

Role of Gender in Apparel Stores' Consumer Review: A Sentiment Analysis

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Abstract : The ubiquity of web 2.0 platforms, in the form of wikis, social media (e.g., Facebook, Twitter, etc.) and online review portals (e.g., Yelp), helps shape today's apparel consumers' purchasing decision. Online reviews play important role towards consumers' apparel purchase decision. Each of the consumer reviews carries a sentiment (positive, negative or neutral) towards products. Commercially, apparel brands and retailers analyze sentiment of this massive amount of consumer review data to update their inventory and bring new products in the market. The purpose of this study is to analyze consumer reviews of selected apparel stores with a view to understand, 1) the difference of sentiment expressed through men's and woman's text reviews, 2) the difference of sentiment expressed through men's and woman's star-based reviews, and 3) the difference of sentiment between star-based reviews and text-based reviews. A total of 9,363 reviews (1,713 men and 7,650 women) were collected using Yelp Dataset Challenge. Sentiment analysis of collected reviews was carried out in two dimensions: star-based reviews and text-based reviews. Sentiment towards apparel stores expressed through star-based reviews was deemed: 1) positive for 3 or 4 stars 2) negative for 1 or 2 stars and 3) neutral for 3 stars. Sentiment analysis of text-based reviews was carried out using Bing Liu dictionary. The analysis was conducted in IPython 5.0. Space. The sentiment analysis results revealed the percentage of positive text reviews by men (80%) and women (80%) were identical. Women reviewers (12%) provided more neutral (e.g., 3 out of 5 stars) star reviews than men (6%). Star-based reviews were more negative than the text-based reviews. In other words, while 80% men and women wrote positive reviews for the stores, less than 70% ended up giving 4 or 5 stars in those reviews. One of the key takeaways of the study is that star reviews provide slightly negative sentiment of the consumer reviews. Therefore, in order to understand sentiment towards apparel products, one might need to combine both star and text aspects of consumer reviews. This study used a specific dataset consisting of selected apparel stores from particular geographical locations (the information was not given for privacy concern). Future studies need to include more data from more stores and locations to generalize the findings of the study.

Keywords : apparel, consumer review, sentiment analysis, gender

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