

Problem Chosen

A

**2022
MCM/ICM
Summary Sheet**

Team Control Number

0000

The L^AT_EX Template for MCM Version v6.3.1

Summary

Keywords: keyword1; keyword2

The L^AT_EX Template for MCM Version v6.3.1



February 21, 2022

Summary

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1 Introduction

1.1 Background

which means , to develop a model that uses only the past stream of daily prices to date to determine each day if the trader should buy, hold, or sell their assets in their portfolio.

1.2 Problem Statement

- 1.
- 2.
- 3.
- 4.
- 5.
6. Determine how sensitive the strategy is to transaction costs

1.3 Problem Analysis

2 Assumption

3 Data Processing

3.1 Data Screening

3.2 Data Visualization

3.3 Mining Time Series

3.3.1 Stability Test

3.3.2 White Noise Test

4 PartModel Development

4.1 Time Series Model ARIMA - Data Forecasting

4.1.1 Train the Model With All the Data

4.1.2 Model Validating

4.1.3 Model Prediction and Visualization

4.1.4 Batch prediction of data

4.2 Investment Decision Model - Dynamic Programming

4.2.1 Buy and Sell Standard Setting

4.2.2 Portfolio Optimal Ratio Identification

4.2.3 Positioning Standard Identification

4.2.4 Daily Portfolio Determinations

5 Part:Strategy Evaluation

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6 Part:Sensitivity Analysis

6.1 Assuming Changes In Commission

6.2 Visualization Results

7 Evaluate of the Model

7.1 Strengths and weaknesses

7.2 Sensitivity Analysis

8 Conclusions

9 A Memo

References

[2] Lamport, Leslie, \LaTeX : “ A Document Preparation System ”, Addison-Wesley Publishing Company, 1986.

[3] <https://www.latexstudio.net/>

Appendices

Appendix A First appendix

In addition, your report must include a letter to the Chief Financial Officer (CFO) of the Goodgrant Foundation, Mr. Alpha Chiang, that describes the optimal investment strategy, your modeling approach and major results, and a brief discussion of your proposed concept of a return-on-investment (ROI). This letter should be no more than two pages in length.

Dear, Mr. Alpha Chiang

Sincerely yours,

Your friends

Here are simulation programmes we used in our model as follow.

Input matlab source:

```
function [t,seat,aisle]=OI6Sim(n,target,seated)
pab=rand(1,n);
for i=1:n
    if pab(i)<0.4
        aisleTime(i)=0;
    else
        aisleTime(i)=trirnd(3.2,7.1,38.7);
    end
end
```

Appendix B Second appendix

some more text **Input C++ source:**

```
//=====
// Name       : Sudoku.cpp
// Author      : wzlf11
// Version     : a.0
// Copyright   : Your copyright notice
// Description : Sudoku in C++.
//=====

#include <iostream>
```



```
#include <cstdlib>
#include <ctime>

using namespace std;

int table[9][9];

int main() {

    for(int i = 0; i < 9; i++){
        table[0][i] = i + 1;
    }

    srand((unsigned int)time(NULL));

    shuffle((int *)&table[0], 9);

    while(!put_line(1))
    {
        shuffle((int *)&table[0], 9);
    }

    for(int x = 0; x < 9; x++){
        for(int y = 0; y < 9; y++){
            cout << table[x][y] << " ";
        }

        cout << endl;
    }

    return 0;
}
```
