

# **LITERATURE SURVEY**

## **1.A SURVEY OF JOB RECOMMENDER SYSTEMS**

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### **ISSN 1992 - 1950**

The Internet-based recruiting platforms become a primary recruitment channel in most companies. While such platforms decrease the recruitment time and advertisement cost, they suffer from an inappropriateness of traditional information retrieval techniques like the Boolean search methods. Consequently, a vast number of candidates missed the opportunity of recruiting. The recommender system technology aims to help users in finding items that match their personnel interests; it has a successful usage in e-commerce applications to deal with problems related to information overload efficiently. In order to improve the e-recruiting functionality, many recommenders' system approaches have been proposed. This article will present a survey of e-recruiting process and existing recommendation approaches for building personalized recommender systems for candidates/job matching. Recruiting process is a core function of human resource management treating the labor as one of the important factors of production. objective of the recruiting process is to hire candidates who are valuable for the company. Two viewpoints are distinguished: from recruiters'' and job seekers. The recruiters generate the job description by determining the set of requirements and constraints on skills, expertise levels, and degrees. The job-seeker, on the other hand, generates his/her CV by specifying the academic background, previous work experience and skills. The IT support for the recruiting activities is ranging from attracting and finding talent to choose and retain candidates (Laumer et al., 2010). The degree of process integration represents the complexity of using e-recruitment solutions. The e-recruitment is a system for quickly reaching a large set of potential job-seekers. Recruiting has attractive growth since the late 1990s when the rapid economy changes produced a high demand for qualified candidates that the labor market could not fully satisfy. The e-recruiting platforms such as corporate homepages and job portals have driven this development.

## **2. CAREER RECOMMENDATION SYSTEM DESIGN BY ADOPTING MACHINE LEARNING TECHNIQUES**

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**ISSN: 2393-9028**

Career Building Recommender System (CBRS) is designed to match jobs to users, removing the need for manual search. The recommender should evaluate a person's suitability for jobs and endorse those that boost a user's career. We use machine learning algorithms like Bayesian or Decision Tree to design the recommender system and take the dataset from AISHE (All India Survey on Higher Education) to train the machine in future work. Recommending a task or job that has simply come onto the marketplace or recommending a job to a job seeker's who has no work records. (the 'cold start' problem). Recommending a job that has lots of candidates, lowering your possibilities of getting it, or recommending a job requirement at a startup that has no previous records of it. (The popularity/long-tail effect). Recommending a job that would improve your skills, rather than one where you will just be doing the same work which you do now someplace else. (The diversity problem). Recommending a job that does not simply in shape your capabilities, however also your values, in phrases of place of job/social placing/money/and so on. (a data sparsity nightmare). We first need to start with a general theory about how job satisfaction/fit/success/performance works. It's different at each level - person to industry, person to company, person to role, person to manager, person to fellow employee. Each company has its own culture, metrics for success, etc. There are different markets for almost each level of this question. There's potentially a lot of value to be created in the person to role and person to company levels. A lot of Graduating students join companies they have always heard of but unsure what to expect when they actually join in. This leads to them hoping between companies. changing profiles and a weak resume with little experience in multiple fields.

### **3.JOB RECOMMENDATION SYSTEM BASED ON SKILL SETS**

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**ISSN: 2320-2882**

Machine learning is a sub-field of data science that concentrates on designing algorithms that can learn from and make predictions on the data. Presently recommendation frameworks are utilized to take care of the issue of the overwhelming amount of information in every domain and enable the clients to concentrate on information that is significant to their area of interest. One domain where such recommender systems can play a significant role to help college graduates to fulfill their dreams by recommending a job based on their skill set. Currently, there are plenty of websites that provide heaps of information regarding employment opportunities, but this task is extremely tedious for students as they need to go through large amounts of information to find the ideal job. And many students are not aware of which job is suitable for them. Many engineering students are learning some technical skills by doing some courses but they don't know which skill is for which job. Simultaneously, existing job recommendation systems only take into consideration the domain in which the user is interested while ignoring their profile and skillset, which can help recommend jobs that are tailor-made for the user. This paper examines the user's resume then compares the knowledge of degree, soft skills, hard skills, and the projects he has done and then only the system recommends the jobs for that user. The system not only recommends the jobs but also shows the score of his/her resume for the respective job. Then, the system also recommends skills to improve the scores of their resume. The proposed work focuses on predicting the suitable jobs for the candidates. It uses machine learning models to find similarities between jobs description and resumes to predict accurately. This application can be used by any candidates who need or who want to know about their suitable jobs and to improve themselves with both soft skills and hard skills. It will be helpful to them by not wasting their time searching for jobs. They can also grow their skills in their domain and grow faster in their domain.

#### **4.JOB SEEKERS' ACCEPTANCE OF JOB RECOMMENDER SYSTEMS: RESULTS OF AN EMPIRICAL STUDY**

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**ISBN: 978-0-9981331-1-9**

” Recruiting is hard. It’s just finding the needle in the haystack” said Steve Jobs while summarizing one of the major challenges of organizations in the 21st century. Job seekers screen plenty of job opportunities and select their perceived most appropriate ones to apply for the job. Given the amount of job opportunities published by organizations, job seekers need to put a lot of effort in identifying the most appropriate ones. Therefore, supporting job seekers has been the focus of several online recruiting services. In the technology-supported job seeking process, job recommender systems have been deployed to support job seekers in their search for their calling. Recommender systems have been used successfully in e-commerce to support users to find different types of products that fit with their preferences. Their relevance and applicability in the job seeking process has increased with more and more people publishing personal and professional information on social networking platforms. Using this public information and matching it with job opportunities published by organizations, job recommender systems are able to provide appropriate job opportunities to job seekers. Hence, job recommender systems automatically identify the needle in the haystack of job opportunities. Nonetheless, job seekers do not fully accept this automation of the job seeking process as only about 50% are willing to use job recommender system actively in the job seeking process and about 15% do not even know what job recommender systems.

Therefore, it is relevant to understand which factors determine job seekers’ intention to use job recommender systems. Hence, a recommender system determines the interest of a user in a specific item by using a variety of information that is related either to the user or to the item. In general, recommender systems address the efforts required to search for specific items that match with user preferences. Our job recommender system acceptance model bases on UTAUT2 as it is among the various technology acceptance model the model that focuses explicitly on a consumer context. As discussed, we will extend UTAUT2 by using trust to explain the use of job recommender systems by job seekers as trust is an important variable when investigating the acceptance and use of recommender systems.