Method for Ranking the Helpfulness of Online Reviews Based on SO-ILES TODIM

ABSTRACT:

Online shopping has become a habit for consumers, who often make purchase decisionsbased on online reviews. However, the gradual accumulation of reviews has caused an issue associated withinformation redundancy. Therefore, recommending helpful reviews for consumers has become an urgentproblem. Current research on the helpfulness of reviews is mostly at the level of analyzing influencingfactors, and few studies have focused on the problem of ranking the helpfulness of reviews. Taking filmreviews as the research object, we proposed a SO-ILES TODIM method (a TODIM method based on theintuitive language evaluation set of emotional and ontological features). This method takes into accountboth semantic indicators (emotional factors and ontological features) and statistical indicators (reviewlength), considers comprehensive information in the review text and has better domain adaptability. First,an intuitive language evaluation set that considers emotional and ontological features was constructed basedon statistical rules. Second, a quantitative calculation method that includes an index weight value basedon the logit regression model was designed, and it can effectively avoid the subjectivity of the manualassignment method. Finally, based on the degree of membership deviation, the score function and the exactfunction were designed to realize a ranking of the helpfulness of reviews. Through a case simulation, weshow that this method can prioritize reviews that directly evaluate the product. Through a comparativeanalysis and parameter sensitivity analysis, the stability and scientificity of the SO-ILES TODIM methodwas demonstrated. This paper broadens the research scope of reviews, enriches the research method ofreview helpfulness ranking and provides insights for merchants or third-party platforms to manage onlinereviews.

SYSTEM REQUIREMENTS:

HARDWARE REQUIREMENTS:

- System : Pentium i3 Processor.
- Hard Disk : 500 GB.
- Monitor : 15’’ LED
- Input Devices : Keyboard, Mouse
- Ram : 4 GB

SOFTWARE REQUIREMENTS:

- Operating system : Windows 10.
- Coding Language : Java
- Web Framework : Flask

REFERENCE:

H. Dong, Y. Hou, M. Hao, J. Wang and S. Li, "Method for Ranking the Helpfulness of Online Reviews Based on SO-ILES TODIM," in IEEE Access, vol. 9, pp. 1723-1736, 2021, doi: 10.1109/ACCESS.2020.3040151.