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# Build a Job Application with Django

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***Abstract:*** ***A job portal website is an essential tool for job seekers and employers alike. In today's digital age, having an online presence is more important than ever. Developing a job portal website using Python-Django can provide a robust platform to connect job seekers with potential employers. Python-Django is a powerful and efficient web development framework that can be used to create a feature-rich job portal website. This website can provide job seekers with a user-friendly interface to search, apply, and manage job applications. Employers can benefit from the website's advanced features, such as filtering, sorting, and applicant tracking. Some of the features are User Details are Protected By using encryption technique. Random Forest Regressor algorithm that will help to maximize the placement probability. Automated message services and chatbot will be implemented for the users. User have to register themselves, and then after login, these jobs are displayed to users on the basis of their search keywords.***

***Technical Keywords:*** ***Job seeker, Recruiter, Administrator, Job portal, Python django, Like Operator, random forest regressor algorithm, String matching algorithm.***

## I. INTRODUCTION

A job portal website is a platform that connects job seekers with employers. It allows job seekers to search for available job opportunities and apply for them while giving employers the ability to post job openings and find suitable candidates. Developing a job portal website using Python-Django can be an efficient and effective way to create a high-quality job portal website. Django is a high-level Python web framework that enables rapid development of secure and scalable web applications. In this document, we will explore the key features and benefits of using Python-Django for job portal website development. The job portal is a web application written in Windows operating systems which is focused in finding jobs. There are basically four modules in this project: Login Page, Admin login page, Jobs filter page, Jobs post page. The first and the foremost module is the Login module. In this frame the user is required to fill user name and password. The next module is the Admin page, Here it provides various options like job post, job filter, help, feedback etc. The third module is Jobs filter page.

## II. LITERATURE REVIEW

A literature review should be carried out to understand the existing job portal websites and the technologies used in their development. This will help to identify the gaps in the market and the unique features that can be added to the new website. In this literature review, we explore the existing body of knowledge related to job portal website development, with a specific focus on implementations using the Python-Django web framework. This review focus on features such as user authentication, job posting, resume uploading, search algorithms, and communication channels between employers and job seekers.

| Sr. No. | Paper Name | Author, Year of publishing journals | Work | |
|---|---|---|---|---|
| 1. | Recruitment Systemwith Placement Prediction | Suraj Gupta1, Yuvraj Haryan3, Atif Hingwala2, Swapnil Gharat4,Information Technology MCT Rajiv Gandhi Institute of Technology Mumbai, India | In this paper, This proposed system provides the static prediction which is used by companies to bifurcate students based on their skills and domain. we are using random forest regressor algorithm to make it more accurate. | |
| 2. | Developing Educational Programs Using Russian IT Job Market Analysis | AndreySozykin,Anton Koshelev, Alexander Bersenev, Denis Shadrin, Alexander Aksenov, Evgeniy Kuklin, Ekaterinburg, Russia | In this paper, They present an approach to design IT educational programs that takes into account job market requirements. we are adding resume building in our application. | |
| 3. | Online job portal using django | Dhanlakshmi G, Daphne Patricia P, Anu Sowmiyaa A, Aruna Rajeshwari K K | In this paper, we attempt to address and minimize the gap between the job seeker and the recruiter through this online job portal using python Django. This is done by considering details of both the job seeker and the recruiter and by applying a variety of filters to satisfy their requirements. | |

 

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| 4. | A Social Network Analysis of Jobs and Skills | Derrick Ming Yang Lee, Dion Wei Xuan Ang, Grace Mei Ching Pua, Lee Ning Ng, Sharon Purbowo, Eugene Wen Jia Choy, Kyong Jin Shim, School of Information Systems Singapore Management University-Singapore. | In this paper, we identified job roles with similar required skills, and we also identified relationships between job skills. Insights derived from our analyses are expected to assist job seekers, employers as well as recruitment agencies. | |

## III. METHODOLOGY

Developing a job portal website using Python-Django requires a well-planned research methodology to ensure the success of the project. The research techniques used in this thesis are correlation and regression analysis. It looks into the relationships between different objects, in this case how different software and technologies interact with each other. For the topic in question, Django, there are little published resources available. This is because Django is community run and most of the resources available come in the form of starter tutorials. This research covers reasons why and why not. Why to use Django and why not to use Django. Then it looks into how certain things can be accomplished. we know that searching of jobs is so difficult in proficient areas the portal developed for the providing the simple and good job searching. With the help of this portal easily the job seeker can submit their resume and get the lot of opportunity of the job related to their profile. And by this website the companies or employer can also find the good and well profiled resume.

