LITERATURE SURVEY

DOMAIN: Cloud Application Development

PROJECT: Skill/Job Recommender Application

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ABSTRACT:

In the last years, job recommender systems have become popular since they successfully reduce information overload by generating personal-ized job suggestions. Although in the literature exists a variety of techniques and strategies used as part of job recommender systems, most of them fail to recommending job vacancies that fit 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. We thus present a general panorama of job recommendation task aiming to facilitate research and real-world application design regarding this important issue.

INTRODUCTION:

Nowadays, job search is a task commonly done on the Internet using job search engine sites like LinkedIn ,Indeed, and others. Commonly, a job seeker has two ways to search a job using these sites: 1) doing a query based on keywords related to the job vacancy that he/she is looking for, or 2) creating and/or updating a professional profile containing data related to his/her education, professional experience, professional skills and other, and receive personalized job recommendations based on this data. Sites providing support to the former case are more popular and have a simpler structure; however, their recommendations are less accurate than those of the sites using profile data.

Based on the person-job fit premise, we propose a framework for job recommendation based on professional skills of job seekers. We automatically extracted

the skills from the job seeker profiles using a variety of text processing techniques. Therefore, we perform the job recommendation using TF-IDF and four different configurations of Word2vec over a data set of job seeker profiles and job vacancies collected by us. Our experimental results show the performances of the evaluated methods and can be used as a guide to choose the most suitable method and configuration for job recommendation.

LITERATURE SURVEY:

Shaha T Al-Otaibi and Mourad Ykhlef. "A survey of job recommender systems". In: International Journal of the Physical Sciences 7.29 (2012), pp. 5127–5142. issn: 19921950. doi: 10.5897/IJPS12. 482

- N Deniz, A Noyan, and O G Ertosun. "Linking Person-job Fit to Job Stress: The Mediating Effect of Perceived Person-organization Fit". In: Procedia Social and Behavioral Sciences 207 (2015), pp. 369–376.
- M Diaby, E Viennet, and T Launay. "Toward the next generation of recruitment tools: An online social network-based job recommender system". In: Proc. of the 2013 IEEE/ACM Int. Conf. on Advances in Social Networks Analysis and Mining, ASONAM 2013 (2013), pp. 821–828. doi: 10.1145/2492517.2500266.
- M Diaby and E Viennet. "Taxonomy-based job recommender systems on Facebook and LinkedIn profiles". In: Proc. of Int. Conf. on Research Challenges in Information Science (2014), pp. 1–6. issn: 21511357. doi: 10.1109/RCIS.2014.6861048.
- M Kusner et al. "From word embeddings to document distances". In: Proc. of the 32nd Int. Conf. on Machine Learning, ICML'15. 2015, pp. 957–966.
- T Mikolov et al. "Distributed Representations of Words and Phrases and Their Compositionality". In: Proc. of the 26th Int. Conf. on Neural Information Processing Systems Volume 2. NIPS'13. Lake Tahoe, Nevada, 2013, pp. 3111–3119. url: http://dl.acm.org/citation.cfm?id=2999792. 2999959.
- T Mikolov et al. "Efficient estimation of word representations in vector space". In: arXiv preprint arXiv:1301.3781 (2013).

• G Salton and C Buckley. "Term-weighting approaches in automatic text retrieval". In: Information Processing and Management 24.5 (1988), pp.

CONCLUSION:

In this paper, we 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, 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