

Experimental Report(Final Project)

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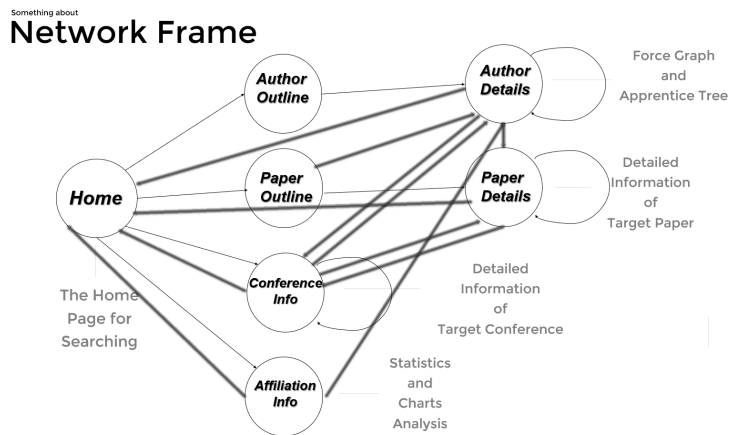
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1 Backend

In the final project, we are asked to build two new search pages 'conference' and 'paper' and finish some funtions such as paging.In fact, we also write some auxiliary backend pages to supports this functions.

1.1 The frame of the web



1.2 Home Page

In the home.php, we add three new forms to support the search of the papers, conference and the affiliations, and all of the methods of them are just like the previous search of the author name. We also add autocomplete function for every search. So, we write three hint pages to support every autocomplete function. And the realization of them is also like the previous hint.php. So, we only post the code of the search of affiliation(including the hint.php).

The form of the affiliation :

```
1 <form method="get" action="affiliation.php" name="affiliation">
2 <label for="affiliation">AffiliationName:</label>
3   <input id="affiliation" name="affiliation">
4   <br>
5 <input type="submit" value='search'>
6 </form>
7 <script>
8   $(function() {
9     $("#affiliation").autocomplete({
10      source: "affiliationhint.php",
11      minLength: 1
12    });
13  });
14 </script>
```

The hint.php of the affiliation :

```
1 $query=mysql_query("select affiliationsname from affiliations
2     inner join affiliation_new on affiliations.affiliationsid=
3     affiliation_new.affiliationid where
4     affiliationsname like '%$q%'
5     group by affiliation_new.affiliationid
6     order by count(affiliation_new.affiliationid)
7     desc limit 10");
8 $i=0;
9 while ($row=mysql_fetch_array($query)) {
10     if ($i<10){
11         $result [] = array(
12             'label' => $row['affiliationsname']
13         );
14     }
15 }
16 mysql_close($con);
```

1.3 Paper Pages

1.3.1 Paper.php and newspaper.php

After you searching the papertitle in home.php, the web will trun to paper.php. In this page, we show the limit ten papers whose title contains the search input and show their confrence, authors ordered by their reference times. And we also add links for every confencename and authername so you can turn to another pages to see the information of the item you click.

Paging: To finish the paging function, we write a backend page newspaper.php to support this function. In the paper.php, we create three buttons 'previous' and 'next' and 'turn to specific page' to control the paging. We add 'click event' for these buttons by using the javascript code. After you clicking them, the web will sent the papertile you want to search and the number of the page you want to turn to('next' will plus 1,'previous' will minus 1) to the newspaper.php. The newspaper.php will search the needful data using the same foamat with the paper.php then return them to the paper.php. Then, in paper.php, the previous data is showed in a big lable like 'table' or 'div', so we can use the new data to replace previous data in this label.

```
1 $x=$_GET[ 'papers ' ];
2 echo "select: ". $x;
3 $result=mysql_query(
4 "select papers.paperid ,papers.title ,papers.conferenceid ,
5 count(paper_reference.referenceid) from papers left join
6 paper_reference on papers.paperid=
7 paper_reference.referenceid where papers.title like '%$x%'
8 group by papers.paperID order by
9 count(paper_reference.referenceid) desc ");
```

```

10 echo "<table border='1'>
11     <tr>
12         <th>PaperTitle</th>
13         <th>ConferenceName</th>
14         <th>Reference times</th>
15         <th>auhtorName</th>
16         <th>Sequence</th>
17     </tr>";
18 $count=0;
19 while ($row=mysql_fetch_array($result)){
20     if ($count<10){
21         $y=$row[ 'paperid' ];
22         $z=$row[ 'conferenceid' ];
23         $result2=mysql_query("select authors.authername , authors.authorid ,
24 paper_author_affiliation.authorsequence from
25 authors inner join paper_author_affiliation
26 on authors.authorid=paper_author_affiliation.authorid
27 where paper_author_affiliation.paperID='$y'
28 order by paper_author_affiliation.authorsequence");
29 $result3=mysql_query("select conferencename
30 from conferences where conferencesid='$z'");
31 $row3=mysql_fetch_array($result3);
32 echo "<tr>";
33 echo "<td>";
34 echo "<a href=paper2.php?paperid=". $y. ">
35 <font color ='red'>". $row[ 'title ' ]. "</font></a>";
36 echo "</td>";
37 echo "<td>";
38 echo
39 '<a href="conference.php?conference=' . $row3[ 'conferencename ' ]. "'>
40 <font color="blue">'. $row3[ 'conferencename ' ]. '</font></a>';
41 echo "</td>";
42 echo "<td>";
43 echo $row[ 'count(paper.reference.referenceid) '];
44 echo "</td>";
45 while ($row2=mysql_fetch_array($result2)){
46 echo "<td>";
47 echo '<a href="author.php?authorID=' . $row2[ "authorid" ]. "'>'.
48 '<font color ="green">'. $row2[ "authername" ]. '</font>'. '</a>';
49 echo "</td>";
50 echo "<td>". $row2[ 'authorsequence ' ]. "</td>";
51 }
52 echo "</tr>";
53 }
54 ++$count;
55 }

```

```
56 echo "</table>";
```

The code of javascript :

```
1 <button id="Pre">Pervious</button>
2 <button id="next">The next</button>
3 <br>
4 <input id="page" name="page">
5 <button id='turn '>Trun to (1-<?php echo $count+1;?></button>
6 <script>
7 var iden=0;
8 var count=<?php echo $count;?>;
9 $("#Pre").hide();
10 $("#page").val(1);
11 if (count==0) $("#next").hide();
12     $(document).ready(function(){
13         $("#next").click(function(){
14             ++iden;
15             $.post("//localhost/newpaper.php",{
16                 limit:iden,
17                 title:"<?php echo $x ;?>"
18             },function(data){$("#table").html(data);});
19             if (iden==1){
20                 $("#Pre").show();
21             }
22             if (iden==count){
23                 $("#next").hide();
24             }
25             $("#page").val(iden+1);
26         });
27     $("#turn").click(function(){
28         if ($("#page").val()<=count+1 & $("#page").val()>0
29             & $("#page").val()!<=iden+1){
30             if (iden==0){
31                 $("#Pre").show();
32             }
33             if (iden==count){
34                 $("#next").show();
35             }
36             iden=$("#page").val()-1;
37             $.post("//localhost/newpaper.php",{
38                 limit:iden,
39                 title:"<?php echo $x ;?>"
40             },function(data){$("#table").html(data);});
41             if (iden==0){
42                 $("#Pre").hide();
```

```

43     }
44     else if (iden==count){
45         $("#next").hide();
46     }
47 }
48 });
49 });
50 $(document).ready(function(){
51     $("#Pre").click(function(){
52         if (iden!=0){
53             --iden;
54             $.post("//localhost/newpaper.php",{
55                 limit:iden,
56                 title:"<?php echo $x ;?>"
57             },function(result){$("#table").html(result)
58             ;});
59         }
60         if (iden==count-1){
61             $("#next").show();
62         }
63         if (iden==0){
64             $("#Pre").hide();
65         }
66         $("#page").val(iden+1);
67     });
68 });
69 </script>