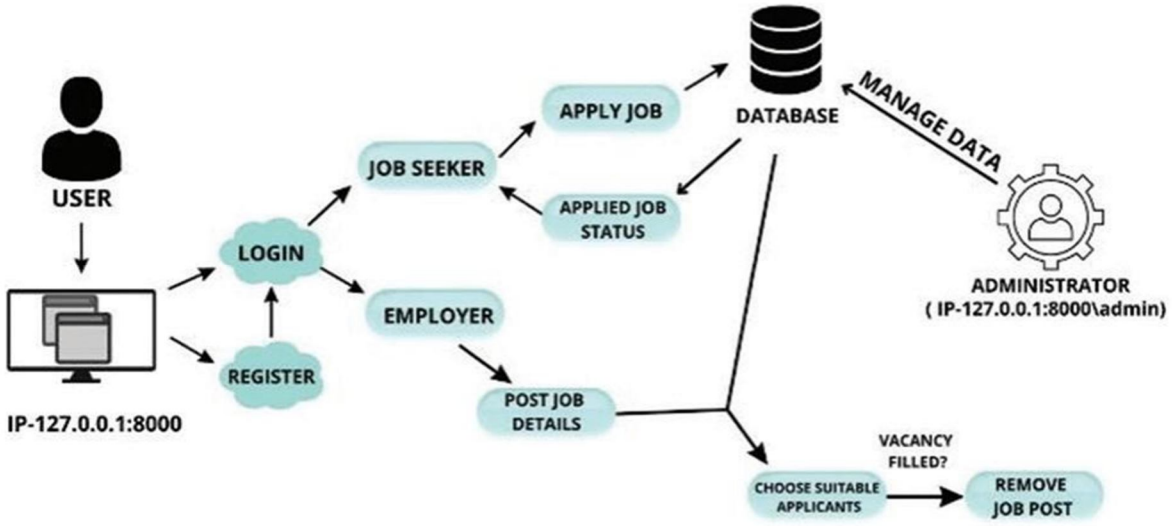


Fig.1. System Architecture

### *A. String Matching Algorithm*

String matching algorithms have greatly influenced computer science and play an essential role in various real-world problems. It helps in performing time-efficient tasks in multiple domains. These algorithms are useful in the case of searching a string within another string. String matching is also used in the Database schema, Network systems. Ø

### *B. Random forest Regressor Algorithm*

Random forest regression is a supervised learning algorithm and bagging technique that uses an ensemble learning method for regression in machine learning. The trees in random forests run in parallel, meaning there is no interaction between these trees while building the trees. Random forest is one of the most accurate learning algorithms available. For many data sets, it produces a highly accurate classifier.It runs efficiently onlarge databases.It can handle thousands of input variables without variable deletion.

### *C. Modules*

When it comes to developing a job portal website, it is essential to have modules for employer, employee, admin, registration, and login. These modules will help in creating a user-friendly platform that caters to the needs of different users.

*The employer module* will allow employers to create job postings, view resumes, and shortlist candidates. It should also have features to manage job postings, view application status, and communicate with candidates.

*The employee module* will allow job seekers to create profiles, search for jobs, apply for jobs, and receive notifications when jobs that match their profile become available. It should also allow employees to view the status of their job applications and communicate with employers.

*The admin module* will allow the website administrator to manage the website's content, monitor user activities, and resolve any issues reported by users. It should also have features to manage user accounts, access control, and generate reports.

*The registration module* will allow users to create accounts on the website. It should require users to provide basic personal information, such as name, email address, and password. It should also have features to validate user information and prevent spam registrations.

*The login module* will allow users to access their accounts on the website. It should require users to provide their login credentials, such as email address and password. It should also have features to prevent unauthorized access and ensure user privacy.

## IV. FUTURE SCOPE

Developing a job portal website using Python-Django has been a popular choice for many developers. With the increasing demand for online job search platforms, there is a huge potential for future work in this field.

One potential area for future development is to enhance the user experience by incorporating more advanced search and filtering options. This could include options to filter jobs by location, industry, salary range, and other relevant criteria. Additionally, integrating machine learning algorithms to suggest jobs to users based on their search history and application patterns could be a valuable feature.

Another area of potential development is to incorporate social media integration. This could include options for users to log in using their social media accounts, share job postings on their social media profiles, and even apply for jobs directly through social media platforms. In addition, implementing a mobile-first approach and ensuring the website is optimized for mobile devices could be a valuable future development. As more and more people use their mobile devices for job searches, having a mobile-friendly platform could be a key differentiator in the job portal market.

Overall, there are many potential areas for future development in job portal website development using Python-Django. By incorporating advanced search and filtering options, social media integration, and a mobile-first approach, developers can create a platform that truly meets the needs of modern job seekers.

