Final project report of group 10

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June 24, 2018

Abstract

This is the report of the final project. The report will be divided into four parts. In each part one of our group members will introduce what they did.

1 HuangTianyi

1.1 Introduction of my part

In this project, I'm responsible for the compulsory part of the project like paper page and conference page. Besides, I also accomplish the force-directed-graph and tree graph.

1.2 Paper page and conference page

To be honest, these two pages are quite similar to the author page and result page. The most demanding work is to write some sql to achieve the target. After writing the sql, what I have to do is just to imitate what I wrote in the result page and author page. I also use the autocomplete to make the website more powerful. To fulfill autocomplete, I created a new php file to conduct json data to the main page.

One demanding task in this part is to design the format of home page. Now we can search three different types of information. At first I put three input window on the home page but it seems foolish. After searching on the internet, I use the select window to switch the home page. After the user choose which information they want to search, the format of the home page will be changed including the input window. Different input window will send information to different backstage page.

What I do in this part is to put the contents I want to change into a div and name it with a unique id. Different selection will let certain content be shown on the home page.

1.3 Force-directed-graph

The code to construct the graph is copied from the internet. What I need to do is to get the data the graph needs and write these data into a json file. Then choose the file as the data source and the graph will be shown on the page. The graph needs information about the co-authors of the main author and the

relationships between each of these authors. This needs some new sql commands. I used to search information about authors in nested loop structure. I inserted some new commands inside these loop. These commands put the cooperation information into arrays and then I transform these arrays into json file. The cooperation information between certain authors is restored in a sql table. I will introduce how I get this table in the next part.

1.4 Tree-graph

Tree-graph shows the student-and-teacher relationship. In order to fulfill this task, I first search in the Paper table and store all the authors' cooperation relationship into a new table. Then I use the model I trained before to predict whether these two authors are teachers and students. If the answer is positive, I will put the information into a new table named tutor-student.
After I have this table, it's easy to fulfill the tree graph. I just need to search in this table and show the students of a certain author.

1.5 conclusion

This is the explanation of the main part of my job. Since the source code is also uploaded onto ftp, I don't list the code in the report.

2 LengMengchao(Paper Recommendation)

2.1 Problem Description

When we use the search engine, it will recommend some similar results according to the search content. Now we also want to add this feature to our own web pages. Based on this situation, I raise the following questions. First, which pages should we add this functionality to? Secondly, what rules should we follow to recommend?

2.2 Problem Solution

First, which pages should we add this functionality to? Because the recommendation is related to the paper, add this to the page where the paper appears. There are author page and paper page. Secondly, what rules should we follow to recommend? In paper page, the principle is first getting the top ten most frequently cited articles with a title most similar to that of the page through a fuzzy search, then showing the title of the most frequently cited paper of the first author of these papers. If the title is the same as previous one, select the next one in order. In author page, the principle is very similar to that in paper page. The difference is the first step that is getting the top ten most frequently cited articles of this author. The recommendation module is separated from the search results. And it doesn't change with the number of pages. The recommended functionality is based on MySQL.

3 DingZehua

3.1 Problem Description

I am responsible for accelerating the website and adding some additional functions. As the name implies, accelerating the website is to make the website querying faster, while the additional function is to list the websites.

3.2 List

I made a ranking list to show the relevant information in the order of the number of cited papers from more to less and the number of papers published by the author from more to less. At the same time, I added a hyperlink to it so that I could jump to the relevant web page for further understanding. When the first query was made, the execution speed of the web page was very slow because he had to execute the query every time, but I put the results in a table, and every time the query was fast.

3.3 Accelerate the website

At first we did not write very skillfully, which led to many mistakes. some errors were completely wrong, which would lead to running errors. however, some errors did not lead to running errors, which would only affect the query speed and slow down the query. So, I found out these mistakes and corrected him. For example, many global functions were originally defined, and some were not used or were not necessary, so they were deleted because the global functions that were not used in the definition would affect the speed. And We use a large number of PHP built-in functions are used as much as possible instead of writing functions ourselves.

4 HuangYifan(Website Beautification)

4.1 Problem Description

At this section, I need to complete the web beautification. Just as its name implies, what I should do is to make the website more beautiful. I can add the background image, I can change the font size, I can put a clear table to show the data and I can even divide the whole page into two or three sections just to show the result more convenient. In a word, I will try my best to make the page look convenient and beautiful.

4.2 Former Outcome and Basic Situation

I'm sorry to say that our group has four boys and nobody has an excellent beautification ability, so they choose me to complete this interesting but a little hard work. And the result I think you have see it, maybe it not so beautiful compared to the former group, but it's surely our achievement and we spend a lot of time on this task.

When I first search for the methods to do the web beautification, I find the basic web beautification language is Cascading Style Sheet, we called it CSS, and there are three code style for us to choose, outside inner and inline style. Before I start my task, my groupmates has finished the output work, so I choose to use the inner style to do my work, and the basic format is this, and I complete the work just base on this format, it's easy to learn but it has too much details to deal with, the outcome maybe not so perfect, I think it is the most important and basic way for web beautification. Base on this, we can do almost all ideas about beautification. And I will try to improve our web all aspects.

I learn the basic grammar of CSS from the W3school

4.3 Problem Solution

The following is the CSS language I used in the home_pro.php and some div has been omitted.

```css
<style type="text/css">

  body{
    background: url("background6.png") no-repeat;
    background-size: 100%;
  }
  h1{
    font-size: 80px;
  }
  .main{
    text-align: center;
    position: absolute;
    left: 50%;
      top: 50%;
      transform: translate(-50%,-50%);
      font-size: 20px;
  }
  a:link {color:magenta; text-decoration:none;}
  a:visited {color:magenta; text-decoration:none;}
  a:hover {color:purple; text-decoration:underline;}
  a:active {color:black; text-decoration:underline;}
  .line{
    display: inline-block;
  }
  select{
    width:120px;
    font-family: Verdana;
  }
  select,input{
    margin: auto;
    padding: 0;
    float: left;
    height: 35px;
  }
  .input1{
    width:500px;
    outline: none;
  }
  .input2{
    background-image: url("search.jpg");
    background-size: 100%;
    width:75px;
```

```
      height: 35px;
  }
  \#div1 ,\#div2 ,\#div3 ,.input2{
      border: none;
      outline: none;
  }


</style>
```

All the web beautification just based on the basic format. I finished this task line by line. CSS is easy to understand. For example, body. . . means to modify the element in body and background-image:. . . means to add a picture for the section.

I finished web beautification not so easily but I feel not so bad.