```

1.3.2 paper recommendation

paper2: The paper2.php is about the paper recommendation. In the page of the paper.php, we add a link turn to paper2.php for each papertitle. After you clicking the papertitle, web turn to paper2.php and sent the paperid at the same time. In fact, in arbitrary pages which contains the papertitle, you can turn to paper2.php by clicking the title to get the recommendation of the paper you click. Then this page use the paperid to look for the papers which is quoted by this paper or quote this paper and only show ten papers decided by their reference times.

```

1 $x=$_GET[ 'paperid' ];
2 $title=mysql_fetch_array( mysql_query(
3 "select title from papers where paperid='$x'" ))[ 'title ' ];
4 echo "The papers you may be interesting in of the paper:<br>";
5 echo "<font size='6px'><strong>$title</strong></font>";
6 echo "<br>";
7 $result=mysql_query(
8 "select papers.paperid ,papers.title ,papers.conferenceid ,
9 count(paper_reference.referenceid) from papers left join
10 paper_reference on papers.paperid=paper_reference.referenceid

```

```

11 where papers.paperid in (select paperid
12 from paper_reference where referenceid='$x') or
13 papers.paperid in (select referenceid as paperid
14 from paper_reference where paperID='$x')
15 group by papers.paperID order by
16 count(paper_reference.referenceid) desc limit 10");
17 echo "<table border='1'>
18     <tr>
19         <th>PaperTitle</th>
20         <th>ConferenceName</th>
21         <th>Reference times</th>
22         <th>auhtorName</th>
23         <th>Sequence</th>
24     </tr>";
25 while ($row=mysql_fetch_array($result)){
26     if ($count<10){
27         $y=$row['paperid'];
28         $z=$row['referenceid'];
29         $result2=mysql_query("select authors.authorname , authors.authorid ,
30 paper_author_affiliation.authorsequence
31 from authors inner join paper_author_affiliation
32 on authors.authorid=paper_author_affiliation.authorid
33 where paper_author_affiliation.paperID='$y'
34 order by paper_author_affiliation.authorsequence");
35         $result3=mysql_query("select conferencename
36 from conferences where conferencesid='$z'");
37         $row3=mysql_fetch_array($result3);
38         echo "<tr>";
39         echo "<td>";
40         echo "<a href=paper2.php?paperid=". $y. ">
41 <font color ='red'>". $row['title ']. "</font></a>";
42         echo "</td>";
43         echo "<td>";
44         echo
45 '<a href="conference.php?conference=' . $row3['conferencename ']. "'>
46 <font color="blue">'. $row3['conferencename ']. '
47 </font></a>';
48         echo "</td>";
49         echo "<td>";
50         echo $row['count(paper_reference.referenceid)'];
51         echo "</td>";
52         while ($row2=mysql_fetch_array($result2)){
53             echo "<td>";
54             echo '<a href="author.php?authorID=' . $row2["authorid"]. "'>'. '
55 <font color ="green">'. $row2["authorname"]. '</font>'. '</a>';
56             echo "</td>";

```

```

57         echo "<td>". $row2[ 'authorsequence' ]. "</td>";
58     }
59     echo "</tr>";
60 }
61 }
62 ?>

```

1.4 Conference Page

1.4.1 conference.php

The conference.php is similar with the paper.php. After you committing the conferencename you want to search, this page will search the papers whose conferencename containing the content you commit and order them by their reference times. This page also has paging function and the way is similar with the previous paper.php page.

The code of conference.php :

```

1  $result=mysql_query(
2  "select papers.paperid , papers.title , papers.conferenceid ,
3  count(paper_reference.referenceid) from papers left join
4  paper_reference on papers.paperid=paper_reference.referenceid
5  where papers.conferenceid in (select conferencesid
6  from conferences where conferencename like '%$x%')
7  group by papers.paperID order by
8  count(paper_reference.referenceid) desc ");
9  echo "<table border='1'>
10     <tr>
11         <th>PaperTitle</th>
12         <th>ConferenceName</th>
13         <th>Reference times</th>
14         <th>auhtorName</th>
15         <th>Sequence</th>
16     </tr>";
17 $count=0;
18 while ($row=mysql_fetch_array($result)){
19     if ($count<10){
20         $y=$row[ 'paperid' ];
21         $z=$row[ 'conferenceid' ];
22         $result2=mysql_query("select authors.authername , authors.authorid ,
23         paper_author_affiliation.authorsequence from authors
24         inner join paper_author_affiliation
25         on authors.authorid=paper_author_affiliation.authorid
26         where paper_author_affiliation.paperID='$y'
27         order by paper_author_affiliation.authorsequence");
28         $result3=mysql_query("select conferencename
29         from conferences where conferencesid='$z'");

```



```

30     $row3=mysql_fetch_array($result3);
31     echo "<tr>";
32     echo "<td>";
33     echo '<a href="paper2.php?paperid='.$y.'">'. '
34     <font color ="blue">'. $row["title"]. '</font>'. '</a>';
35     echo "</td>";
36     echo "<td>". $row3['conferencename']. "</td>";
37     echo "<td>". $row['count(paper_reference.referenceid)']. "</td>";
38     while ($row2=mysql_fetch_array($result2)){
39     echo "<td>";
40     echo '<a href="author.php?authorID='.$row2["authorid"]. '">'. '
41     <font color ="green">'. $row2["authorname"]. '</font>'. '</a>';
42     echo "</td>";
43     echo "<td>". $row2['authorsequence']. "</td>";
44     }
45     echo "</tr>";
46     }
47     ++$count;
48 }
49 echo "</table>";
50 $count=intval($count/10);

```

The code of the button and the paging javascript code :

```

1 <button id="Pre">Pervious</button>
2 <button id="next">The next</button>
3 <br>
4 <input id="page" name="page">
5 <button id='turn '>Trun to (1-<?php echo $count+1;?>)</button>
6 <script>
7 var iden=0;
8 var count=<?php echo $count;?>;
9 $("#page").val(1);
10 $("#Pre").hide();
11 if (count==0) $("#next").hide();
12 $(document).ready(function(){
13     $("#next").click(function(){
14         ++iden;
15         $.post("//localhost/newconference.php",{
16             limit:iden,
17             conference:"<?php echo $x ;?>"
18             },function(data){$("#table").html(data);});
19         if (iden==1){
20             $("#Pre").show();
21         }
22         if (iden==count){

```

```

23     $("#next").hide();
24     }
25     $("#page").val(iden+1);
26 });
27 $("#turn").click(function(){
28     if ($("#page").val()<=count+1 &
29     $("#page").val()>0 & $("#page").val()! = iden+1){
30         if (iden==0){
31             $("#Pre").show();
32         }
33         if (iden==count){
34             $("#next").show();
35         }
36         iden=$("#page").val()-1;
37         $.post("//localhost/newconference.php",{
38             limit: iden,
39             conference: "<?php echo $x ;?>"
40         },function(data){$("#table").html(data)});
41         if (iden==0){
42             $("#Pre").hide();
43         }
44         else if (iden==count){
45             $("#next").hide();
46         }
47     }
48 });
49 });
50 $(document).ready(function(){
51     $("#Pre").click(function(){
52         if (iden!=0){
53             --iden;
54             $.post("//localhost/newconference.php",{
55                 limit: iden,
56                 conference: "<?php echo $x ;?>"
57             },function(result){$("#table").html(result)});
58         }
59         if (iden==count-1){
60             $("#next").show();
61         }
62         if (iden==0){
63             $("#Pre").hide();
64         }
65         $("#page").val(iden+1);
66     });
67 });
68 </script>

```

The code of the backend page newconference.php to make the new data :

```

1 $i=$POST[ 'limit ']*10;
2 $x=strtoupper($POST[ 'conference ']);
3 $conference=mysql_fetch_array(mysql_query("select conferencesid
4 from conferences where conferencename like '%$x%' "));
5 $conference=$conference[ 'conferencesid '];
6 $result=mysql_query(
7 "select papers.paperid ,papers.title ,papers.conferenceid ,
8 count(paper_reference.referenceid) from papers left join
9 paper_reference on papers.paperid=paper_reference.referenceid
10 where papers.conferenceid in (select conferencesid
11 from conferences where conferencename like '%$x%' )
12 group by papers.paperID order by
13 count(paper_reference.referenceid) desc limit $i,10");
14 echo "<table border='1'>
15     <tr>
16         <th>PaperTitle</th>
17         <th>ConferenceName</th>
18         <th>Reference times</th>
19         <th>auhtorName</th>
20         <th>Sequence</th>
21     </tr>";
22 while ($row=mysql_fetch_array($result)){
23     $y=$row[ 'paperid '];
24     $z=$row[ 'conferenceid '];
25     $result2=mysql_query("select authors.authorname ,
26 authors.authorid ,paper_author_affiliation.authorsequence
27 from authors inner join paper_author_affiliation
28 on authors.authorid=paper_author_affiliation.authorid
29 where paper_author_affiliation.paperID='$y '
30 order by paper_author_affiliation.authorsequence");
31     $result3=mysql_query("select conferencename
32 from conferences where conferencesid='$z '");
33     $row3=mysql_fetch_array($result3);
34     echo "<tr>";
35     echo "<td>";
36     echo '<a href="paper2.php?paperid='.$y.' ">'.
37     '<font color ="blue">'. $row[ "title "]. '</font>'. '</a>';
38     echo "</td>";
39     echo "<td>". $row3[ 'conferencename ']. "</td>";
40     echo "<td>". $row[ 'count(paper_reference.referenceid) ']. "</td>";
41     while ($row2=mysql_fetch_array($result2)){
42         echo "<td>";
43         echo '
44         <a href="author.php?authorID='.$row2[ "authorid "]. '>'.
45         '<font color ="green">'. $row2[ "authorname "]. '</font>'. '</a>';

```

```

46         echo "</td>";
47         echo "<td>".$row2[ 'authorsequence' ]. "</td>";
48     }
49     echo "</tr>";
50 }
51 }

```

2 Visualization

This part is our visualization , including forced graph , mentoring tree and some auxiliary statistic charts in our affiliation page.

