profit.

The fuzzy technology is used in this project with different fuzzifier, inference engine and defuzzifier to build a prediction system. MATLAB was chosen to be the main platform of software implementation and used to create a friendly graphic user interface.

The file that contains the past stock prices can be downloaded from this system.

There are totally 8 combinations of the fuzzifier, inference engine and defuzzifier. It provides users with options to suit their preferences.

After the selection, the system is then ready for predictions.
System Block Diagram

1. Start

2. Import the data

3. Fuzzifier

4. Fuzzy Inference Engine

5. Defuzzifier

6. Prediction of the stock price

**Fuzzy If-Then Rules**

**Center average**

**Maximum**

**Guassian**

**Triangular**

**Black Box**

**Table Look-up Scheme**

**WM Method**

**OR**
Results

Graph shows the experimental result about the accuracy of fuzzy rules with importing data of 長江實業、中電控股、香港中華煤氣 and exporting 恆生指數.

MAPE of fuzzy system is 0.741
MAPE of linear system is 5.258

Graph shows the prediction result with importing data of 中電控股、香港中華煤氣, 恆生指數 and exporting 長江實業 from 7/3/2007 to 15/3/2007.

MAPE of fuzzy system is 0.92
MAPE of linear system is 14.4

Graph shows the prediction result with importing data of 中國聯通、中國海洋石油, 恆生指數 and exporting 中國移動 from 7/3/2007 to 15/3/2007.

MAPE of fuzzy system is 1.63
MAPE of linear system is 22.5