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ONLINE RESUME SYSTEM

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Abstract

Online resume systems have been widely used in the fields of human resource management and recruitment in recent years. However, there are still some problems in the existing system, such as the non-intuitive design of the user interface, and the challenges of editing and posting resumes on the same website and functional limitations. Aiming at these problems, this paper proposes a comprehensive set of solutions, including an improved interface design where job seekers can edit and post their resumes online and recruiters can post existing job vacancies. The resume management system is a management system based on practical applications, software engineering principles and development methods, and springboot framework. The overall design mainly includes system function design, system overall structure design, system data structure design and system security design. Ultimately, we verified the performance of various solutions and strategies by building and testing a prototype system. This prototype system has multiple functions, including online resume editing, creating social circles, and tracking the progress of resume delivery. The results of the experiments confirmed the effectiveness of our system in enhancing user experience, data security, and recruitment efficiency, all of which have been significantly improved. The database used in this resume system is mysql, which is based on the java programming language and developed with the springboot framework. The research results of this thesis will help to promote the further development of the online resume system to meet the needs of modern recruitment.

Keywords: resume system, springboot framework, MySQL, Java

Introduction

With the rapid development of society, the influence of computer is comprehensive and profound. With the continuous improvement of people's living standards, people's requirements on the resume system in daily life are also increasing. In today's age of technology, companies' hiring processes have evolved to a greater extent. Job seekers and recruiters alike like to submit their resumes electronically.

Background: To ensure the sustainable development of the economy, the information age is increasingly updated and booming. At the same time, with the rapid development of the information society, the resume system is faced with more and more information, so it is difficult to obtain their demand for efficient information. Recruitment websites are generally divided into two main roles: job seekers and companies. As for the third-party recruitment platform, it forms a complete ecology of enterprises and recruiters.

Objective: Based on a review of the existing literature, key factors in the functional, data structure, and safety design of CV systems are identified. The resume section designs a powerful resume template information library. Users can choose the most suitable template according to their needs to create a personalized resume. Develop the field of flexible employment. The department's main objective is to maximize the efficiency of labor resource allocation by balancing flexible employment positions. To achieve this, the design creates separate interfaces for employees and employers. And developed an Applicant Tracking System (ATS) to manage applications, track candidate progress and facilitate communication between employers and applicants.

Scope: Online resume system needs to have a set of core features that support the needs of the user. These features will allow users to create and manage profiles, browse and apply for jobs, participate in community discussions and interactions, bookmark and track job interests, and manage their own accounts and Settings. The system needs to run stably in a variety of

environments, whether the user is using Windows, Mac-OS, or other types of operating systems. The user must register and log in to access the system for operation, unauthorized access should be denied and the operation is determined by the system. Users' personal information, resume data, operation records and other sensitive information need to be encrypted during storage and transmission to prevent data leakage.

Justification and Importance: Although online resume systems have played an important role in the digital recruitment process, there are still some problems that need to be solved. First of all, the separation of resume editing and resume delivery process leads to a break in user experience. In the current system design, resume editing and resume delivery are carried out on different web pages, which not only causes unnecessary troubles for users, but also increases the difficulty for users to use the system. A more integrated and seamless process should be considered to improve the user experience and increase the efficiency of resume editing and delivery.

Literature Review: Online recruiting services are rapidly changing the hiring traditions of the job market. There are millions of registered users providing resumes and thousands of job listings online. Learning how to match job resumes is important for recruiting services. The key idea is to understand job requirements and CV textual representations and incorporate underlying preference information into them (Yan et al. 2019). Numerous recruitment in the Internet age are done using online recruitment portals. These portals help job searchers find employment and firms find resumes. However, these networks have no way of knowing whether a job seeker has found work. As a result, even if the candidate has found work, his resume will be promoted to the organization, resulting in platform resource waste and a poor user experience (Shi Shuyang et al. 2018). Experiment studies of labour market discrimination that do not account for resume whitening may, to a limited extent, exaggerate the true extent of labour market discrimination. To maintain high validity, we recommend future studies to carefully analyse signals on resumes and related materials (Ruedin et al. 2022). In general, the literature highlights several ideas about 18 the

importance of learning how to match a job resume; The repeated recommendation of resume is not humanized for both the applicant and the employer, which leads to the waste of resources. And resume whitening has a certain role in the labor market, to a limited extent, a certain resume whitening is a feasible strategy to find a job. A large and growing body of literature emphasizes the need to beautify your resume and match it to the right job.

