

Your Paper's Title(SHUMOJIAYOUZHAN)

Summary

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Keywords: keyword1; keyword2

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1 Introduction

1.1 Problem Background

During the Paris 2024 Summer Olympics, the medal table was the focus of fans, media and analysts around the world. The total number of medals won by each country not only measures the results of the competition, but also reflects the overall strength of each country's sports.

In the medal table, the performance of the traditional sporting powers is still remarkable. The United States topped the table with 126 medals, including 40 gold medals, 44 silver medals and 42 bronze medals, showing its strong competitiveness in many events. The Chinese delegation tied with the United States for the most gold medals with 40, but came second with a total of 91 medals. The host country, France, ranked fourth overall with 16 gold, 26 silver and 22 bronze medals, and fifth in gold medals, demonstrating its excellent performance at home. Meanwhile, the performances of some of the smaller traditional sporting nations are also worthy of note. Dominica and Saint Lucia won their first Olympic medals at this year's Games, with Dominica taking gold. Countries such as Albania and Cape Verde have also achieved breakthrough results. Although the number of medals is small, these achievements are milestones in the Olympic history of these countries.

The dynamics of the medal table are also worth exploring. The number of medals won is a highly volatile, noisy, complex and unpredictable non-linear time series data. How to accurately predict a country's Olympic performance based on historical data, the number of gold, silver and bronze medals, great coach effect and other factors has become an important research topic.

1.2 Restatement of the Problem

1.3 Our work

2 Analysis of the Problem

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$$a^2 \quad (1)$$

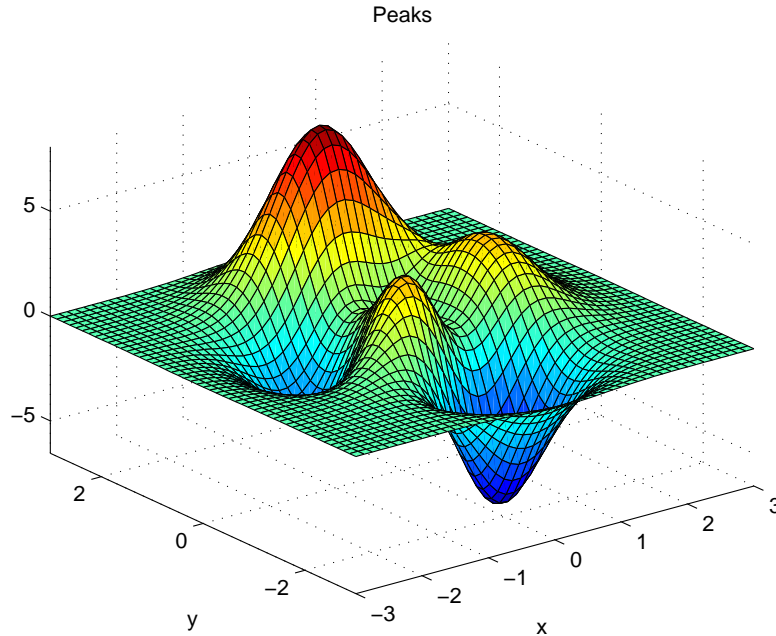


Figure 1: aa

$$\begin{pmatrix} *20ca_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} = \frac{\textit{Opposite}}{\textit{Hypotenuse}} \cos^{-1} \theta \arcsin \theta$$

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$$p_j = \begin{cases} 0, & \text{if } j \text{ is odd} \\ r!(-1)^{j/2}, & \text{if } j \text{ is even} \end{cases}$$

Suspendisse vitae elit. Aliquam arcu neque, ornare in, ullamcorper quis, commodo eu, libero. Fusce sagittis erat at erat tristique mollis. Maecenas sapien libero, molestie et, lobortis in, sodales eget, dui. Morbi ultrices rutrum lorem. Nam elementum ullamcorper leo. Morbi dui. Aliquam sagittis. Nunc placerat. Pellentesque tristique sodales est. Maecenas imperdiet lacinia velit. Cras non urna. Morbi eros pede, suscipit ac, varius vel, egestas non, eros. Praesent malesuada, diam id pretium elementum, eros sem dictum

tortor, vel consectetur odio sem sed wisi.

$$\arcsin \theta = \lim_{x \rightarrow \infty} \frac{n!}{r!(n-r)!} \quad (1)$$

3 Calculating and Simplifying the Model

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4 The Model Results

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5 Validating the Model

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6 Conclusions

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7 A Summary

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8 Evaluate of the Mode

9 Strengths and weaknesses

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9.1 Strengths

- **Applies widely**

This system can be used for many types of airplanes, and it also solves the interference during the procedure of the boarding airplane, as described above we can get to the optimization boarding time. We also know that all the service is automate.

- **Improve the quality of the airport service**

Balancing the cost of the cost and the benefit, it will bring in more convenient for airport and passengers. It also saves many human resources for the airline.

-

References

- [1] Brian A Nosek, Mahzarin R Banaji, and Anthony G Greenwald. Math= male, me= female, therefore math \neq me. *Journal of personality and social psychology*, 83(1):44, 2002.

Appendices

Appendix A First appendix

Aliquam lectus. Vivamus leo. Quisque ornare tellus ullamcorper nulla. Mauris portitor pharetra tortor. Sed fringilla justo sed mauris. Mauris tellus. Sed non leo. Nullam elementum, magna in cursus sodales, augue est scelerisque sapien, venenatis congue nulla arcu et pede. Ut suscipit enim vel sapien. Donec congue. Maecenas urna mi, suscipit in, placerat ut, vestibulum ut, massa. Fusce ultrices nulla et nisl.

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
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;
}
```

Appendix C Report on Use of AI

- OpenAI ChatGPT(Nov 5, 2023 version, ChatGPT-4)
- Query1:Please briefly explain the common usages and main differences between RNN, GRU,LSTM.
- Output: Recurrent Neural Networks (RNN), Gated Recurrent Units (GRU), and Long Short-Term Memory (LSTM) networks are all types of neural networks designed to handle sequential data, such as time series data, natural language text, and audio. They are primarily used in tasks that involve temporal dependencies, where the order of the input data is crucial for making predictions or understanding context. Common Usages RNN: Used for modeling sequence data but has limitations in learning long-term dependencies due to the vanishing gradient problem. Commonly used in earlier applications of language modeling and text generation. GRU: Introduced as a simpler alternative to LSTM with fewer parameters. It is efficient in capturing dependencies for sequences of moderate length and is used in tasks like speech recognition, language modeling, and text generation. LSTM: Specifically designed to overcome the vanishing gradient problem of RNNs, making it capable of learning longterm dependencies. LSTMs are widely used in complex sequence modeling tasks, including machine translation, speech recognition, and time series prediction. Main Differences Complexity: LSTMs are more complex than GRUs, as they have three gates (input, output, forget) compared to GRUs two gates (update and reset). RNNs are the simplest, with no gates, leading to their inability to capture long-term dependencies as effectively as GRU and LSTM. Memory Capability: LSTMs are best suited for applications requiring the understanding of long-term dependencies due to their complex gating mechanisms. GRUs are more efficient than LSTMs for shorter sequences but can still handle long-term dependencies better than RNNs. Training Time and Parameters: Due to their simplicity, RNNs have fewer parameters and thus are faster to train than GRUs and LSTMs. However, GRUs strike a balance between complexity and performance, often requiring less training time than LSTMs due to having fewer parameters, while still performing comparably on many tasks. Use Cases: The choice between RNN,