2.1 Forced Graph

Forced graph is a visualized picture of the selected author and his coauthors(the selected author's color should be different).Also the relations between coauthors should be added in the picture. We create a new table for all the relations and try different training sets to get the best result.

The table is : authorID authorname coauthorID coauthorname relation

```

1  coauthorsid = []
2  for paperid in authorpapers:
3      sql3="select * from paper_author_affiliation
4          join authors on paper_author_affiliation.authorid
5          =authors.authorid where paperid='%s' "%(paperid[0])
6      cursor.execute(sql3)
7      l2=cursor.fetchall()
8      for i in l2:
9          if i[1] not in coauthorsid and i[1]!=authorid:
10             coauthorsid.append(i[1])

```

My idea is to search every coauthor of every author.The sql above is used to find all coauthors that write the same papers with the author.The second "for" is used to avoid duplicate and himself.And a list "coauthors" is filled with small lists of every coauthor's name and id(code is omitted)

```

1  for i in range(0, len(coauthors)):
2      X=[]
3      X.append(get_features(authorid, coauthors[i][0]))
4      label1=lr.predict(X)
5      Y=[]
6      Y.append(get_features(coauthors[i][0], authorid))
7      label2=lr.predict(Y)

```

This is the process of prediction whether relation of two authors are teacher and student or not. If A is teacher of B ,then relation=1;if B is teacher of A ,relation=-1;otherwise relation=0,no direct relation.

```

1 for i in coauthors:
2     print(authorid, authorname, i[0], i[1], i[2])
3     cursor.execute("""insert into relations
4         values(\ "%s\ ", \ "%s\ ", \ "%s\ ", \ "%s\ ", \ "%d\ ") """
5         %(authorid, authorname, i[0], i[1], i[2]))
6     db.commit()

```

Use "insert" to insert the information to table.

```

1 if ($row2[ 'authorID ']!= $id){
2     $id2=$row2[ 'authorID '];
3     $sql3="select * from relations where authorname
4 = '$authorname' and coauthorid='$id2'";
5     $l=mysql_query($sql3);
6     $element_nodes=array();
7     $element_links=array();
8     while ($row3=mysql_fetch_array($l)){
9         if ($row3[ 'relation ']==1){
10            $element_nodes[ 'id ']=$row2[ 'authorname '];
11            $element_nodes[ 'group ']=2;
12            $element_links[ 'source ']=$row2[ 'authorname '];
13            $element_links[ 'target ']=$authorname;
14            $element_links[ 'value ']=1;
15        }
16        elseif ($row3[ 'relation ']==-1){
17            $element_nodes[ 'id ']=$row2[ 'authorname '];
18            $element_nodes[ 'group ']=3;
19            $element_links[ 'source ']=$row2[ 'authorname '];
20            $element_links[ 'target ']=$authorname;
21            $element_links[ 'value ']=1;
22        }
23        else{
24            $element_nodes[ 'id ']=$row2[ 'authorname '];
25            $element_nodes[ 'group ']=4;
26            $element_links[ 'source ']=$row2[ 'authorname '];
27            $element_links[ 'target ']=$authorname;
28            $element_links[ 'value ']=1;
29        }
30    }
31 }
32 array_push($all_coauthors[ 'nodes '], $element_nodes);
33 array_push($all_coauthors[ 'links '], $element_links);
34 array_push($coauthor_already, $row2[ 'authorname ']);

```

These codes are used to set different colors to teacher and student. It is actually just a modification of Problem Two, adding some "if" to divide them into different groups. Different groups stand for different colors.

Demo:

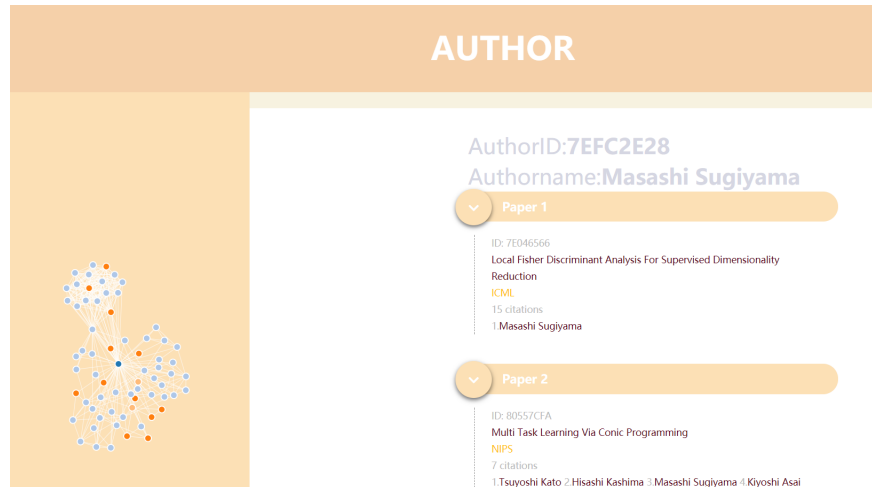


Figure 1: masachi sugiyama

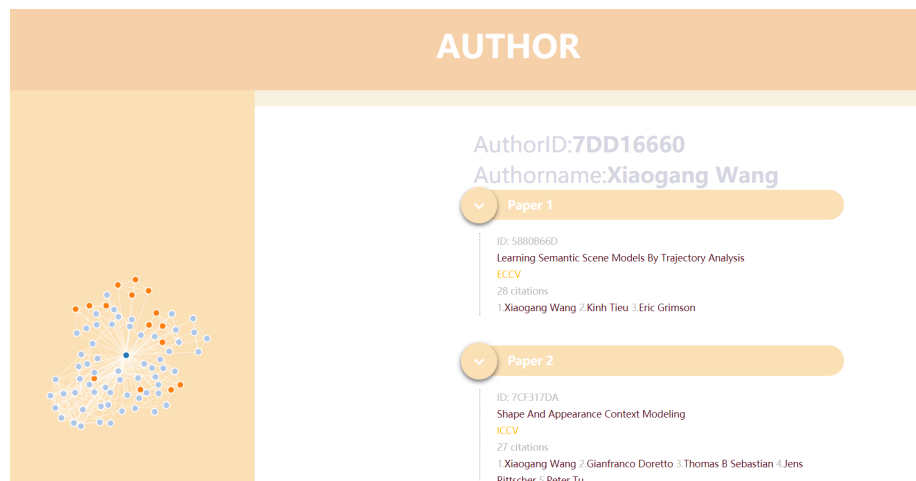


Figure 2: wang gang

The navy blue one is the selected author. The orange ones are his students. The light yellow ones are his teachers. The light blues ones mean no obvious relation.

And we try different predicting methods , finding logistic regression gets the best accuracy , about more than 75 percent . The training set will be packaged in our compressed file.

2.2 Mentoring Tree

Mentoring tree shows students of the selected author. Also it can extend further when clicking its students , demonstrating students' students. The difficulties are

- 1)How to constructing the tree structure
- 2)How to guarantee the efficiency

Actually we can use existed d3 JavaScript codes to construct the tree. What we need to do is process the data and make it into the form required. And at first we try recursion , intending to find all students relations until there is not a single student left. The method is correct but it can not run out results when there are many students , making computer crack.

