

SKILL AND JOB RECOMMENDER SYSTEM

Date	16-10-2022
Team ID	PNT2022TMID36949
Project Name	Skill and Job Recommender
Maximum Marks	4 Marks

LITERATURE SURVEY

1. “Job Recommendation System Based on Skill Sets” proposed by G Mahalakshmi, A Arun Kumar, B Senthilnayaki, J Duraimurugan on 8 August 2022.

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. 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. Most works are just built for the companies or for the purpose of making money from the people by giving some irrelevant choices. The main objective of this project is to recommend a suitable job for the candidates.

2. “Job Recommendation based on Job Seeker Skills: An Empirical Study”, March 2018 proposed by Jorge Valverde-Rebaza, Ricardo Puma, Paul Bustios, Nathalia C. Silva.

Job Recommender Systems have become popular since they successfully reduce information overload by generating personalized job suggestions. Thus, the contributions of this work are threefold, they: i) made publicly available a new dataset formed by a set of job seekers profiles and a set of job vacancies collected from different job search engine sites; ii) put forward the proposal of a framework for job recommendation based on professional skills of job seekers; and iii) carried out an evaluation to quantify empirically the recommendation abilities of two state-of-the-art methods, considering different configurations, within the proposed framework. In this paper, they proposed a framework for job recommendation task. This framework facilitates the understanding of job recommendation process as well as it allows the use of a variety of text processing and recommendation methods according to the preferences of the job recommender system designer. Moreover, they also contribute making publicly available a new dataset containing job seekers profiles and job vacancies.

3. “Job Recommendation based on Job Profile Clustering and Job Seeker Behaviour” - Mhamdi, D. & Moulouki, R. & Ghoumari, M. & Azzouazi, M. & Moussaid, L. (2020).

This article presents a recommender system that aims to help job seekers to find suitable jobs. First, job offers are collected from job search websites then they are prepared to extract meaningful attributes such as job titles and technical skills. Job offers with common features are grouped into clusters. As job seeker like one job belonging to a cluster, he will probably find other jobs in that cluster that he will like as well. A list of top n recommendations is suggested after matching data from job clusters and job seeker behaviour, which consists on user interactions such as applications, likes and rating.

4. “Job Recommendation System Using Profile Matching and Web-Crawling”, May 2016 by Deepali V Musale, Mamta K Nagpure, Kaumudini S Patil, Rukhsar F Sayyed.

The developed system is job recommendation system for campus recruitment which helps college placement office to match company’s profiles and student’s profiles with higher precision and lower cost. For profile matching, two matching methods are used: semantic matching, tree-based knowledge matching and query matching. These methods are integrated according to representations of attributes of students and companies, and then the profile similarity degree is acquired. Based on profile similarity degree, preference lists of companies and students are generated. Also, students can perform keyword-based search for job profiles from various job recruitment sites. For obtaining data from online recruitment sites system uses web crawling. With loop matching, matching results would be further optimized and provide more effective guidance for recommendation. This approach is suitable for the cases in which different users may have different attributes and a single recommendation approach may not be appropriate for all users. This system considers input as a CV to create the user profile. These user profiles are then compared with the available jobs. Moreover, the RS has been enhanced with implicit relevance feedback, which allows the system to find out user preferences.

5. “Priming Jobs as Skill Development Opportunities and Responses to Job Postings”- a paper proposed by Drewery, David & Pretti, T. & Nettinga, Jamie. (2022).

Many inexperienced job seekers adopt a focused job search strategy in which they disregard job postings that seem unrelated to their interests. Yet, many of the jobs that they disregard during their job search could have been relevant to such interests because they offer opportunities for skill development. Counterintuitively, an exploratory job search can help such job seekers find and pursue more relevant jobs. In an experiment (N = 122), they examined the effect of priming seemingly irrelevant jobs as skill development opportunities on inexperienced job seekers’ responses to job postings. Compared to those who did not receive the prime, those who received the prime reported higher perceived job relevance and, in turn, perceived job attractiveness for subsequently viewed job postings. The results suggest that career educators could use peer-to-peer learning, or public reflection, to encourage students to share insights with each other, reframe the meanings of job relevance, and pursue more relevant jobs.

