SENTIMENT ANALYSIS OF TWITTER DATA

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Semester:- 6

METHODOLOGY USED

Language :- Python
Library:- Tweepy , matplotlib
Tool Used :- Jupyter Notebook

Introduction

Sentiment analysis of in the domain of micro-blogging is a relatively new research topic so there is still a lot of room for further research in this area. Decent amount of related prior work has been done on sentiment analysis of user reviews , documents, web blogs/articles and general phrase level sentiment analysis . These differ from twitter mainly because of the limit of 140 characters per tweet which forces the user to express opinion compressed in very short text. The best results reached in sentiment classification use supervised learning techniques such as Naive Bayes and Support Vector Machines, but the manual labelling required for the supervised approach is very expensive. Some work has been done on unsupervised and semi-supervised approaches, and there is a lot of room of improvement. Various researchers testing new features and classification techniques often just compare their results to base-line performance. There is a need of proper and formal comparisons between these results arrived through different features and classification techniques in order to select the best features and most efficient classification techniques for particular applications.

Practical Example of Sentiment Analysis

1.Social Media Monitoring

There are more than 3.5 billion active social media users; that's 45% of the world's population. Every minute users send over 500,000 Tweets and post 510,000 Facebook comments, and a large amount of these messages contain valuable business insights about how customers feel towards products, brands and services.

2.Brand Monitoring

Besides social media, online conversations can take place in blogs, review websites, news websites and forum discussions. Product reviews, for instance, have become a crucial step in the buyer's journey. Consumers read at least 10 reviews before buying, and 57% only trust a business if it has a star-rating of 4 or more.

Sentiment analysis is an excellent tool to keep a close eye on your brand's reputation, find out what is right or wrong about your business, and understand more about your customers.

3.Customer Support Analysis

Providing outstanding customer service experiences should be a priority. After all, 96% of consumers say great customer service is a key factor to choose and stay loyal to a brand.

Fortunately, sentiment analysis can help you make your customer support interactions faster and more effective.

If you run sentiment analysis on all your incoming tickets, you can easily detect the most dissatisfied customers or the most urgent issues and prioritize them above the rest.Plus, you could route tickets to the appropriate person or team in charge of dealing with them.

Information about Libray Used

Tweepy:- The Twitter API gives developers access to most of Twitter's functionality. You can use the API to read and write information related to Twitter entities such as tweets, users, and trends.

Technically, the API exposes dozens of HTTP endpoints related to:

- Tweets
- Retweets
- Likes
- Direct messages
- Favorites
- Trends
- Media

Tweepy, as we'll see later, provides a way to invoke those HTTP endpoints without dealing with low-level details.

Matplotlib :- Matplotlib is an amazing visualization library in Python for 2D plots of arrays. Matplotlib is a multi-platform data visualization library built on NumPy arrays and designed to work with the broader SciPy stack. It was introduced by John Hunter in the year 2002.

One of the greatest benefits of visualization is that it allows us visual access to huge amounts of data in easily digestible visuals. Matplotlib consists of several plots like line, bar, scatter, histogram etc.