So we do two improvements. Firstly , we replace recursion with loops. It guarantees the running speed because it does not need to search infinitely . It can extend 3 layers , which we think is enough for users to have a general knowledge. If the user want to learn more details , he can search the target author directly. Secondly , we make a table including only students and teachers , cutting much searching time of joining tables.

The table is : teacher studentID studentname

```

1  $sql4="select studentid ,studentname from teacher where teacher='$id1 '";
2  $result4=mysql_query($sql4);
3  if (!mysql_fetch_array($result4)){
4      $element['children']=array();
5  }
6      else{
7          $element['children']=array();
8          while ($row4=mysql_fetch_array($result4)){
9              $element_1=array();
10             $name_1=$row4['studentname'];
11             $id_1=$row4['studentid'];
12             $element_1['name']=$name_1;
13             $sql5="select studentid ,studentname from
14             teacher where teacher='$id_1 '";
15             $result5=mysql_query($sql5);
16             if (!mysql_fetch_array($result5)){
17                 $element_1['size']=1000;
18             }
19             else{
20                 $element_1['children']=array();
21                 while ($row5=mysql_fetch_array($result5))
22                 {$name_2=$row5['studentname'];
23                     $id_2=$row5['studentid'];
24                     $element_2['name']=$name_2;

```

```

25         $element_2[ 'size ']=1000;
26         array_push($element_1[ 'children ']
27             , $element_2);
28     }
29 }
30 array_push($element[ 'children '], $element_1);
31 }
32 }

```

This is the loop of compressing data in required form.

```

1     if ($i==0){
2         $element[ 'size ']=1000;
3         return $element;
4     }
5
6     else if ($i>=1){
7
8         $element[ 'children ']=array ();
9         while($row4=mysql_fetch_array($result4)){
10
11             $coauthorid=$row4[ 'coauthorid '];
12             array_push($element[ 'children '],
13                 find_children($coauthorid));
14             echo $coauthorid;
15         }
16         return $element;
17     }
18 }

```

This is the main part of our recursive function(but run very slowly).

Demo:

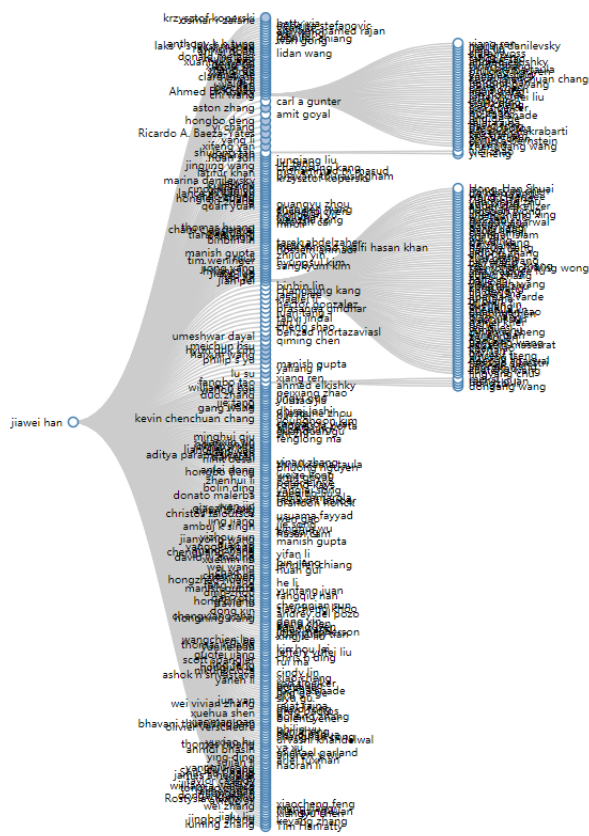


Figure 3: jiawei han

2.3 Affiliation and Echarts

Affiliation is not a required page. But we decide to build it for two reasons.

Firstly , people are increasingly paying attention to world ranking of universities . We find that papers and citations account for a large part of ranking criterion.

World University Ranking Criterion

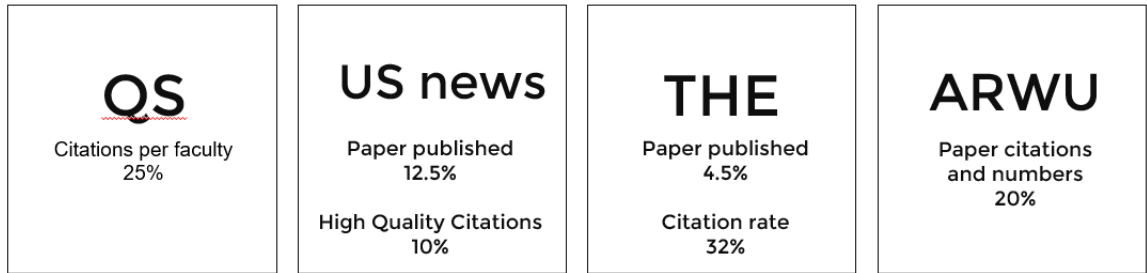


Figure 4: world ranking indicator

As is depicted in the picture, 4 major ranking institutions give high priority to papers and citations. So we intend to make tendency lines about paper numbers and citations of an affiliation as an indicator of its academic strength.

Secondly, we find the conferences given are all top conferences of certain fields, such as computer vision, machine learning and etc. So it comes to us that maybe we can sort papers according to specific fields so that users can learn clearly which area the affiliation excels at or which area it pales in comparison.

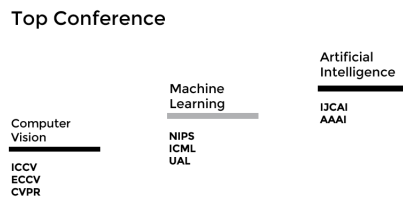


Figure 5: top conferences in different fields

And what we do is use sql to get data of papers and citations of every affiliation group by year. We also build a table to cut the time cost.

The table is: affiliationid paperid paperpublishyear authorid conferenceid

```

1 $sql2="select count(*) as paper_num ,paperpublishyear
2 from affiliation_new where affiliationid='
3 $affiliationid ' group by paperpublishyear";
4 $result2=mysql_query($sql2);
5 $paper_total=0;
6 while ($row2=mysql_fetch_array($result2)){
7     array_push($publishyear_list,$row2['paperpublishyear']);
8     array_push($papernumber_list,$row2['paper_num']);
9     $paper_total+=$row2['paper_num'];}

```

Get total paper numbers and papers of every year. Then put data sets into echarts codes to make a tendency line.

```

1 $year=0;
2 $i=0;
3 $sql7="select paperid ,paperpublishyear from affiliation_new
4 where affiliationid='
5 $affiliationid ' group by paperid order by paperpublishyear ";
6 $sql8="select count(*) as citation_num from paper_reference
7 where referenceid='$paperid '";
8 $result7=mysql_query($sql7);
9 while ($row7=mysql_fetch_array($result7)){
10     if ($row7['paperpublishyear']!=$year){
11
12         $year=$row7['paperpublishyear'];
13         array_push($publishyear_list2,$year);
14         if ($i!=0){
15             array_push($citationnum_list,$citation_num);
16         }
17         $i++;
18         $citation_num=0;
19
20     }
21     $paperid=$row7['paperid'];
22     $sql8="select count(*) as citation_num from paper_reference
23 where referenceid='$paperid '";
24 $result8=mysql_query($sql8);
25 while ($row8=mysql_fetch_array($result8)){
26     $citation_num+=$row8['citation_num'];
27 }
28 }
29 array_push($citationnum_list,$citation_num);

```

Get total citations and citations of every year. Then put data sets into echarts codes to make a tendency line.

```

1 $sql3="select count(*) as paper_num_per_conf ,conferenceid

```

```

2 from affiliation_new where affiliationid='
3 $affiliationid' group by conferenceid";
4 $result3=mysql_query($sql3);
5 $iccv=0;
6 $cvpr=0;
7 $eccv=0;
8 while ($row3=mysql_fetch_array($result3)){
9     if ($row3['conferenceid']=='45701BF3'){
10         $iccv=$row3['paper_num_per_conf'];
11     }
12     if ($row3['conferenceid']=='45083D2F'){
13         $cvpr=$row3['paper_num_per_conf'];
14     }
15     if ($row3['conferenceid']=='43001016'){
16         $eccv=$row3['paper_num_per_conf'];
17     }
18 }

