

An Investigation of a Method to Estimate polarity of each topic in Customer Reviews

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1. Introduction

Recently, there are many travel information sites and checking accommodation information such that customer reviews on these sites becomes established in many web users. Therefore, an importance of methods to find adequate information from enormous amount of the customer reviews increases more and more.

Our final purpose is to construct a method to search adequate information from reviews and show them to users considering user's situation. However, the reviews were based on the situation of the authors. In addition, these situations have several variations of many different situations. Therefore, the methods must consider whether the situation of the review will fit the searching user or not.

In this paper, we propose a method to estimate polarity of each estimation topic contained with the customer reviews of the accommodations in order to search considering user's situations.

2. The Proposed Method to Estimate Polarity of Topics

Our proposed method has three phases. First, our method analyses syntactic dependence structures of each sentence of a review. Based on the analyzed results, the syntactic dependency relationships between every phrase are represented by tree structure called syntactic dependency tree. Next, estimation representations are retrieved from the dependency tree. Finally, polarities of each topic contained in the sentence are estimated by using the extracted representations. In order to obtain the estimation representations, we used a method proposed by Tsujii and Tsuda (2012) to construct estimation attribute dictionary and synonym dictionary (p.292).

As future works, we devise to improve our proposed method to be able to estimate not only polarity, but also numerical data of each topic in the reviews.

References

Tsujii, K. & Tsuda, K. (2012), A Method to Extract Attentional Information from Accommodation Reviews by Text Mining. (in Japanese), *Journal of Digital Practices*, IPSJ, 3(4), 289-296.