

Some thoughts about Job Recommender System

Jimmy Lin

January 31, 2014

The followings are some of my thoughts in technical aspects about job recommender System:

1. As to a dataset, the first thing we need to guarantee is the correctness of data. From the perspective of employer, the position description may be precise because they want to find the most suitable person. However, some company may also wish to find overqualified person in the market, in a way of proposing high qualification in the posting. In addition to that, from the standpoint of applicant, their capabilities may be overstated out of the purpose of finding a better job (a job with higher salary). Thus, the authenticity of literal data would be a big problem.

2. Quantitative evaluation should be important for precise recommendation. What degree of mastery of JAVA is required for a company? What degree of JAVA is mastered by a job applicant? The degree would essentially influence the result of suitability evaluation. However, the difficulty exists in the fact that such degree cannot be measured simply through looking at the frequency of a word.

3. Think about what kind of data we can derive at most?

- a set of person profiles
- a set of job posting from company
- a set of job application
- a set of job acceptance cases

Literally,

- Job application can only show us one applicant is interested in a position. Thus, this data provides us little information about the suitability between person and job. (suitability should be bi-directional preference.)
- Job acceptance case can provide us some information about the suitability in the sense that the job applicant is qualified and the company prefer this applicant to

others. But there still exists a problem: if one company recruit two applicants but they have different qualification, how to distinguish suitability in two cases? Note that the only ground truth provided here is only about being accepted or not.

4. Microscopically speaking, how can a computer perceive particular logic in job posting? For example, one company may require a programmer to possess master of JAVA or C++. Simple natural language processing method may perceive it as JAVA and C++ since both of them occur one time. Nevertheless, a person who has the either java or c++ skill would qualify.