```

We take computer vision for example , we select the three top conferences as indicators , counting papers in these conferences and make it as a pie chart.

```

1 $sql4="select authorid ,count(*) as paper_num
2 from affiliation_new where affiliationid='
3 $affiliationid' group by authorid
4 order by count(*) DESC limit 5";
5 $result4=mysql_query($sql4);
6 while ($row4=mysql_fetch_array($result4)){
7     $authorid=$row4['authorid'];
8     $sql5="select authorname from authors
9     where authorid='$authorid'";
10    $result5=mysql_query($sql5);
11    while ($row5=mysql_fetch_array($result5)){
12        $authorname=$row5['authorname'];
13        echo '<a style="text-decoration:none"
14 href="author.php?authorID='.$authorid.'">'.
15 <strong><font color ="#A9E2F3" size="4px">'.
16 $authorname.'</font></strong>'. '</a>';
17        echo '<br>';
18    }
19 }
20 }
21 $y=ucwords($x);
22 echo '<a style="text-decoration:none" href=
23 "https://en.wikipedia.org/wiki/'. $y. '">'.
24 '<strong><font color ="black" size="4px">'.
25 'For More Information ... '. '</font></strong>'. '</a>';

```

We also list the top five authors of the selected affiliation , users can click for more information. And we provide a hyperlink to wikipedia if users want to know more about the affiliation.

```
1 <script>
2
3     var x_data=<?php echo json_encode($publishyear_list) ?>;
4     var y_data=<?php echo json_encode($papernumber_list) ?>;
5     var myChart = echarts.init(document.getElementById('main'));
6
7     var option = {
8         title:{
9             text:'Papers'
10        },
11    },
12
13    tooltip:{
14
15        trigger:'axis'
16    },
17
18    legend:{
19        data:['Papers Published Every Year'],
20        textStyle:{
21            fontSize:16
22        }
23    },
24
25    xAxis:{
26        data:x_data
27    },
28
29    yAxis:{},
30
31    series:[{
32        name:'Papers Published Every Year',
33
34        type:'line',
35        data:y_data
36    }
37    ]
38 };
39
40 myChart.setOption(option);
41 </script>
```

Above are codes of one tendency line of echarts. The other similar codes are omitted.

Demo:

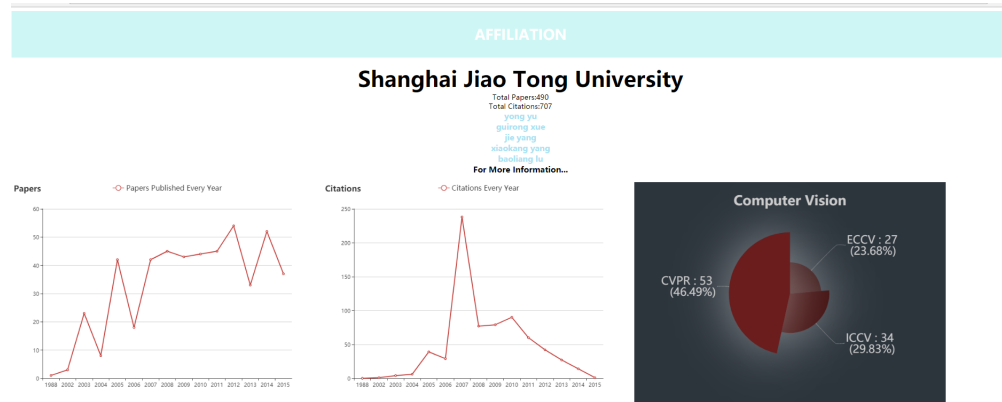


Figure 6: Shanghai Jiao Tong University

The page is somehow simple and far from completed since we do not have enough data and lack skills in sorting data. But we believe the idea can be improved and further developed in the future when we learn more and it possesses value in practice.

3 Front Beautification

3.1 Home page

We should realize four kinds of search-by author,paper,affiliation and conference so the home page is designed as a rolling page. Every left part contains a search bar and a button to search the certain kind of information and the right part is four pictures. the codes:

```

1 <body>
2   <div class="ui-widget">
3 </div>
4   <div class="wrapper" style="position: absolute; z-index: 1;">
5     <div class="container">
6       <div class="slideshow">
7         <div class="slideshow-left">
8           <div class="Lslide" style="font-family: sans-serif;">
9             <div class="Lslide-content">
10              <h2>SEARCH BY<br>Affiliation</h2>
11              <p>Be a part of our creation</p>
12              <form action="affiliation.php"
13                method="get" id="author">
14                <span class="input input-ichiro">
15                  <input class="input__field input__field-ichiro"
16                    type="text" id="input-28" name="affiliation" />
17                <label class="input__label input__label-ichiro"

```

```

18         for="input-28">
19         <span class="input__label-content input__label-content—ichiro">
20         Type In</span>
21         </label>
22         </span>
23         <button class="button" type="submit">
24         <p>Search</p>
25         <i class="fa fa-chevron-right"
26         aria-hidden="true"></i>
27         </button></form>
28     </div>
29 </div>
30 </div>
31
32     <div class="slideshow-right">
33
34         <div class="Rslide">
35             
36         </div>
37
38
39     </div>
40
41
42     <div class="control">
43         <div class="oncontrol control-top">
44             <i class="fa fa-arrow-up"
45             aria-hidden="true"></i>
46         </div>
47         <div class="oncontrol control-bottom">
48             <i class="fa fa-arrow-down"
49             aria-hidden="true"></i>
50         </div>
51     </div>
52
53 </div>
54
55 </div>
56 </div>
57 <!-- <div class="htmlleaf-container">
58
59 </div> -->
60 <script src="a/js/classie.js"></script>
61 <script type="text/javascript">
62     var Lslide= document.querySelectorAll( '.Lslide' ),
63         Rslide= document.querySelectorAll( '.Rslide' ),
64         control= document.querySelectorAll( '.oncontrol' ),
65         slideHeight= document.querySelector( '.wrapper' ).clientHeight ,
66         color = [ '#fdc97c' , '#e5d3d0' , '#71b3d6' , '#A9F5F2' ],
67         index = 0;
68
69
70     function init () {
71         slideHeight = document.querySelector( '.wrapper' ).clientHeight;
72         for ( i = 0; i < Lslide.length; i++) {
73             Lslide[ i ].style.backgroundColor = color[ i ];
74             Lslide[ i ].style.top = -slideHeight * i + "px";
75             Rslide[ i ].style.top = slideHeight * i + "px";

```

```

76     }
77   }
78   init()
79   window.addEventListener('resize', function(){
80     init()
81   });
82
83   function moveToTop() {
84
85     index++;
86     for (el = 0; el < Lslide.length; el++) {
87       Lslide[el].style.top =
88       parseInt(Lslide[el].style.top) + slideHeight + "px";
89       Rslide[el].style.top =
90       parseInt(Rslide[el].style.top) - slideHeight + "px";
91     }
92
93     if (index > Lslide.length-1) {
94       index = 0;
95       for (el = 0; el < Lslide.length; el++) {
96         Lslide[el].style.top
97         = -slideHeight * el + "px";
98         Rslide[el].style.top
99         = slideHeight * el + "px";
100      }
101    }
102  }
103
104  function moveToBottom() {
105    index--;
106    for (el = 0; el < Lslide.length; el++) {
107      Lslide[el].style.top
108      = parseInt(Lslide[el].style.top) - slideHeight + "px";
109      Rslide[el].style.top
110      = parseInt(Rslide[el].style.top) + slideHeight + "px";
111    }
112
113    if (index < 0) {
114      index = Rslide.length-1;
115      for (el = 0; el < Lslide.length; el++) {
116        Lslide[el].style.top
117        = parseInt(Lslide[el].style.top)
118        + slideHeight * Lslide.length + "px";
119        Rslide[el].style.top
120        = parseInt(Rslide[el].style.top)
121        - slideHeight * Rslide.length + "px";
122      }
123    }
124  }
125
126  function transition() {
127    for (t = 0; t < Lslide.length; t++) {
128      Lslide[t].style.transition = "all 0.8s";
129      Rslide[t].style.transition = "all 0.8s";
130    }
131  }
132
133

