Skill-based Occupation/Job Recommendation system

Wednesday, 21 March 2018 16:00 (30 minutes)

A mass of adolescents has decided their occupations/jobs/majors out of proper and professional advice from school services. For instance, adolescents do not have adequate information about occupations/jobs, what occupations can be reached by which majors, and what kind of education and training are needed for particular jobs. On the other hand, major choices of adolescents are influenced by a society and their family. They receive occupational information in common jobs from the environment. But they are a lack of information in professional occupations.

Furthermore, the choice of major has become increasingly complex due to the existence of multiple human skills which mean each person has their ability at the certain area and can be applied to multiple jobs/occupations. Their major choices are influenced by society, education environment, and mostly their families. Those pitfalls are potentially the causes of a mismatch major between academic achievements, personality, interest and skills of students. It would be useful to understand how students' choice of the academic majors depends on personal characteristics, competencies, and vocational interests. Most of the students do not possess adequate information about meaning of occupations/majors, what careers can be reached by which majors, and what kind of skills and abilities are needed for a particular occupation/major. For those reasons, students need an automatic counselling system according to their values.

To do this, occupation recommendation system is implemented with a variety of IT and soft skills. The main goal of this research is to build an occupation recommendation system (ORS) by using data mining and natural language processing (NLP) methods on open educational resource (OER) and skill dataset, in order to help adolescents. The system can provide different variety of academic programs, related online courses (e.g., MOOCs), required skills, ability, knowledge, and job tasks, and jobs currently announced as well as relevant occupational descriptions. The system can assist adolescents in major selection and career planning. Furthermore, the system incorporates a set of searching results, which are recommended using similarity measurements and hybridization recommendation techniques. These methods serve as a base for recommending occupations that meet interests and competencies of adolescents.

Primary author: Ms OCHIRBAT, Ankhtuya (National University of Mongolia)

Co-author: Prof. K.SHIH, Timothy (National Central University)

Presenter: Ms OCHIRBAT, Ankhtuya (National University of Mongolia)

Session Classification: Humanities, Arts & Social Sciences Session

Track Classification: Humanities, Arts, and Social Sciences (HASS) Application