VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROFESSIONAL READINESS PROGRAM FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

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Topic : Skill or Job Recommender

Technology : Cloud Application and Development

Literature Survey:

S.No.	Title	Author	Abstract
1.	Job Recommendation through Progression of Job Selection	Aakash Roy Amber Nigam Harsimran Walia Hartaran Singh	This paper introduces a novel machine learning model that incorporates the dynamics of a highly volatile job market by using candidates' job preferences over time. Additionally, this strategy includes a variety of smaller recommendations that worsen the issues with a) producing serendipitous recommendations. b) addressing the cold-start issue for new jobs and candidates. Skills are used as embedded features to derive latent competencies from them, thereby expanding job and

			candidate skills to achieve higher coverage in the skill domain. This model was created and tested in a proper job recommender system, and the best possible performance of the click-through rate metric was accomplished by combining machine learning and non-machine learning recommendations. The best results were obtained using Bidirectional Long Short-Term Memory Networks (Bi-LSTM) with Attention for recommending jobs via machine learning, which forms a significant portion of our recommendation.
2.	CaPaR: A Career Path Recommendation Framework	Magdalini Erinaki Bharath Patel Varun Kakuste	Existing job recommendation systems only consider the user's field of interest and ignore the user's profile and skills, which could result in more relevant career recommendations for users. CaPaR, a Career Path Recommendation framework, is proposed in this paper to address such shortcomings. The system scans the user's profile and resume, identifies the candidate's key skills, and generates personalized job recommendations using text mining and collaborative filtering techniques. Furthermore, the system suggests to student's additional skills needed for related job openings, as well as learning resources for each skill. As a result, the system not only allows its users to explore vast amounts of information, but also to expand their portfolio and resume in order to advance their careers.
3.	Collaborative job prediction based on Naive Bayes	Savita Choudhary Shridhar Mishra	The purpose of this paper is to implement a recommendation system for job portals based on

	Classifier using python platform	Rishabh Jain	collaborative filtering techniques. The system is designed to suggest jobs to the user based on his profile and by calculating a similarity index between two skill sets using Euclidean distance and then ranking them using their naive Bayes algorithm. Python was used to implement the recommendation system.
4.	Generating Unified Candidate Skill Graph for Career Path Recommendation	Akshay Gugnani Karthikeyan Ponnalagu Vinay Kumar Reddy Kasireddy	Given the amount of career position data of individuals available online, personalized career path recommendation systems that could mine and recommend the most relevant career paths for a user are on the rise. However, such recommendation systems typically are only effective within a single organization where there are standardized job roles. At an industry sector level such as Information Technology or across such different industry sectors (such as retail, insurance, health care), mining and recommending the most relevant career paths for a user is still an unsolved research challenge. Towards addressing this problem, this paper proposes a system that leverages the notion of skills to construct skill graphs that can form the basis for career path recommendations. Skills are perceived to be more amenable for career path standardizations across the organizations. The proposed system ingests a user's profile (in a pdf, word format or other public and shared data sources) and leverages an Open IE pipeline to extract education and experiences. Subsequently, the extracted entities

			are mapped as specific skills that are expressed in the form of a novel unified skill graph. Such skill graphs which capture both spatial and temporal relationships are believed to aid in generating precise career path recommendations. An evaluation of this current skill extraction model with an industrial scale dataset yielded a precision and recall of 80.54% and 86.44% respectively.
5.	A content based approach for recommending personnel for job positions	Nikolaos D. Almalis; George A. Tsihrintzis and Nikolaos Karagiannis	This paper proposes a content-based approach that takes into consideration an organisation's needs and the skills of candidate employees in order to quantify the suitability of a candidate employee for a specific job position. The proposed algorithm utilises Minkowski distance to perform a primary study in order to investigate how the personnel seeking and recruiting field could benefit further. Also, the paper conducts a three step experimental evaluation, namely, content analysis, refinement of the algorithm, and execution. The results of this experiment show that recommender systems can play an important role in the area of job seeking and recruiting.