Plagiarism Scan Report

Summary	
Report Genrated Date	21 Apr, 2018
Plagiarism Status	**100% Unique**
Total Words	613
Total Characters	3909
Any Ignore Url Used	

Content Checked For Plagiarism:

Abstract—The instinctive medium that humans use for communication is of words and not numbers. Ratings and reviews are the most common form of feedback that customers of a product or service can provide on an online platform. While ratings are quantitative, reviews are expressive. Extracting the users' true sentiments from their review with respect to each aspect is highly insightful. Our project leverages the Stanford CoreNLP Parser to apply PoS tagging, Coreference Resolution and Dependency Inferencing for constructing aspect-sentiment pairs. The aspect polarities are calculated using an amalgam of sentiment lexicons like VADER and TextBlob. We have also used some filtering rules with hard limits to ensure that our system only has the most relevant reviews for processing. One filter obstructs spammed reviews and blacklists the reviewers for the same. Another makes sure that the reviews to be processed have been marked helpful by a strong majority of users. Our system provides recommendations to users based on prioritised aspects. We construct user profiles and product profiles to map according to aspect preferences. The Stanford CoreNLP Parser dependencies have been thoroughly exploited to design the rules for aspect-sentiment extraction.
Keywords—Natural Language Processing, Sentiment analysis, Opinion parsing

I. Introduction

The aspect based recommendation system is still a research topic, and there have been various approaches researchers have undertaken to try and improve the accuracy and thoroughness of the system. Our system is made with a rounded perspective that has the primary motive of giving the most relevant recommendations to the user. The subject is very intriguing, mainly because the instinctive medium that humans use for communication is of words and not numbers. Ratings and reviews are the most common form of feedback that customers of a product or service can provide on an online platform. While ratings are quantitative, reviews are expressive. Extracting the users' true sentiments from their review with respect to each aspect is highly insightful.

These insights are leveraged to provide the businesses with the overall sentiment about a product category in the market. The businesses get a holistic view of the demand of the most preferred aspects with respect to a particular product. Temporal patterns can be observed by businesses with breakthroughs in technology. For example when the octa-core processor came into picture, the processor aspect of smart phones certainly grabbed the most attention. Similar is the current trend, where the camera aspect is turning heads after the dual camera technology for portraits has been adopted as the signature selling point by a maximum of top smartphone brands.

The facts gathered through our system can lead to some fine grained inferences and

implications. Each user, with each purchase or review, makes a contribution in building her profile. It helps the user choose, not the best product in the market with a general viewpoint, but the product that is right for her.

II. Literature Review

The literature survey involved looking for relevant IEEE papers published by students or well renowned authors. These papers played a role in giving us a guideline for our approach toward the problem and an overall depth of the problem and its extent. It also helped us to get an idea about the extent to which the problem has been perused and dealt with. We were also able to define the scope up to which our proposed system will take care of the issue. The challenges faced by the authors of these papers gave insights and will help us to plan mitigation strategies if we face similar challenges in the implementation. The key words or phrases we used to find the most relevant research papers are Natural Language Processing, Sentiment analysis, Opinion parsing, Aspect Extraction, Sentiment Extraction.