Report Organization: This technical report consists of six main sections. First, the "Introduction" section provides us with the background of the entire project, defining the goals, scope, motivation of the project and a review of the literature. Immediately following, the Research Methods section describes in detail the strategies, techniques, and tools employed during the development of the online resume system. Second, the "Results and Discussion" section presents the results of the project with in-depth analysis and discussion. In the "Conclusion" section, the key findings of the project, their implications, and possibilities for future development are summarized. The "Acknowledgments" section acknowledges the individuals and institutions that supported the project. Finally, the "References" section lists all resources and cited sources cited in the report.

Research Methodology

The research methodology of the online resume system is based on user-centered design, emphasizing the design and development of the system starting from user needs. We start with a needs analysis to understand target users and market needs, and then create a detailed system design tailored to those needs.

Development Process Model: Choosing a waterfall strategy is a simple, well-defined approach to project management in which requirements are clearly established from the beginning by having a proven track record. The analysis of the system process is to adjust and sort out the design scheme of the system to ensure that the system can reach the ideal state by investigating the identification, feasibility, operability, system analysis and processing ability of the problems involved in the system. These operations are from the registration, login from the point of view of a series of process testing to ensure the integrity of the database, so as to control the system involved in the security of information management, to ensure the normal conversion of information input and output. Then, the flowchart is drawn through the actual operation. The development of resume system analyzed the management module and the database used by the system, wrote the code, and tested the system, as shown in Figure 1.

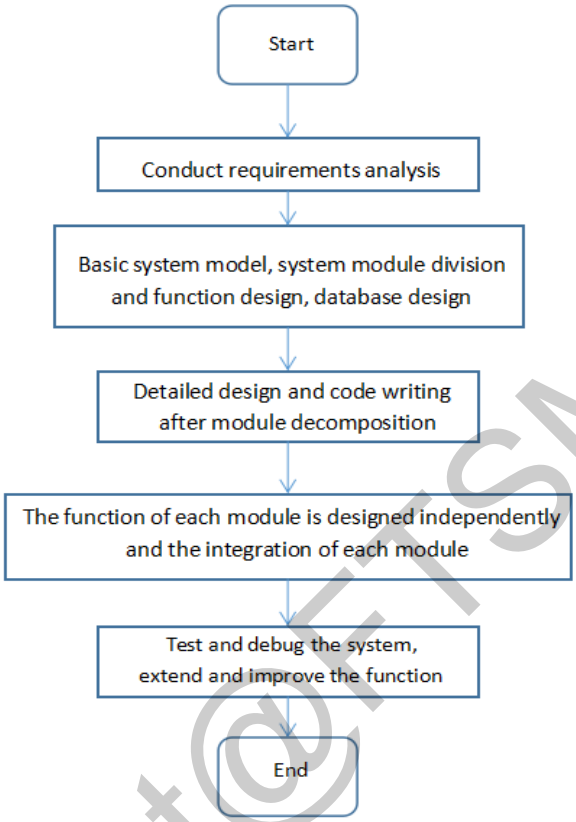

Figure 1: Develop System Flow Chart

Methodology: The development of an online resume system begins with an in-depth needs analysis, which includes understanding the needs of target users, conducting a market competition analysis, and evaluating existing solutions. Then, based on these requirements, we develop a system design, including system architecture, user interface and database design, etc. Next, develop the system using agile development methods for rapid iteration and user feedback. After the development is complete, we conduct comprehensive system testing and deploy the online resume system. Finally, we will continue to pay attention to user feedback, and optimize and improve the system as needed to meet the changing needs of users and improve user experience.

