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The Employment Senson System of College Students

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Abstract. In the Internet era, we actively promote and broadcast recruitment information to college students, actively help students' employment needs, and provide the latest job market information. The key to the success of wireless sensor systems for job hunting is to actively provide customized requirements and the latest development status of professional titles, and broadcast to students on campus or just leaving school. After strict system requirements analysis, overall model design, coding, system development tool selection, design pattern integration, testing, and completion. The research and design are to store the position information of the recruitment website in MySQL through the crawler technology in the database, and the system selects the position information according to the filing requirements. Through email, APP, and SMS, the employment information can be quickly pushed to the demanders to help teachers, students, and parents quickly screen out their expected employment fields.

Keywords. Job recommendation, Crawler technology, MySQL, Software engineering, Sensing technology

1. Introduction

The school's student psychological counseling center and College Teachers' concern and inquiry. The source of the pressure of college graduates was found in the interview[1]. The results of the survey are as follows: firstly, some students plan to continue their master's degree program with the goal of a doctor's degree. Second, most students hope to get employed as soon as possible, share the source of family income, or choose to enter national enterprises to stabilize their income[2]. Third, to obtain a university diploma, according to the needs of social employment human resources, we can obtain a professional qualification certificate, and then enter the private company and enter the entrepreneurial direction[3,4].

2. System Design

The background of the system design is to actively promote customized recruitment information to college students in the Internet era, actively help students expect to obtain

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employment demand, and provide the latest job market information. With wireless sensor technology, the key to the success of the job search system can accurately provide customized demand, provide the latest development status of expected professional titles, and broadcast rapidly and accurately to students on campus or just leaving school[2,5].

2.1 Software engineering demand analysis

The recruitment sensor has been selected through strict system demand analysis, overall model design, coding, system development tool selection, design mode integration, testing, and completion. The software design and software development tool are to store the position information of recruitment website to MySQL through crawler technology in database. The system selects the position information according to the filing requirements. The software design goal is to quickly push employment information to the demander through email, APP, and SMS contact, and help teachers and students or parents quickly screen out their expected employment fields[6].

2.2 Research object

Second-year students have entered the professional program step by step, and they are not familiar with the characteristics of the course during the four years, so they are not included in the main scope of the job interview. The third and fourth-grade students were selected as the main research objects. In order to do a good job as a tutor[7], all three-year students in the Department of electrical engineering and automatic chemistry were selected as the sample of the job interview. However, there is no questionnaire interview on the four-year students, because most of them have to actively apply for enterprise internships and choose the direction of graduation project production. In view of the convenience of teaching this semester, the interviewee only conducted a general survey on all three-year students in the Department of electrical engineering and automatic chemistry. There were five classes with 246 students in total.

2.3 Survey results

At present, there are 10 people who want to take part in the examination, accounting for 4%, 85 people who want to take the examination of civil servants or state-owned enterprises, accounting for 34.6%, and 151 people, accounting for 61.4%, who have general job demand or follow up family enterprises. From the above, it can be seen that job hunting is one of the most important factors of students' psychological pressure in the past three years. With Internet exploration as the main means, they expect to get information about their expected enterprises or related jobs and positions. This is the demand of the online job agent mechanism. This job-seeking system is to achieve the technology of web crawler and actively push and broadcast the newly updated job search information to Job seeking clients, for reference[8].

The key to the feasibility and success of this automatic job search system is to actively provide the latest daily development of employment-related industries and professional titles, find the job categories and salary orientation of new recruitment work from the professional recruitment website and the company's personnel recruitment and job search line, actively broadcast to the students in school or just leaving school, and actively assist students at all levels to measure their employment intention and plan My own undergraduate course map[9].

2.4 System technology architecture

The function of the system is to explore the web pages, build a large database, and mine the jobs of specific objects. Therefore, the use of crawler technology is based on the Django framework, and the Django framework follows the commonly used MVC (modem, view, controller) development model. The system is divided into three parts. The first is the view layer, which is the front-end page display layer. It is mainly used to interact with users. HTML5, CSS3, JavaScript, and other software will be used to achieve this. The second is the controller layer, which belongs to the business logic layer. It mainly deals with the logic operation of the system, which is written in Python language. The third is the model layer, which is the access layer of the database. It is mainly used to add, delete, modify and query the database. The system uses a MySQL database. Figure 1: Conception of system technology architecture[10].

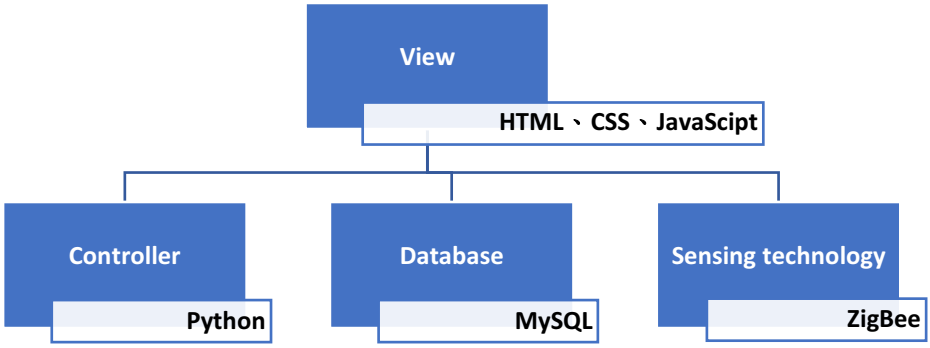

Figure 1. Conception of system technology architecture.

