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Sentiment Analysis in Social Media and Its Operations

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Abstract - *This paper is a report of a review on sentiment analysis in social media that explored the styles, social media platform used and its operation. Social media contain a large quantum of raw data that has been uploaded by druggies in the form of textbooks, videos, prints and audio. The data can be converted into precious information by using sentiment analysis. A methodical review of studies published between 2014 to 2019 was accepted using the following trusted and believable database including ACM, Emerald Insight, IEEE Xplore, Science Direct and Scopus. After the original and in-depth webbing of paper, 24 out of 77 papers have been chosen from the review process. The papers have been reviewed grounded on the end of the study. The result shows utmost of the papers applied opinion- wordbook system to analyses textbook sentiment in social media, uprooted data on microblogging point substantially Twitter and sentiment analysis operation can be seen in world event, politics and business*

***Key Words*: Sentiment Analysis, Big Data, Social Media, E-Commerce.**

1.INTRODUCTION

The exposure of Web 2.0 is changing the world of social media. Not only online social media used to connect, and partake information and their particular opinion to others, but indeed business can also communicate, understand and meliorate their product and services through connecting in social media. The number of social media stoners increases every day, and it's estimated in 2019 there will be over to2.77 billion social media stoners worldwide. There is various type of information uploaded and shared on social media in the form of text, videos, prints and audio. Social media is rich with raw and undressed data and the improvement in technology, especially in machine knowledge and artificial intelligence, allow the data to be reused and converted it into a useful data that they can benefit utmost business association. This paper focuses to give a better understanding of the operation of sentiment analysis in social media platform by examining combined literature published between 2014 and 2019. Sentiment analysis is an approach that uses Natural Language Processing (NLP) to prize, convert and interpret opinion from a text and classify them into positive, negative or natural sentiment. Ultimate of the former study applied sentiment analysis into a product or movie review to more understand their customer and make the necessary decision to meliorate their product or services. Scholars have been conducting a study on sentiment analysis since the last decade which utmost papers started to appear and swiftly growing after the time 2004. Sentiment analysis is divided into three different situations which are judgment position, document position and point position. The purpose is to classify the opinion either from judgment, document or features into positive and negative sentiment. There are 2 main styles of sentiment analysis have been linked which is a machine-knowledge approach and a dictionary-predicated approach. Machine knowledge approach employed algorithms to prize and descry sentiment from a data while dictionary-predicated approach works by counting the positive and negative words that are related to the data. But there is a challenge arise in developing a model where ultimate of it's design for the English language. But a recent study shows that there is sentiment analysis model design in other languages analogous as Korean, Thailand, Arabic, Malay, Portuguese and Chinese. As for the operation of sentiment analysis, it's reported that it has been done in business and marketing, politics and public action terrain. Illustration of the operation is E- commerce, advancing operation and world events. Ultimate of the data pulled for the study was pulled from social media. The social media contain a vast amount of data from online stoners, and we can get any information on a product, services, place or events which makes it fit for sentiment analysis study

2. Review

2.1. Design A methodical review was accepted using 6-way guidelines for conducting a methodical literature review in operation. First, we start by defining the exploration question. Also determine the needed specific for the study. Continue by reacquiring potentially applicable literature and opting material literature. We also synthesize applicable information from the literature and the final step is reporting the result of the review.

After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper.

2.2. To give an overview of the review, the following exploration question was addressed

• RQ1 What's the system used in sentiment analysis of social media?

• RQ2 What's the type of social media platform used to usable sentiment analysis?

• RQ3 What's the operation environment of sentiment analysis in social media?

2.3. Reacquiring and opting material literature review exercising five estimable and believable online databases that published literature covering information and computer wisdom area. The total number of papers linked from the database hunt is 407 papers. 34 papers linked from Emerald Insight, 244 results linked from Wisdom Direct, 24 results from the Association for Calculating Ministry (ACM), 54 papers from Scopus, and 51 papers linked from IEEE. Also, the webbing of papers is conducted grounded on the addition and rejection criteria and the webbing redounded in 77 papers. Accordingly, the webbing involved reading the full textbooks and assaying each composition, and we gained 24 perfected papers.

