Literature survey

S.NO:1

TITLE OF THE PAPER   : Job Recommendation based on Job Seeker Skills:
An Empirical Study.

YEAR OF PUBLICATION: 2018

AUTHORS OF THE PAPER:

- Jorge Valverde-Rebaza

- Ricardo Puma

- Paul Bustios

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THEME OF THE PAPER:

Job recommender systems have become popular since they successfully reduce information overload by generating personalized job suggestions. Although in the literature exists a variety of techniquesand strategies used as part of job recommender systems, most of them fail to recommending job vacancies that properly to the job seekers profiles. Thus, the contributions of this work are threefold, we:

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

 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. We thus present a general panorama
of job recommendation task aiming to facilitate research and real-world
application design regarding this important issue.

Keywords: Job matching, job seeking, job search, job recommender
Systems, word embedding.

INFERENCE:

From this paper, we infer that 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, we also contribute making publicly available a new dataset containing job seekers profiles and job vacancies.

Future directions of our work will focus on performing a more exhaustive evaluation considering a greater amount of methods and data as well as a comprehensive evaluation of the impact of each professional skill of a job seeker on the received job recommendation.

S.N0:2

TITLE OF THE PAPER : Implicit Skills Extraction Using Document Embedding and Its Use in Job Recommendation

YEAR OF PUBLICATION : 2014

AUTHORS OF THE PAPER :

＊ Akshay Gugnani

＊ Hemant Misra

THEME OF THE PAPER :

Formal job search and application typically involves matching one's profile or curriculum vitae (CV) with the available job descriptions (JD), and then applying for those job opportunities whose JDs are the closest match to one's CV, and also considering his/her needs, constraints, and aspirations.

The fundamental premise this paper builds upon is that skills are one of the most important aspects while matching CVs to JDs, and play a major role in recommending JDs which are the best match for a CV. The following are the important contributions of this paper :

• A new methodology which combines several natural language processing (NLP) techniques for robust skill extraction from natural occurring texts in CVs and JDs is proposed

• An approach for inferring implicit skills in a JD (skills not explicitly mentioned in the JD) is introduced, and a method to extract these implicit skills from other similar JDs is presented

• A bi-directional matching algorithm to match skills between CVs and JDs is suggested to obtain the most relevant job recommendation for each CV

INFERENCE :

In this paper, we have proposed a novel framework for job recommendation – a skill extraction technique is introduced to identify and infer implicit skills for each JD that may not be explicitly mentioned in the original JD .In addition, the paper proposed a generalizable ensemble method for skill extraction from unstructured text of resumes as well as JDs.

Our future work in this space will involve generating ranked recommendations on different career path options that optimally utilize the accumulated skill and experience of a candidate.

We propose using these skill graphs to infer Skill-Gap in a candidate profile and use this as an additional recommendation to the user. Additionally the system can be used to analyze cost of acquiring a skill and recommend better skills on which to get trained.

S.NO:3

TITLE OF THE PAPER: A JOB RECOMMENDER SYSTEM: A REVIEW

YEAR OF PUBLICATION: 2021

AUTHORS OF THE PAPER:

- Corne De Ruijt

- Sandjai Bhulai

THEME OF THE PAPER :

In this paper,We will consider the different methods used in these systems, and consider these from a reciprocal, temporal, and ethical perspective. Our results suggest that JRS(Job Recommended System) could benefit from a more application-oriented view: the reciprocal and tem-poral nature of JRS are infrequently discussed in the literature, while contributions that do consider these show considerable benefits.

In accordance with recommender system literature, deep language models have also been more frequently applied in the domain of job recommender systems. What remains somewhat unknown, is how well results on JRS generalize across datasets: the only study that considers this question shows that error metrics my vary greatly over different datasets.

All three datasets contain data with respect to candidate profiles, vacancies and online interaction between the two. Another resource often used is the Occupation Information Network, an English-based job ontology that is frequently used in knowledge-based job recommender systems

INFERENCE:

In this paper, we have considered the job recommender system (JRS) literature from several perspectives. These include the influence of data science competitions, the effect of data availability on the choice of method and validation, and ethical considerations in job recommender systems.

Application-oriented challenges in JRS were already highlighted in early JRS contributions, though, still most literature does not take these into account. Contributions that do take different views on the JRS problem, however, do show that such views can have considerable benefits.

Currently, most attention goes out to how to represent the substantial amount of textual data from both candidate profiles and vacancies to create job recommendations, for which recently especially deep representations have shown promising results.

S.NO:4

TITLE OF THE PAPER: A survey of job recommender systems

YEAR OF PUBLICATION: 2012

AUTHORS OF THE PAPER:

- Shaha T. Al-Otaibi
- Mourad Ykhlef

THEME OF THE PAPER:

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 amount 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 recommender 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.

INFERENCE:

From the article,we infer a literature analysis of many journals and proceedings related to the recruiting process and the job recommendation researches. We have seen from our literature review and from the challenges that faced the holistic e-recruiting platforms, an increased need for enhancing

the quality of candidates/job matching. The recommender system technologies accomplished significant success in a broad range of applications and potentially a powerful searching and recommending techniques. Consequently, there is a great opportunity for applying these technologies in recruitment environment to improve the matching quality. This survey shows that several approaches for job recommendation have been proposed, and many techniques combined in order to produce the best fit between jobs and candidates. We presented state of the art of job recommendation as well as, a comparative study for its approaches that proposed by literatures.