## V. ACKNOWLEDGEMENT

As a developer, it can be challenging to create a job portal website that caters to the needs of both job seekers and employers. However, with the help of Python-Django, you can create a robust and scalable platform that can handle a large volume of traffic and user data.you can create a website that has a user-friendly interface, is easy to navigate, and provides a seamless experience for both job seekers and employers. You can also add features such as job search, application tracking, resume upload, and job posting, among others. We take this opportunity to thank our project guide and Head of Department Prof. Rahul Ghode for their valuable guidance and for providing all the necessary facilities,which were indispensable in the completion of this project report.We would also like to thank the institute for providing the required facilities, Internet access and Reference Papers.

## VI. CONCLUSION

In conclusion, Python-Django is a powerful tool for developing job portal websites. Its robust framework and extensive libraries make it easy to create a dynamic and user-friendly site. With Python-Django, developers can create a fully functional job portal site that allows job seekers to browse, search, and apply for jobs, while also providing employers with an easy-to-use platform for posting and managing job listings. Additionally, the flexibility of Python-Django allows for customization and integration with other tools and technologies, making it an ideal choice for job portal development. Overall, using Python-Django for job portal website development offers a reliable and efficient solution that can help businesses and job seekers connect with each other in a more effective way.

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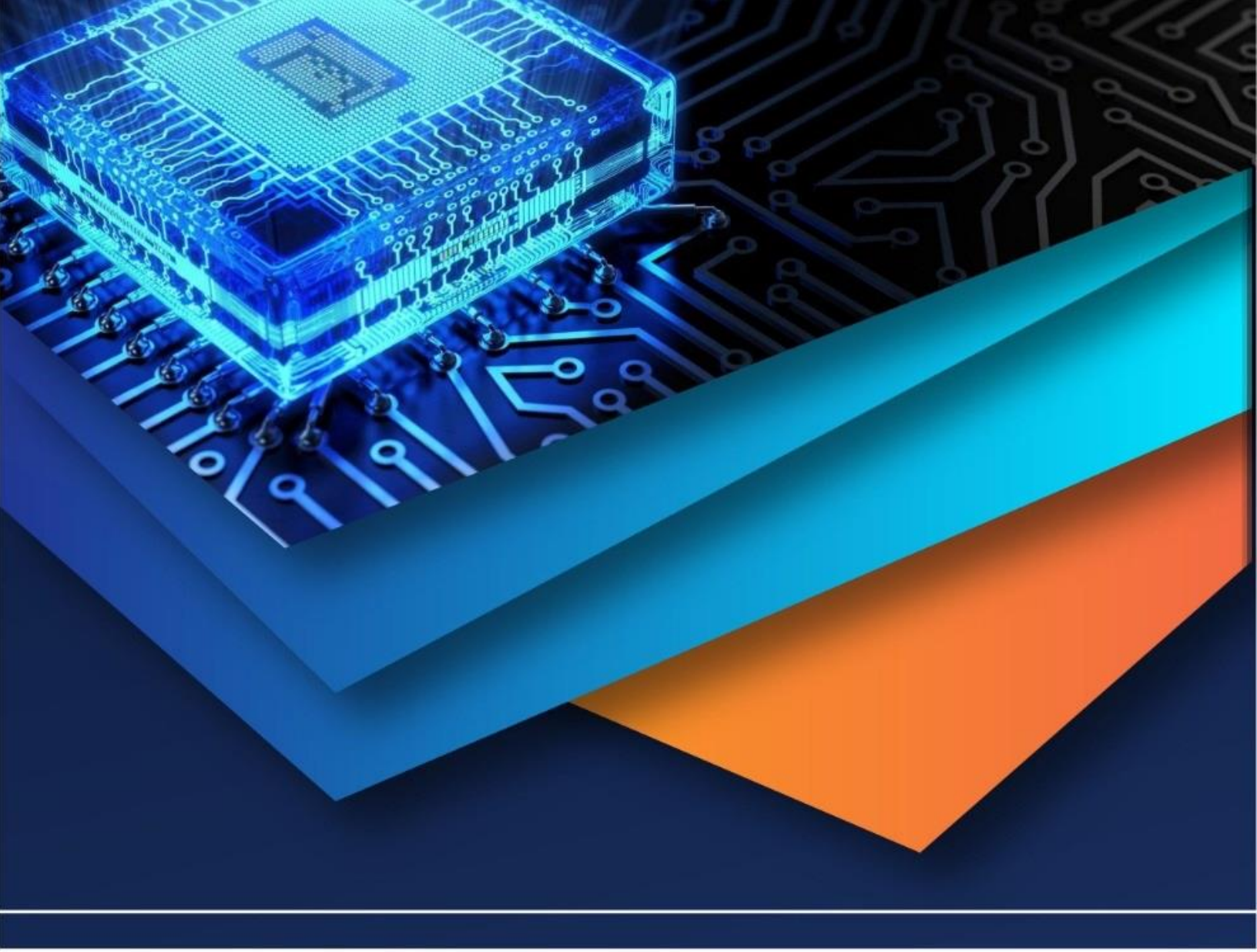

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