

Using Sentiment Analysis to Explore the Accommodation Experience in the Sharing Economy through Topic Modeling

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Abstract

The rapid proliferation of internet-based technology has made the sharing economy the next e-commerce business model. Recently, sharing economy lodging platforms have gained a significant market share in the tourism and lodging industry. Tourism and hospitality industries are now being significantly disrupted by Airbnb, an online lodging platform. For businesses and customers who utilize these accommodation platforms, online reviews serve as quality indicators, affecting their decisions to make a transaction. Sentiment analysis and text mining can be used to analyze these online reviews to identify various factors embedded in them that can influence how guests perceive lodging in the sharing economy. Peer-to-peer accommodation platforms can benefit from analyzing these aspects since they can utilize the results to streamline their operations and give customers better services. Current research on this domain has only identified a limited number of important factors, such as trust, quality, security, price, cleanliness, and indoor environmental quality. However, there can be many other factors that can affect the accommodation experience. These factors would require further attention. Therefore, in this study a dataset pertaining to the Airbnb platform was considered which contained a total of 401 964 review comments. Word cloud, frequency distribution, and topic modeling were used as data analysis techniques to identify various factors affecting accommodation experience. Results indicate that factors including location, to safety, host-guest interaction, amenities, proximity to restaurants and transit options, and apartment uniqueness can be primarily taken into account to give superior services to their clients.

Keywords

Accommodation, Online Reviews, Sentiment Analysis, Sharing Economy, Text Mining