

MSc Project Report

A Framework to Predict the Impact of a Social Media Trend using Trend Analysis Techniques

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Abstract

In the digital era we are citizens in a global village connected through internet despite the geographical boundaries. We use social media platforms to share our experiences and thoughts with our friends, colleagues, or interest groups as it happens. At the same time, we read statuses from others through these platforms.

Among social media platforms, Twitter is popular as a micro blogging platform to express our opinion on almost anything that happens in the society. Twitter users generate short text messages called "tweets" which is mostly text with a length up to 280 characters. Sharing multimedia data like images, emoticons and video is also allowed in twitter. Some very important meta data included in a tweet are author, contributor, tweet(text), followers count, friends count, created time, favorite count, tweet ID, language, place/location, number of retweets, Source and Source URL etc.

On the other hand, news media has been a source of information in any community which is also a source that has an impact on the society provided that the news being confirmed by multiple news sources.

A trend in social media is a topic that is subjected to a sudden burst in popularity among the users. The reason behind this situation can be a certain event or a group of events that happened in their surroundings. Or else a rumor for no specific reason. Due to the sudden increase in popularity, there can be reflected in actions in social media such as retweeting of tweet(s) related to a particular topic. Hence, it's worth studying the social media activities to identify trending topics from social media.

Some trends are triggered by public events or news broadcasts and cause high impact on the society. On the other hand, some trends originate from social media and later cause impact on the society. Identifying trends that originates from social media and predict the future impact of it can be beneficial for various personnel in myriads of fields such as news analysts, social media users, business organizations, government and so on.

In this research, a novel interdisciplinary approach based on trend analysis, natural language processing and machine learning, has been developed to predict the social impact of the topics identified from twitter data.