Using Data Mapping and Facebook Data to Enrich Web Browsing

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Abstract

Social data is playing a more and more important role in recommender systems, to improve the quality of suggestions and to enrich the recommended information within the social network systems. However, as people spend more and more time on the web, there is a requirement that bringing this data out of those social systems and letting it serve users when they are browsing on external websites. The difficulty is how to establish the relations between social data and the web content a user is browsing, which are annotated by different schema languages. The dissertation proposes a two phase mapping approach to tackle the data matching problem. In the schema mapping phase, the Alignment API and the Wordnet library are used to calculate the similarity between the data types defined by different schema languages, as well as the matched properties between the similar types. In the instance mapping phase, instances extracted from original websites of the shared social links are mapped to the web content based on the results computed in phase one. In order to adjust this approach to multiple websites including those with self-defined subtypes, a component called strengthen model is designed to enrich the schema information of instances. The evaluation is carried out on the prototype called the Suggestion Tool which utilises Facebook data for the web enrichment. Evaluation results shows that the approach provides suggesting content effectively and with user satisfaction.