```



```

134     for (t = 0; t < control.length; t++) {
135         control[t].addEventListener("click", function() {
136
137             if (this.classList.contains('control-top')) {
138                 moveToTop()
139             }
140             if (this.classList.contains('control-bottom')) {
141                 moveToBottom()
142             }
143
144             transition()
145
146         });
147     }
148
149     var wheeling;
150     function mousemouve(e) {
151
152         clearTimeout(wheeling);
153         e.preventDefault();
154         var e = window.event || e;
155         var delta
156         = Math.max(-1, Math.min(1, (e.wheelDelta || -e.detail)));
157
158         wheeling = setTimeout(function() {
159             wheeling = undefined;
160             if (delta === 1) {
161                 moveToTop()
162             }
163             if (delta === -1) {
164                 moveToBottom()
165             }
166         }, 100);
167
168         transition()
169     }
170
171     document.addEventListener("mousewheel", mousemouve);
172     document.addEventListener("DOMMouseScroll", mousemouve);
173     (function() {
174         if (!String.prototype.trim) {
175             (function() {
176                 // Make sure we trim BOM and NBSP
177                 var rtrim
178                 = /^[^\s\uFEFF\xA0]+|[\s\uFEFF\xA0]+$/g;
179                 String.prototype.trim = function() {
180                     return this.replace(rtrim, '');
181                 };
182             })();
183         }
184
185         [].slice.call( document.querySelectorAll( 'input.input__field' ) )
186         .forEach( function( inputEl ) {
187             // in case the input is already filled..
188             if( inputEl.value.trim() !== '' ) {
189                 classie.add( inputEl.parentNode, 'input—filled' );
190             }
191

```

```

192 // events:
193 inputEl.addEventListener( 'focus', onInputFocus );
194 inputEl.addEventListener( 'blur', onInputBlur );
195 } );
196
197 function onInputFocus( ev ) {
198     classie.add( ev.target.parentNode, 'input—filled' );
199 }
200
201 function onInputBlur( ev ) {
202     if( ev.target.value.trim() === '' ) {
203         classie.remove( ev.target.parentNode, 'input—filled' );
204     }
205 }
206 })();
207 </script>

```

The code between class 'rside' and class 'lside' is one of the contents described before. For convenience the link of the outer files in the codes are all removed.

The search bar is from another template, it only need to include the file and mark the right name of the class.

The functions are defined to realize the rolling of the page.

3.2 Other pages

The style of the other pages are almost the same except the unique element of some page like the fdg-figure of the author page, the text description of the paper-recommendation page. So take the result page as an example.

The header is a rectangle with color and at the left there is a color block as well. The body contains the informations. Every piece of information is shown in a drop down. User can click the bar to hide or show the detailed information.

The codes:

```

1 <style>
2 #header {
3     background-color:#FCE0B5;
4     color:white;
5     text-align:center;
6     padding:30px;
7     font-family:sans-serif;
8 }
9
10 #nav1 {
11     line-height:30px;
12     background-color:#F9B16D;
13     height:1400px;
14     width:300px;
15     float:left;
16     padding:5px;
17     transform:translate(-20px)
18 }
19

```

```

20 a {text-decoration:none; text-transform:capitalize;}
21
22 .c {text-transform:capitalize;font size:1;}
23
24 </style>
25 <style type="text/css">
26     .demo{padding: 2em 0; background: #fff;}
27     a:hover,a:focus{
28         text-decoration: none;
29         outline: none;
30     }
31     #accordion .panel{
32         border: none;
33         box-shadow: none;
34         border-radius: 0;
35         margin: 0 0 15px 10px;
36     }
37     #accordion .panel-heading{
38         padding: 0;
39         border-radius: 30px;
40
41     }
42     #accordion .panel-title a{
43         display: block;
44         padding: 12px 20px 12px 50px;
45         background: #F7BE81;
46         font-size: 18px;
47         font-weight: 600;
48         color: #fff;
49         border: 1px solid transparent;
50         border-radius: 30px;
51         position: relative;
52         transition: all 0.3s ease 0s;
53     }
54     #accordion .panel-title a.collapsed{
55         background: #fff;
56         color: #0d345d;
57         border: 1px solid #ddd;
58     }
59     #accordion .panel-title a:after,
60     #accordion .panel-title a.collapsed:after{
61         content: "\f107";
62         font-family: fontawesome;
63         width: 55px;
64         height: 55px;
65         line-height: 55px;
66         border-radius: 50%;
67         background: #F7BE81;
68         font-size: 25px;
69         color: #fff;
70         text-align: center;
71         border: 1px solid transparent;
72         box-shadow: 0 3px 10px rgba(0, 0, 0, 0.58);
73         position: absolute;
74         top: -5px;
75         left: -20px;
76         transition: all 0.3s ease 0s;
77     }

```

```

78         #accordion .panel-title a.collapsed:after{
79             content: "\f105";
80             background: #fff;
81             color: #0d345d;
82             border: 1px solid #ddd;
83             box-shadow: none;
84         }
85         #accordion .panel-body{
86             padding: 20px 25px 10px 9px;
87             background: transparent;
88             font-size: 14px;
89             color: #8c8c8c;
90             line-height: 25px;
91             border-top: none;
92             position: relative;
93         }
94         #accordion .panel-body p{
95             padding-left: 25px;
96             border-left: 1px dashed #8c8c8c;
97     }
98     </style>
99
100 <body style="background:#F7F2E0;">
101 <meta charset="utf-8">
102
103 <div id='header '>
104 <h1><font size="10"><strong>RESULT</strong></font></h1>
105 </div>
106
107 <div id="nav1">
108 </div><br>
109
110
111
112 <div class="demo">
113     <div class="container">
114         <div class="row"
115             <div class="col-md-offset-3 col-md-6">
116                 <div class="panel-group" id="accordion" role="tablist"
117                     aria-multiselectable="true">
118 <?php
119 $con = mysql_connect("localhost","root","");
120 if (!$con)
121     {
122         die('Could not connect: ' . mysql_error());
123     }
124
125 mysql_select_db("main_db", $con);
126 $x=$_GET[ 'AuthorName' ];
127
128 $result = mysql_query("SELECT authors.AuthorName,authors.authorID ,count(*)
129 FROM authors inner join paper_author_affiliation
130 on authors.AuthorID=paper_author_affiliation.AuthorID where authors.AuthorName LIKE '%$x%'
131 group by authors.authorID
132 order by count(*) DESC ");//
133 $count=0;
134 $seq2=0;
135 echo "<div id='try'>";

```

```

136 while($row = mysql_fetch_array($result)){
137     if($count<10){
138         {echo '<div class="panel panel-default">';
139         $y1=$row[ 'authorID '];
140
141
142
143         echo "<div class='panel-heading' role='tab' id='headingOne'><h4 class='panel-title'>
144             <a role='button' data-toggle='collapse' data-parent='#accordion'
145                 href='#$seq2' aria-expanded='true'
146                 aria-controls='$seq2' style='text-decoration:none'>
147                 ".$row[ "AuthorName" ]."</a></h4></div>";
148
149 $result2=mysql_query("SELECT AffiliationID from paper_author_affiliation
150 where authorID ='$y1' group by affiliationID order by count(*) DESC limit 2");
151
152 $row2=mysql_fetch_array($result2);
153 $affiliationID=$row2[ 'AffiliationID '];
154 if ($affiliationID=='None'){
155     $row2=mysql_fetch_array($result2);
156     if (!$row2) $authorname='None';
157     else {
158         $y=$row2[ 'AffiliationID '];
159         $result2=mysql_query("SELECT AffiliationsName
160 from affiliations where affiliationsID='$y'");
161         $row2=mysql_fetch_array($result2);
162         $authorname=$row2[ 'AffiliationsName '];
163     }
164 }
165 else {
166     $y=$row2[ 'AffiliationID '];
167     $result2=mysql_query("SELECT AffiliationsName
168 from affiliations where affiliationsID='$y'");
169     $row2=mysql_fetch_array($result2);
170     $authorname=$row2[ 'AffiliationsName '];
171 }
172 /*$y=$row2[ 'AffiliationID '];
173 $result2=mysql_query("SELECT AffiliationName from affiliations
174 where affiliationID='$y'");
175 $row2=mysql_fetch_array($result2);*/
176
177
178 echo"<div id='$seq2' class='panel-collapse collapse in'
179 role='tabpanel' aria-labelledby='headingOne'>
180     <div class='panel-body'>
181         <p><a style='text-decoration:none'
182             href='author.php?authorID=".$$y1."'>
183             <font color ='orange'>".$row[ "AuthorName" ]."</font></a>".",
184             <font color ='#BDBDBD'>".$authorname.".", ".$row[ 'count(*) ' ]." pages</font></p>
185     </div></div>";
186
187
188
189
190 $seq2+=1;
191 echo '</div>';}}
192 ++$count;}
193 echo "</div>";

