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# WHAT DOES YOUTUBE SAY ABOUT YOUR PRODUCT? AN ASPECT BASED APPROACH

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# WHAT DOES YOUTUBE SAY ABOUT YOUR PRODUCT? AN ASPECT BASED APPROACH

*Research paper*

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## Abstract

*Nowadays, customers have a variety of options to gather information about products, which can support their purchasing decisions. More and more customers use YouTube reviews or unboxing videos to get a first impression of different products and interact or discuss with other users in the comment section. Automatically analyzing these comments to gain a better insight about the important product aspects remains a major challenge in the field of social media monitoring because the text data is unstructured and noisier compared to conventional review data for example from Amazon. In this study, we focus on the automated aspect extraction task to answer the question, which characteristics of products are important from the (potential) customer view. We show that YouTube comments are a valuable data source for this purpose with an aspect extraction precision comparable to conventional Amazon reviews. To improve aspect extraction in general, we propose a new aspect sorting method based on Google Trends. Incorporating the search volume of products combined with aspects into the extraction procedure improves the precision results especially for noisier text data. To illustrate the analysis results, we choose Amazon reviews and YouTube comments about three exemplary smartphones.*

*Keywords: Aspect Based Sentiment Analysis, YouTube, Google Trends, Social Media Monitoring.*

## 1 Introduction and Motivation

Today, company-relevant data is available from a variety of sources like internal databases but also external platforms like social media websites. While it is getting easier and cheaper to collect and store relatively big datasets, companies need to develop the capability to process all that available data (Dey et al., 2011), which is a special problem when it comes to unstructured data like texts. Social media data remains a major challenge (Singh et al., 2015), while more and more customers' express opinions, feelings, and concerns about products and services in this way. The growing volume of these opinion expressions from other users plays a major role in forming and shaping perceptions of a product and helps customers in making purchase decisions (Jensen et al., 2013). Companies can use these kind of reviews as an important resource in their product development, marketing, and customer relationship management (Yu et al., 2011). This approach helps to assess own, but also competitors' strengths and weaknesses. Companies that use methods like Social Media Monitoring (SMM) can outperform their competitors on key business indicators like, growth and earnings (Zikopoulos et al., 2012).

Sentiment Analysis (SA) is an approach to extract automatically the opinion of people about a product by analyzing their written comments. Either the entire text (document level), individual sentences