Data Collection Method: Data collection is a key link. A variety of methods are used to obtain information, including data directly entered by users, such as name, contact information, educational background, work experience and skills when registering, creating or updating resumes, as well as user information when using our system. Behavioral data, such as page access time, etc.

All this data is collected in strict compliance with relevant data protection and privacy regulations and access controls are implemented to prevent unauthorized access. The collection and use of these data is aimed at improving the quality of web services and user experience.

Data Analysis Method: Usability testing focuses on the ease of use and user experience of the online resume system, and mainly verifies the intuitiveness, ease of use, and whether the system meets user expectations. Evaluate the clarity of system navigation, understand-ability of functionality, and how effectively the system assists users in completing their resume. At the same time, use data analysis methods, such as user behavior analysis, task completion rate and time analysis, error analysis and satisfaction survey, etc., to feedback and optimize the results of these usability tests in a quantitative way. By comprehensively utilizing usability testing and data analysis, we can gain a deeper understanding of user needs, discover and solve potential problems, and provide a high-quality and user-friendly online resume creation experience.

Measurement and Measuring Tools: Testing plays an indispensable role in the software development life-cycle, ensuring the software meets desired expectations and requirements. It encompasses several stages: Unit Testing verifies individual components of the code, detecting problems at the earliest stage. Integration Testing checks the interaction between these units, identifying any interface issues. System Testing, an end-to-end process, validates the entire system under conditions simulating real-world environments. Lastly, User Acceptance Testing involves the system's real users to confirm the system's usability and effectiveness in real-world scenarios. Through these rigorous testing stages, potential problems can be detected and resolved, enhancing the software's reliability, stability, and user satisfaction.

Results and Discussions

Result: Completed the online resume system including resume template, online resume editing, job forum, one-click delivery and ATS (Applicant Tracking System) and other functions. User feedback indicates that our system provides a comprehensive, efficient and user-friendly job search experience. In addition, through data collection and analysis, it is found that when users use our system, the satisfaction rate and user retention rate are significantly improved.

Result analysis: The system provides a one-stop job-seeking solution, which more effectively simplifies the job-seeking process for job seekers. The ATS function in the system is especially welcomed by users. It helps job seekers track the application progress more effectively and improves the efficiency of job hunting.

Comparison with previous research: Compared with other online job search services or online resume template services, our system has obvious advantages in terms of user experience, comprehensive functions, and system stability. This is mainly because the system pays more attention to user needs, deeply understands the pain points of users, optimizes the service process, and provides more personalized options.

Description: The research results are based on real user feedback and data analysis. Data analysis methods such as user behavior analysis and satisfaction survey are used to ensure that the test results are accurate and relevant.

Table 1: Usability Testing

ID	Question	Description	Score
U001	Is the system easy to navigate?	This involves assessing whether users can easily find and access different sections of the online resume system.	90/100
U002	Are the functions easy to understand and use?	This involves evaluating if the process of creating, editing, and sharing resumes is clear and user-friendly.	85/100
U003	Does the system provide effective assistance to users?	This involves checking if there are clear instructions and support available for users when they encounter difficulties.	94/100

U004	Is the user interface visually appealing?	This involves assessing the aesthetic aspect of the system, such as layout, color scheme, typography, etc.	89/100
U005	Is the system responsive and efficient?	This involves evaluating the speed and responsiveness of the system, such as page loading times, responsiveness to user inputs, etc.	95/100

Significance and conclusion: The research results have important guiding significance for online job search service providers and job seekers. Research has proven that by providing comprehensive and caring service, user experience and satisfaction can be significantly improved. At the same time, the application of ATS has also proved that by providing effective tools, it can help job seekers better manage their job search process.

