

IBM NALAIYA THIRAN

SKILL AND JOB RECOMMENDER

TEAM ID: PNT2022TMID47055

DOMAIN: CLOUD APPLICATION DEVELOPMENT

BATCH: B2-2M4E

TEAM MEMBERS:

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LITERATURE SURVEY:

I. Job Recommendation based on Job Seeker Skills

Source: CEUR-WS

Authors: Jorge Valverde-Rebaza, Ricardo Puma, Paul Bustios, Nathalia C.Silva

Websites: <http://ceur-ws.org/Vol-2077/paper6.pdf>

About the Paper:

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

II. Job Recommendation Based on Extracted Skill Embeddings

Source: ResearchGate

Authors: Atakan Kara, F.Serhan Danis, Gunce Keziban Orman, Sultan N.Turhan

Websites: https://www.researchgate.net/publication/363190802_Job_Recommendation_Based_on_Extracted_Skill_Embeddings

About the Paper:

With the increasing popularity of online recruiting platforms in modern industry, most employers choose these platforms as a means of connecting with potential candidates for open positions. Developing job recommendation systems can significantly help both employers and job seekers in speeding up this process and finding the best matches. Using skill phrases extracted from unformatted and unstructured CVs and Job Descriptions, we propose two approaches with different similarity metrics, namely Word Mover's Distance and Cosine Similarity. We selected TF-IDF with Cosine Similarity as a baseline and evaluated our methods on the real data from an online recruitment company, Kariyer.net. Our results suggest that the previously unstudied Word Mover's Distance-based approach outperforms Cosine Similarity-based approaches and gives promising results in the job recommendation domain. Keywords Job recommendation Word mover's distance Cosine similarity Word2vec

III. Job Recommendation based on Job Profile Clustering and Job Seeker Behavior

Source: ScienceDirect

Authors: D.Mhamid, R.Moulouki, M.Y.El Ghourmari, M.Azzouazi, L.Moussaid

Websites: <https://www.sciencedirect.com/science/article/pii/S1877050920318020>

About the Paper:

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 behavior, which consists on user interactions such as applications, likes and rating..

IV. Technical Job Recommendation System Using APIs and Web Crawling

Source: PMC

Authors: Naresh Kumar, Manish Gupta, Issac Ofori

Websites: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9239795/>

About the Paper:

There has been a sudden boom in the technical industry and an increase in the number of good startups. Keeping track of various appropriate job openings in top industry names has become increasingly troublesome. This leads to deadlines and hence important opportunities being missed. Through this research paper, the aim is to automate this process to eliminate this problem. To achieve this, Puppeteer and Representational State Transfer (REST) APIs for web crawling have been used. A hybrid system of Content-Based Filtering and Collaborative Filtering is implemented to recommend these jobs. The intention is to aggregate and recommend appropriate jobs to job seekers, especially in the engineering domain. The entire process of accessing numerous company websites hoping to find a relevant job opening listed on their career portals is simplified. The proposed recommendation system is tested on an array of test cases with a fully functioning user interface in the form of a web application. It has shown satisfactory results, outperforming the existing systems. It thus testifies to the agenda of quality over quantity.