



Contribution ID: 88

Type: **not specified**

Evaluating and Monitoring the Quality of Online Products and Services via User-Generated Reviews

Monday, 13 September 2021 15:45 (30 minutes)

User-generated content including both review texts and user ratings provides important information regarding the customer-perceived quality of online products and services. The quality improvement of online products as well as services will benefit from a general framework of analyzing and monitoring these user-generated content. This study proposes a modeling and monitoring method for online user-generated content. A unified generative model is constructed to combine words and ratings in customer reviews based on their latent sentiment and topic assignments, and a two-chart scheme is proposed for detecting shifts of customer responses in dimensions of sentiments and topics, respectively. The proposed method shows superior performance in shift detection, especially for the sentiment shifts in customer responses, based on the results of simulation and a case study.

Keywords

online reviews, statistical process control, text mining

Special/invited session

Invited by Session: Data-Driven Methods for Quality Modeling and Monitoring

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Session Classification: Data-Driven Methods for Quality Modeling and Monitoring

Track Classification: Quality