```

```

194     $count=intval($count/10);
195
196     mysql_close($con);
197     ?>
198
199
200     </div>
201
202         </div>
203     </div>
204
205         </div>
206
207
208
209
210 <div style="text-align:center;">
211 <button class="button button-glow button-rounded button-highlight"
212 style="background: white;" id="Pre"><font color='orange '>Pervious</button>
213 <button class="button button-glow button-rounded button-highlight"
214 style="background: white;" id="next"><font color='orange '>TheNext</button></div>
215 <br>
216 <input id="page" name="page">
217 <button class="button button-glow button-rounded button-highlight"
218 style="background: white;" id='turn '><font color='orange '>Trun to (1-<?php echo $count+1;?>)</button>
219 <script>
220 var iden=0;
221 var count=<?php echo $count;? >;
222 $("#page").val(1);
223 $("#Pre").hide();
224 if (count==0) $("#next").hide();
225 $(document).ready(function(){
226     $("#next").click(function(){
227         ++iden;
228         //$.get("newresult.php?limit
229         =" +iden+"&name="+$("#thename").html(),function(data){
230             //document.write(data);
231             //$("#table").load("newresult.php?limit
232             =" +iden+"&name="+<?php echo $x ;?>");
233             $.post("//localhost/newresult.php",{
234                 limit: iden ,
235                 name: "<?php echo $x ;?>"
236             },function(data){$("#try").html(data);});
237             if (iden==1){
238                 $("#Pre").show();
239             }
240             if (iden==count){
241                 $("#next").hide();
242             }
243             $("#page").val(iden+1);
244         });
245     $("#turn").click(function(){
246         if ($("#page").val()
247         <=count+1 & $("#page").val()>0 & $("#page").val() != iden+1){
248             if (iden==0){
249                 $("#Pre").show();
250             }
251             if (iden==count){

```

```

252         $("#next").show();
253     }
254     iden=$("#page").val()-1;
255     $.post("//localhost/newresult.php",{
256         limit:iden,
257         name:"<?php echo $x ;?>"
258     },function(data){$("#try").html(data);});
259     if (iden==0){
260         $("#Pre").hide();
261     }
262     else if (iden==count){
263         $("#next").hide();
264     }
265 }
266 });
267 });
268 $(document).ready(function(){
269     $("#Pre").click(function(){
270         if (iden!=0){
271             --iden;
272             //$.get("newresult.php?limit
273             =" + iden + "&name=" + $("#thename").html(),function(data){
274                 $.post("//localhost/newresult.php",{
275                     limit:iden,
276                     name:"<?php echo $x ;?>"
277                 },function(result){$("#try").html(result);});
278             }
279             if (iden==count-1){
280                 $("#next").show();
281             }
282             if (iden==0){
283                 $("#Pre").hide();//
284             }
285             $("#page").val(iden+1);
286         });
287     });
288 });
289 </script>
290 </body>

```

The 'style' head is to define the shape, color, position etc of every element.

Like the home page the buttons are from outer templates. For different pages the color style are different and it needs to change the color code every where.

In the body first there is an overall canvas to place other things. Then there are pieces of info. As there are all results of the search, the codes should be added into the loop of php backgrounds.

The functions are to realize the turning of the pages.

4 Extra (ElasticSearch)

4.1 Brief introduction

ElasticSearch is a search server based on Lucene. It provides a full-text search engine with distributed multi-user capabilities. Elasticsearch is developed in Java, and can achieve real-time search, and it is stable, reliable, fast, and easy to use. As it has always stressed: you know, for search.

4.2 task Description

In this part, the main task is to import data into Elasticsearch and get data from the data base in all the PHP page, as our expectation, it will greatly improve our speed for searching. and simplify the process of getting data.

4.3 Main steps

Main idea: Install related software and use Python to import data and connect PHP with Elasticsearch to get data

step 1: Installing related software and plug-ins

step 2: use Python as a tool to import data from MySQL into Elasticsearch;

step 3: connect PHP with Elasticsearch and get the data in JSON form;

4.4 installing

4.4.1 installing list

Here are all the things we should install: 1. Java: It provides an environment;

2. Elasticsearch: It is the main part of our demand;

3. Kibana: A visualization tool and operating platform of Elastic;

4. Composer: for connecting PHP with Elasticsearch;

5. Elasticsearch(py): This is a package in Python, it is for connecting Python with Elastic.

4.4.2 installing process

In fact, installing these software and plug-ins is the most difficult part in the whole process. Here I will show you how to install them.


1. Java:

This is easy, just download from the official page.

2. Elasticsearch:

The key is not to believe in the installation methods of blogs written on the Internet, some of which are obsolete, and some are wrong. Just follow the way in the Elasticsearch official page.

Downloads

- 1 Download and unzip Elasticsearch
 Elasticsearch can also be installed from our package repositories using apt or yum, or installed on Windows using an MSI installer package. See [Repositories in the Guide](#).
- 2 Run `bin/elasticsearch` (or `bin\elasticsearch.bat` on Windows)
- 3 Run `curl http://localhost:9200/` or `Invoke-RestMethod http://localhost:9200` with PowerShell
- 4 Dive into the [getting started guide](#) and [video](#).

<https://www.elastic.co/guide/en/elasticsearch/reference/current/index.html>

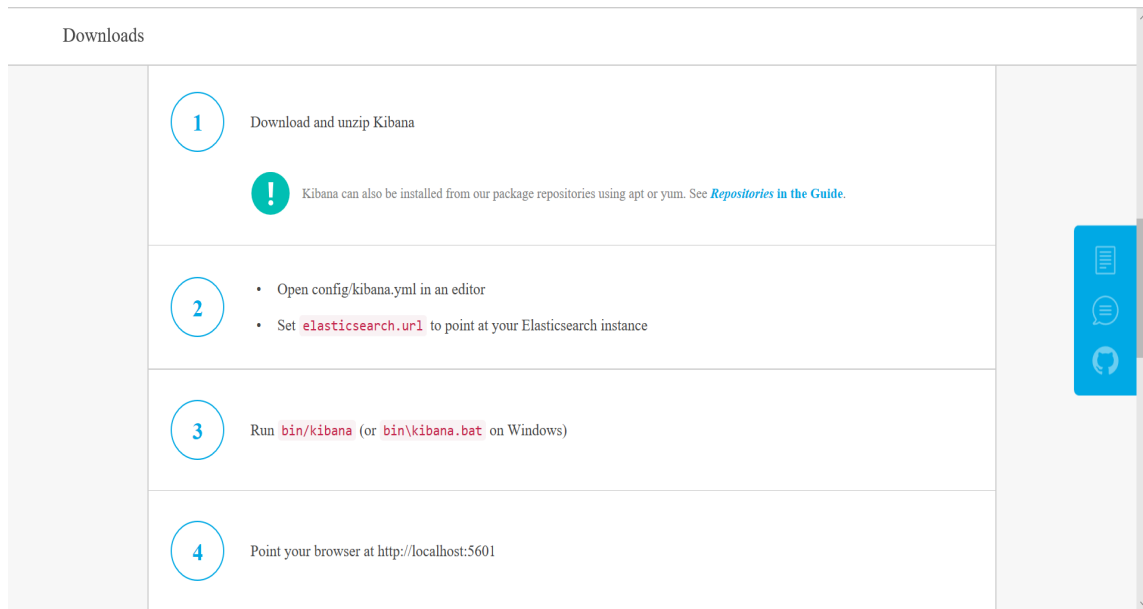
GitHub
Docs
Forum

after installing elasticsearch, try to visit localhost:9200, if you can get this page, you are success.

