Abstract

Opinions have become extremely vital in today’s “ratings” driven technological services. An android application, a top-tier restaurant or any service for that matter thrives or wanes away on the reviews it gets. A good review can help attract potential users while a bad one may drive them away. Thus, it is essential to analyze these reviews to better understand the user’s experience and work towards improving it. The general system that most services use today is based on star-ratings or a score out of 5 or 10. Although these serve the most basic purpose, text-based reviews allow one to understand the reason behind the ratings and are useful to both the user and the service provider to gain more insight. It is impractical for a human to go through thousands of reviews and comprehend the user’s sentiment. Instead, training an algorithm to do this job is much more pragmatic and the advances in machine learning allows one to do so. This is where sentiment analysis comes in. In this paper, analysis of various machine learning algorithms like Multinomial Naïve Bayes, Random Forest Classifier and Bernoulli’s Naïve Bayes has been done and their behavior has been studied. In addition, study
of Convolutional Neural Networks and Recurrent Neural Networks is done to find out if deep learning algorithms perform better. Using these results, a recommendation system is built that maps an individual user’s interests to the highest rated tourist places and generates a unique tour plan that is tailored to the user’s needs.

References


Index Terms

Computer Science  Artificial Intelligence

Keywords

Machine Learning, Sentiment Analysis, Tourism, Recommendation System, Recurrent Neural Network