

## The Potential of Sentiment Analysis to Categorize Social Media Comments Using German Libraries

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**Abstract :** Based on the number of users and the amount of content posted daily, Facebook is considered the largest social network in the world. This content includes images or text posts from companies but also private persons, which are also commented on by other users. However, it can sometimes be difficult for companies to keep track of all the posts and the reactions to them, especially when there are several posts a day that contain hundreds to thousands of comments. To facilitate this, the following paper deals with the possible applications of sentiment analysis to social media comments in order to be able to support the work in social media marketing. In a first step, post comments were divided into positive and negative by a subjective rating, then the same comments were checked for their polarity value by the two German Python libraries TextBlobDE and SentiWS and also grouped into positive, negative, or even neutral. As a control, the subjective classifications were compared with the machine-generated ones by a confusion matrix, and relevant quality criteria were determined. The accuracy of both libraries was not really meaningful, with 60% to 66%. However, many words or sentences were not evaluated at all, so there seems to be room for optimization to possibly get more accurate results. In future studies, the use of these specific German libraries can be optimized to gain better insights by either applying them to stricter cleaned data or by adding a sentiment value to emojis, which have been removed from the comments in advance, as they are not contained in the libraries.

**Keywords :** Facebook, German libraries, polarity, sentiment analysis, social media comments

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