3. Results

According to the demand analysis of the system, firstly, from the two recruitment websites 58 Tongcheng and laguo.com as the experimental objects, we use the web crawler technology to screen the positions or companies according to the needs of customers, in order to successfully and accurately crawl the new information of the required recruitment posts[11].

3.1 Software module design and program flow

The main information can be divided into the job title, salary, company name, company address and company development type, work experience, education background, special nature of the post, etc., and store these data into MySQL database. In addition, in order to prevent large recruitment websites from setting up anti crawler mechanisms, or recruitment websites setting up different anti crawler mechanisms, it will form resistance for the system to obtain data[12].

Therefore, the system also initially wrote a breakthrough program to successfully achieve the work of web crawler data acquisition. The system functional architecture is shown in Figure 2.

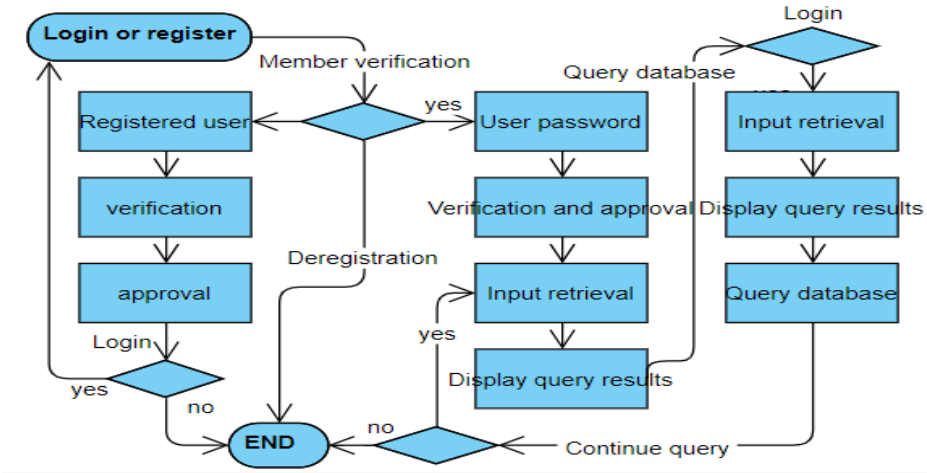

Figure 2. System functional architecture.

3.2 Database Planning

There are four main display interfaces in the system: login and registration page, homepage, personal center page, and position details page. It is convenient for users to take advantage of the opportunity to submit their resume to apply for the job immediately after finding out the satisfactory job. Therefore, the system also provides a jump function to recommend the selected position immediately.

The inquirer can also record the information of the job that has been posted so that they can follow up in the future. In terms of database table design, the system has four tables: registration information table, personal information record form, post information table, and user comment feedback information table. Table 1: Registration table.

Table 1. Registration table

Number	Field name	Paragraph description	Type	Primary key
1	ID	User ID	Int（12）	yes
2	Name	Name	Varchar (160)	
3	Password	Password	Varchar (160)	

Because the division of job market and occupation category is more and more refined, and the demand is more and more huge, there are more and more recruitment websites. The system consists of demand analysis, overall model design, coding, system development tools selection, design pattern integration, testing, and completion.

The main purpose of system testing is to detect whether the system can run normally and find and correct the logic errors in the program as early as possible. System testing is the test of the whole system in the final completion stage. The purpose of the test is to find out whether there are hidden bugs in the system. If it is found that the system program is still wrong, it is necessary to check and modify it in time, to measure whether the system operation quality can reach the ideal standard. Table 2: Job search function table.

Table 2. Job search function table

Module name	Test purpose	Testing procedure	Expected results	Test result
Job search function	Verify the position search function and screening function of the system	1.Enter a position and click search. 2.Give the filter criteria and click search.	1. The system successfully displayed the positions searched by users. 2. Screening succeeded.	Consistent with the expected results

The purpose of adding the jump function is to take the actual needs of users as the starting point. When users find suitable information on the web page and are immediately interested in the job, they can immediately Click to jump to the source website of the post information and post their resume information on the website. Table 3: Jump function.

Table 3. Jump function

Module name	Test purpose	Testing procedure	Expected results	Test result
Jump function	Verify the jump function of the system	Click the apply now button	Jump to source website successfully	Consistent with the expected results

4. Conclusion and discussion

The successful cases of the software engineering experiment project are based on the actual needs of college graduates, effectively reducing the employment pressure of college students, and constructing a simple employment recommendation system. Individual qualitative interviews were carried out on the trial results of the system, and the third and fourth-grade students of the computer college expressed their great affirmation. Most of the graduates think that it is very helpful to inquire about the national civil service examination and search for the ideal job in their mind, and they can effectively use the blank course time to think about their own career positioning.

This system creates a database, uses crawler technology and anti-crawler technology, stores the position information of the recruitment website in MySQL, after the system logs in, according to fill in the registration personal data, according to the application conditions, select the position information and expected salary that meet their own needs.

The job application system will quickly match the latest employment information and push it to students by Email, APP, WeChat, SMS, and other means according to the user's contact information, so as to help teachers, students or family members study and discuss together, screen out the ideal career, give full play to professional knowledge, make contributions to society and serve the people.

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