Cloud Application Development
Skill and Job Recommender

ABSTRACT

Recommendation system is a technique, which provides users with information, which he/she may be interested in or accessed in past. Traditional recommender techniques such as content and collaborative filtering used in various applications such as education, social media, marketing, entertainment, egovernance and many more. Content-based and collaborative filtering has many advantages and disadvantage and they are useful in specific application. Sparsity and cold start problem are major challenges in content and collaborative filtering. Challenges of content and collaborative filtering can be solved by using hybrid filtering. In our project, we use Hybrid filtering which combines the features of two recommender system like content and collaborative; content-based filtering improves the classification accuracy and collaborative model easily gives the best-predicted result of a latent factor model. The combination of the two techniques is used to achieve better job and skill recommendations.

LITERATURE SURVEY

1.Shaha T Al-Otaibi and Mourad Ykhlef. 2012. A survey of job recommender systems. International Journal of Physical Sciences , Vol. 7, 29 (2012), 5127--5142.

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

2.Technical Job Recommendation System Using APIs and Web Crawling

The proposed system is designed to go forth with developing a fully functional user interface supporting a job aggregator and recommendation system. Every aspect of the operation is made from scratch and in a customized sort of manner using APIs and Web Crawling.

3.Skill Scanner: Connecting and Supporting Employers, Job Seekers and Educational Institutions with an AI-based Recommendation System by Koen Bothmer and Tim Schlippe

Usually employers, job seekers and educational institutions use AI in isolation from one another. However, skills are the common ground between these three parties which can be analyzed with the help of AI.

4.A Life-long Learning Recommender System to Promote Employability

People may feel overwhelmed by the speed the labor market evolves and how quickly their knowledge and skills became obsolete. Therefore, it is relevant to provide analytical tools that support people to be aware of how well positioned they are for succeeding in their professional and job expectations, of what knowledge and skills they should get to be able to achieve such expectations or of how to maximize their employability

PROBLEM STATEMENT

Having lots of skills but wondering which job will best suit you? Don’t need to worry! We have come up with a skill recommender solution through which the fresher or the skilled person can log in and find the jobs by using the search

option or they can directly interact with the chatbot and get their dream job.

To develop an end-to-end web application capable of displaying the current job openings based on the user skillset. The user and their information are stored in the Database. An alert is sent when there is an opening based on the user skillset. Users will interact with the chatbot and can get the recommendations based on their skills. We can use a job search API to get the current job openings in the market which will fetch the data directly from the webpage.

PROPOSED SOLUTION

1.Dynamic user profile-based job recommender system

In this idea, we propose a dynamic user profile-based job recommender system. To address the challenge that the job applicants do not update the user profile in a timely manner, we update and extend the user profile dynamically based on the historical applied jobs and behaviours of job applicants. In particular, the statistical results of basic features in the applied jobs are used to update the job applicants' profile. In addition, feature selection is employed in the text information of jobs that applied by the job applicant for extending the feature. Then a hybrid recommendation algorithm is employed according to the characteristics of user profiles for achieving the dynamic recommendation.

2.An online social network-based job recommender system

This idea presents a content-based recommender system which proposes jobs to Facebook and LinkedIn users. A variant of this recommender system is currently used by Work4, a San Francisco-based software company that offers Facebook recruitment solutions. Work4 is the world leader in social recruitment technology; to use its applications, Facebook or LinkedIn users explicitly grant access to some parts of their data, and they are presented with the jobs whose descriptions are matching their profiles

the most. The profile of a user contains two types of data: interactions data (user's own data) and social connections data (user's friends' data). Furthermore the users profiles and the description of jobs are divided into several parts called fields. Our experiments suggest that to predict the users interests for jobs, using basic similarity measures together with their interactions data collected by Work4 can be improved upon. The second part of this study presents a method to estimate the importance of each field of users and jobs in the task of job recommendation. Finally, the third part is devoted to the use of a machine learning algorithm in order to improve the results obtained with similarity measures.

3.A Job Recommender System Based on User Clustering

In this idea, we first provide a comprehensive investigation of four online job recommender systems (JRSs) from four different aspects: user profiling, recommendation strategies, recommendation output, and user feedback. In particular, we summarize the pros and cons of these online JRSs and highlight their differences. We then discuss the challenges in building high-quality JRSs. One main challenge lies on the design of recommendation strategies since different job applicants may have different characteristics. To address the aforementioned challenge, we develop an online JRS, which groups users into different clusters and employs different recommendation approaches for different user clusters. As a result our recommender system has the capability of choosing the appropriate recommendation approaches according to users' characteristics.

4.Job Recommender System Using Hybrid Filtering

Recommendation system is a technique, which provides users with information, which he/she may be interested in or accessed in past. Traditional recommender techniques such as content and collaborative filtering used in various applications such as education, social media,

marketing, entertainment, e-governance and many more. Contentbased and collaborative filtering has many advantages and disadvantage and they are useful in specific application. Sparsity and cold start problem are major challenges in content and collaborative filtering. Challenges of content and

collaborative filtering can be solved by using hybrid filtering. Hybrid filtering combines the features of two recommender system like content and collaborative; content-based filtering improves the classification accuracy and collaborative model easily gives the best-predicted result of a latent factor model.