Using Micro-Reviews to Select an Efficient Set of Reviews

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22nd ACM Conference of Information and Knowledge Management (CIKM’13), San Francisco, California, United States, October 2013

LARC Accepted Conference Papers: http://smu.edu.sg/centres/larc/conference-papers/
ABSTRACT

Online reviews are an invaluable resource for web users trying to make decisions regarding products or services. However, the abundance of review content, as well as the unstructured, lengthy, and verbose nature of reviews make it hard for users to locate the appropriate reviews, and distill the useful information. With the recent growth of social networking and micro-blogging services, we observe the emergence of a new type of online review content, consisting of bite-sized, 140 character-long reviews often posted reactively on the spot via mobile devices. These micro-reviews are short, concise, and focused, nicely complementing the lengthy, elaborate, and verbose nature of full-text reviews.

We propose a novel methodology that brings together these two diverse types of review content, to obtain something that is more than the sum of its parts. We use micro-reviews as a crowdsourced way to extract the salient aspects of the reviewed item, and propose a new formulation of the review selection problem that aims to find a small set of reviews that efficiently cover the micro-reviews. Our approach consists of a two-step process: matching review sentences to micro-reviews and then selecting reviews such that we cover as many micro-reviews as possible, with few sentences. We perform a detailed evaluation of all the steps of our methodology using data collected from Foursquare and Yelp.