**LITERATURE SURVEY**

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| Title | Author(s) | Year | Technique(s) | Finding/Pros/Cons |
| Cloud based predictive analytics: text classification, recommender systems and decision support | Hammond, Klavdiya and Varde, Aparna S | 2013 | 1.Apache Hadoop  2.Minimal installation and configuration required, Amazon Web Services (AWS).  3.Naive Bayes algorithm . | 1.This work demonstrates that big data analytics can be implemented using a relatively low cost approach through cloud computing services.  2.Future work from our side includes evaluating the prototypes’ performance with much larger data sets on a cluster of distributed machines on the cloud. |
| A combined representation learning approach for better job and skill recommendation | Dave, Vachik S and Zhang, Baichuan and Al Hasan, Mohammad and AlJadda, Khalifeh and Korayem, Mohammed | 2019 | 1.Memory-based CF methods  2.Model-based CF methods  3.Information retrieval techniques  4.Preference function based on users‟ interaction history and a new similarity measurement | we must consider unary attributes such as individual skills, mental abilities and personality that control the fit between the individual and the tasks to be accomplished, as well as the relational attributes that determine the fit between the individual and the upcoming team members. In this context literatures usually distinguish between (1) person-job, (2) personteam and (3) person-organization fits |
| Explaining and exploring job recommendations: a user-driven approach for interacting with knowledge-based job recommender systems | Francisco and Charleer, Sven and De Croon, Robin and Htun, Nyi Nyi and Goetschalckx, Gerd and Verbert, Katrien | 2019 | 1.GeoServices is used to provide information about the location of the vacancies  2.The MySQL database is used to store information about previous searches.  3.CCS Concept. | 1.Information systems → Recommender systems; Decision support systems; Personalization; •Human-centered computing → Human computer interaction (HCI).  2.Although these interactive visualizations have been proposed, to the best of our knowledge they have not been co-designed with job seekers or job mediators |
| Job recommendation through progression of job selection | Nigam, Amber and Roy, Aakash and Singh, Hartaran and Waila, Harsimran | 2019 | 1.Applying machine learning model  2.Creating recommendations using nonmachine learning methods - Similar Jobs.  3.Blending Recommendations | 1.We shortlisted 9 features from each candidate, 11 features from each job and 1 common feature that adds up to a total of 21 features. We split the data into 70%, 20% and 10% for training, testing and validating sets respectively.  2. We found significant improvement in our job web portal with the blended approach and saw a relative increase of 63% in click-through rates (CTR) |
| A personalized question recommender system for intelligent job interview | Chen and Xu, Tong and Zhuang, Fuzhen and Ma, Chao and Zhang, Jingshuai and Xiong. | 2019 | 1.skills Machine Learning and Reinforcement Learning.  2.PageRank algorithm.  3.collaborative filtering recommendation algorithm. | 1.Entity Extraction and Relation Extraction. Another related topic is entity graph (skill-graph in this paper) construction, which includes two subtasks, entity extraction and relation extraction.  2. prior arts usually relied on high-quality hand-crafted features and well-designed models, e.g., Hidden Markov Model. |
| Implicit skills extraction using document embedding and its use in job recommendation | Gugnani, Akshay and Misra, Hemant | 2020 | 1.Skill Extraction  2.Matching Candidate CV and JD | **Combined Flow :**  In this section we illustrate how the Skill Extraction system works. Consider we have the following sentence from a JD: **“Need candidates with ability to code in Python, Java, and Octave.”**  2.Additionally the system can be used to analyze cost of acquiring a skill and recommend better skills on which to get trained. |
| Interpretable job skill recommendation with deep reinforcement learning | Ying and Zhuang, Fuzhen and Zhu, Hengshu and He, Qing and Xiong. | 2021 | 1.Sequential  Job Matching Algorithm.  2.Difficulty Estimation Algorithm.  3.Multi-Objective RL Formulation  4.Skill Recommendation Deep Q-Network |  |