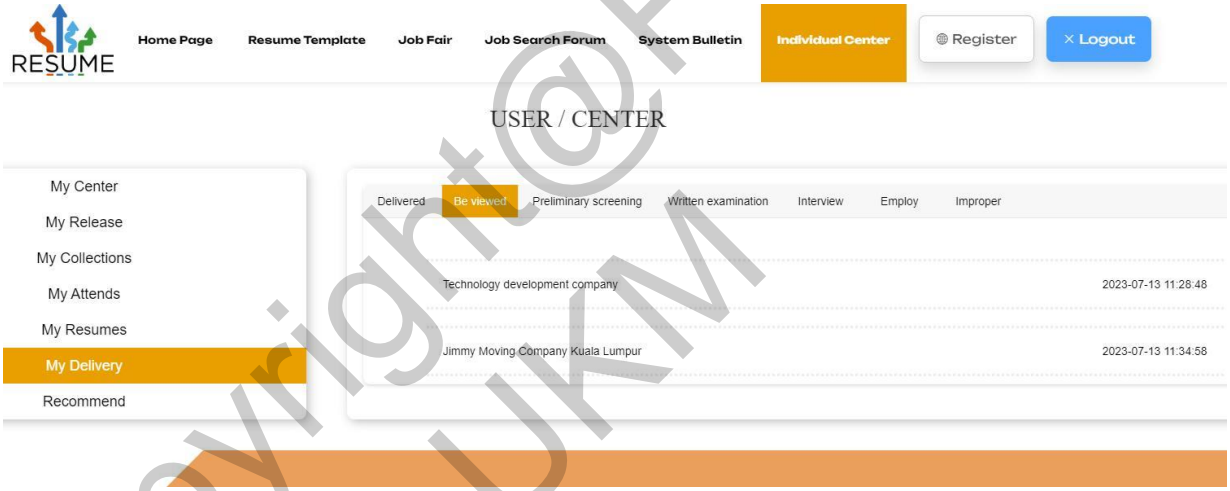

Figure 2: Individual Center - My Delivery Interface(ATS)

Future Recommendations: While our system has had positive results, we recognize that there are still areas that we need to improve and optimize in order to better serve our users. First of all, the user interface can be further refined to make it more humanized and easy to use, and improve the user's comfort during use. Secondly, the stability and response speed of the system are the key factors that we need to continue to pay attention to and improve, and they directly affect the user's experience and efficiency. Finally, in order to meet more diverse user needs, we should add more resume templates and provide more personalized options to provide better services.

Conclusion

Summary of research results: Online resume system includes resume templates, online resume editing, job forums, one-click delivery, and ATS (Applicant Tracking System) and other functions. Together, these components provide a comprehensive, efficient and user-friendly job search experience. Users can use rich resume templates to quickly create personalized resumes, use the online resume editing function to update in real time, exchange job search experience through job search forums, and the one-click delivery function makes the job search process more convenient. Finally, ATS helps users effectively track Application Progress.

Objective: The set goal is to build a comprehensive and convenient online resume making and job application platform for job seekers. The platform is designed to allow job seekers to conveniently create, edit their resumes, and easily find and apply for positions of interest to them. After in-depth research and extensive collection of user feedback, we confirmed that this goal has been achieved, and the online resume system has received positive feedback. However, we also realize that although the system has achieved positive results, there are still some areas for improvement and optimization. For example, the user interface can be further optimized, the stability and response speed of the system can be improved, and more resume templates and personalization options can be added to meet the needs of more users.

Implications: The research findings will have a profound impact on online job search service providers as well as job seekers. The online resume system can make the job search process more convenient and provide job seekers with a larger market, while the application of ATS helps job seekers better manage their job search process. At the same time, the research also proves that providing comprehensive and caring service can significantly improve user experience and satisfaction.

Weaknesses and Recommendations: While our online resume system has a strong set of features, there is still room for improvement. For example, the stability and response speed of the system, the diversity of resume templates, and the user experience of ATS all need further optimization. Start from these aspects to provide better service.

Overall, online resume systems provide job seekers with a one-stop job search solution by providing comprehensive and caring services. While there is still room for improvement, the system has significantly improved the job-seeking experience for job seekers. The research results will provide important reference and inspiration for future online job search services.

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