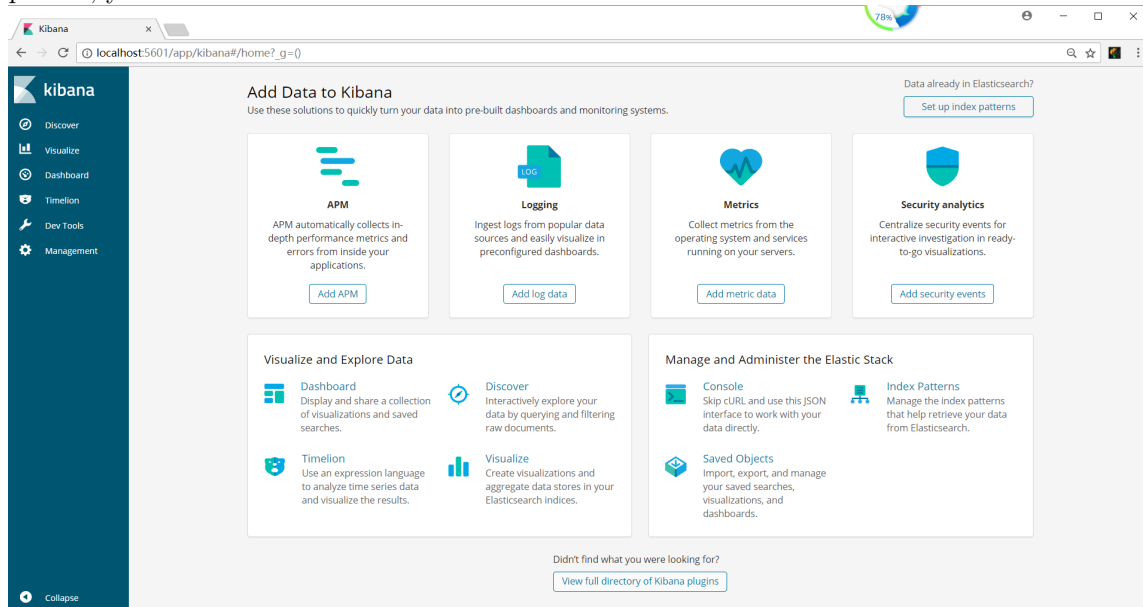
```
localhost:9200/
{
  "name" : "my_first_node",
  "cluster_name" : "elasticsearch",
  "cluster_uuid" : "YcixnUzq56-3fpmWv_R-Xg",
  "version" : {
    "number" : "6.2.4",
    "build_hash" : "ccec39f",
    "build_date" : "2018-04-12T20:37:28.497551Z",
    "build_snapshot" : false,
    "lucene_version" : "7.2.1",
    "minimum_wire_compatibility_version" : "5.6.0",
    "minimum_index_compatibility_version" : "5.0.0"
  },
  "tagline" : "You Know, for Search"
}
```

3. kibana:

this is the same as elasticsearch, do not to believe in the installation methods of blogs written on the Internet, just follow the way in elasticsearch official page.



you may need to change some environment variable during the process or do some cmd operations, just follow what they say. after installing kibana , try to visit localhose:5601 and if you can see this picture, you are success



4. composer:

you can download composer-Setup.exe in <https://www.phpcomposer.com> and before you setup it you should change some environment variable for php and then you can setup it directly, after you installing it, enter composer in cmd , and if you can see this picture, you are success.

```
命令提示符
Microsoft Windows [版本 10.0.17134.112]
(c) 2018 Microsoft Corporation. 保留所有权利。

C:\Users\13037>composer

Composer version 1.6.5 2018-05-04 11:44:59

Usage:
  command [options] [arguments]

Options:
  -h, --help                Display this help message
  -q, --quiet               Do not output any message
  -V, --version             Display this application version
  --ansi                    Force ANSI output
  --no-ansi                 Disable ANSI output
  -n, --no-interaction     Do not ask any interactive question
  --profile                 Display timing and memory usage information
  --no-plugins              Whether to disable plugins.
  -d, --working-dir=WORKING-DIR If specified, use the given directory as working directory.
  -v|vv|vvv, --verbose    Increase the verbosity of messages: 1 for normal output, 2 for more verbose output and
3 for debug

Available commands:
  about      Shows the short information about Composer.
```

5. elasticsearch(py):
this is easy, just setup itt in PyCharm setting.

4.4.3 import data

this section is about to import data in mysql into elasticsearch, so we should use python as a bridge, and connect both of them.

what we should know is that we should set data in json form. here is one example:

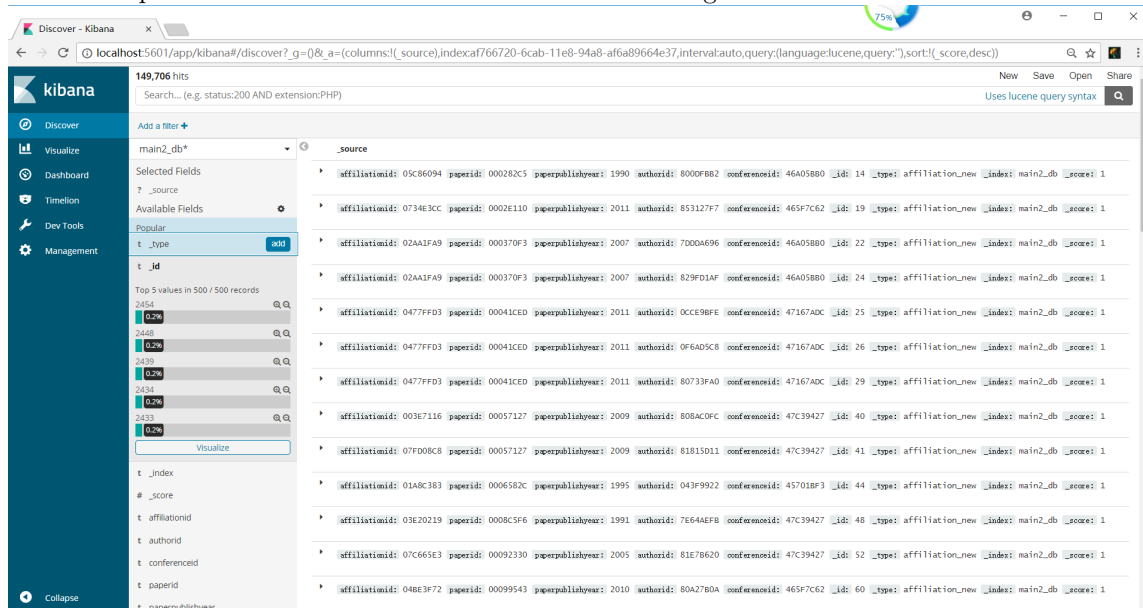
```
1 from elasticsearch import Elasticsearch
2 from elasticsearch import helpers
3 import pymysql
4 import time
5
6 connection=pymysql.connect(host="localhost",
7                             user="root",
8                             password="",
9                             db="main2_db",
10                            charset="utf8",
11                            port=3306,
12                            cursorclass=pymysql.cursors.Cursor)
13 cursor=connection.cursor()
14 sql="select * from affiliations"
15 cursor.execute(sql)
16 list=cursor.fetchall()
17 print(list)
```

```

18 es = Elasticsearch("localhost:9200")
19 actions = []
20
21
22 i = 1
23 while True:
24     action = {
25         "_index": "main2_db",
26         "_type": "affiliations",
27         "_id": i,
28         "_source": {
29             "AffiliationsID": list[i-1][0],
30             "AffiliationsName": list[i-1][1]
31         }
32     }
33     print(i)
34     i += 1
35     actions.append(action)
36     if (i==len(list)+1):
37         break
38
39 a=time.clock()
40
41 for m in actions:
42     print(m)
43
44 if len(actions) > 0:
45     helpers.bulk(es, actions, chunk_size=5000)

```

after import data into elasticsearch we can see some change in kibana.



The screenshot shows the Kibana Discover interface. The search query is `status:200 AND extension:PHP`, resulting in 149,706 hits. The left sidebar shows the 'Discover' view with a filter for 'main2_db*'. The main area displays a list of search results. The first result is expanded to show the following JSON object:

```
{
  "affiliationid": "02A06094",
  "paperid": "000282C5",
  "paperpublishyear": 1990,
  "authorid": "8000FBB2",
  "conferenceid": "46A058B0",
  "_id": "14",
  "_type": "affiliation_new",
  "_index": "main2_db",
  "_score": 1
}
```

these are the detail of our data, and it surely means we insert data successfully.

4.4.4 get data

this is our last step, get the data from elasticsearch, and this step will be used in almost every php page, since we use it everywhere, it follows a method

```
1 <?php
2 require_once( 'vendor/autoload.php' );
3 $params = array ();
4 $params[ 'hosts' ] = array (
5     '127.0.0.1:9200 ',
6 );
7 $client = new Elasticsearch\ Client( $params );
8
9 $getParams = array ();
10 $getParams[ 'index' ] = 'index';
11 $getParams[ 'type' ] = 'type';
12 $getParams[ 'id' ] = 'id';
13 //these three are all the name in elasticsearch
14 $retDoc = $client->get( $getParams );
15 var_dump( $retDoc );
```

Then we can use the data in everywhere we want. just replace them as `$getParams['id']`