3. Reporting the result

3.1. The sentiment analysis system used in social media Grounded on the papers reviewed, all of the papers demonstrated the operation of either a wordbook grounded system, a Machine literacy system, or a blend of both systems when enforcing sentiment analysis. The results show in conducting sentiment analysis, 7 of the reviewed paper uses the wordbook-grounded system, 10 papers use machine literacy and 7 papers show the combination of both styles. Wordbook grounded system is known as an unsupervised literacy system. The Wordbook system doesn't bear any training data and only depends on the Wordbook. Utmost of the study acclimated Sentiwordnet and TF- IDR system when conducting sentiment analysis. This approach is calculated grounded on the circumstances of the terms in the textbook data with other positive or negative words in the redeveloped opposition dictionaries like Sentiwordnet. As for TF- IDR system, it works by converting the words into a number, and it's calculated using the term frequency-inverse document frequency system. The ways calculate on verbal coffers and the effectiveness of the whole approach explosively depends on the quality of the verbal coffers. It's grounded on the opposition of a piece of textbook can be attained on the ground of opposition of the words which compose it. Due to the complexity of natural languages, this approach isn't designed to cover all aspect of language especially when it comes to shoptalk, affront and negation. Using sentiment words aren't sufficient. Some of the problems live similar as some words have different meaning grounded on the operation, some judgment containing sentiment words may not express any sentiment and numerous rulings without sentiment words can also indicate opinion. Still, the wordbook-grounded system does have its own advantage similar as it provides simple counting positive and negative words, flexible to fit with different language and speed to complete analysis. Machine literacy system falls under supervise literacy and the system requires training data in order to be reused. The most habituated system in machine literacy system is the SVM and Naïve Bayes model. Different machine literacy model, but these are the most common used. Naïve Bayes is successful when applied on well-formed textbook corpus while support vector machine it gives a good performance for low shape dataset. Nonetheless, machine literacy system performs inadequately on Facebook with people post in arbitrary length and lots of spelling mistake, and it requires a huge quantum of training sample in order to acclimatize the system as the quantum of dataset will impact the size and quality the affair. Likewise, assaying with machine literacy is time-consuming where it takes hours in the complex machine literacy model especially if training is needed. The process is briskly with a lower size of training dataset but it leads to poorer bracket delicacy. Interestingly, experimenters argue that both types of analysis system perform veritably analogous in terms of delicacy. There are options to combine two approaches substantially wordbook-grounded sentiment bracket that contain sentiment scoring function and Naïve Bayes multinomial event models from a machine literacy approach to prognosticate the direction of sentiment. Rather of counting on one system, studies have proven that combining both styles it has better effectiveness. Therefore, in order to ameliorate the outgrowth, it's recommended to combine both styles as it'll round each other, and the result is bettered compared to using one approach only. Combine approach is precious to identify a miracle. It also can ameliorate the running of unshaped data.

3.2. Type of social media platform use to prize data for sentiment analysis

Social information services or social media can be distributed into four types grounded on their operation Content communities (Youtube, Instagram), Social networking (Facebook, LinkedIn), Blogs (Reddit, Quora) and Micro-blogs (Twitter, Tumblr). Grounded on the reviewed paper, among the four types of social media services, micro-blogging spots specifically twitter is the top social media platform used to collect information on stoner opinion. 85 of the reviewed paper uses twitter to collect information for sentiment analysis. Twitter is one of the ten most visited websites and enables druggies to post and interact with short dispatches. Twitter also use to express their opinion and give veritably precious information to scholars, business association and indeed the government. Twitter as a notorious microblogging tool social media platform for people to express their emotion towards a particular person, event or product. What makes Twitter popular is the content or data that's readily available for public use. With the

operation of API, people can pierce and copy the data on any asked content grounded on the keywords or hashtag. Twitter to conduct real- time analysis and nearly public sentiment as Twitter has about 500 million tweets per day and it allows public access to its data through API. Twitter is used to search and collect tweet from 8 different countries from the western and eastern country. There's Twitter stoner each around the world therefore making it rich with opinion and views by people from a different country, different language and different perception. For illustration, Twitter is used collected druggies chitter on particular chairman seeker during election and collected tweets that had been written on a community development program exertion. also, Twitter also used to collect communication from the client to energy company in the UK and dissect tweets downloaded from London Heathrow field functionary twitter account to be anatomized further using sentiment analysis. Facebook has the largest social media druggies in the world. But it isn't veritably popular for sentiment analysis as the data is messy, it isn't structured well, and people frequently use short forms and a lot of spelling error. This makes the data harder to be anatomized. An illustration is using Facebook and Twitter to cost runners, status updates and commentary suggesting stoner gests . A study conducted gathered data from colorful source of social media includes forum, blogs, Expedia, blog spot, mainstream media, WordPress, YouTube, Twitter, aggregator, Facebook. And the result shows that 88 of the data comes from Twitter. The other source of social media isn't preferable because of the number of data or opinions that can be uprooted is limited similar as in Blogspot, YouTube and WordPress.

3.3 operation environment of sentiment analysis

The operation of sentiment analysis ranges from business and marketing, politic, health to public action. Sentiment analysis isn't limited to one operation, but it provides a vast operation in different areas to help in decision timber. Sentiment analysis can be applied on world events similar as an event, exertion, sports or disaster that's being in the world. Some of the exemplifications are a study conducted to compare how people from western countries and eastern countries view ISIS. The result shows how two sides of the world view ISIS the same way which is a terrorist. Sentiment analysis also allows raising mindfulness of data security and the peril of security breaches. likewise, sentiment analysis also conducted on the severance rate and employment sentiment score in social media. We can see the operation of sentiment analysis in healthcare and where the study uses Sentiment analysis as a service frame is proposed and use spatio-temporal parcels to identify locales of complaint outbreaks. In addition, sentiment analysis can identify sentiment requirements of people during a disaster and prepare an applicable response to deliverance. also, Sentiment analysis allows chancing the position of depression of a person by overserving and assaying feelings from textbook. Sentiment analysis can be used to prognosticate political election where it shows the data anatomized from twitter is more dependable as a platform where 94 of correlation has been set up to polling data and have the eventuality to come a platform that's suitable to compete sophisticated polling ways. Incipiently, feedback of client plays an utmost important part in the operation of sentiment analysis where it can help business and association to take applicable action to ameliorate their product or services and business strategy. This is shown in a study where it concludes views and gests of medicine and ornamental product among social media druggies. Sentiment analysis also allows detecting area that needs to be bettered in field service quality and apply proper corrective measures similar as pay attention to passenger feedback in social media. also, sentiment analysis suitable to dissect trends and characteristics of people food habit which is useful for the business association when planning their product and marketing strategy. Sentiment analysis creates advantages for business possessors to identify their fashionability among client and how client suppose about their product or service and assessing the effectiveness and capability of business brand communication and social media and estimate their business inflow of stock price through social media. The feedback given by consumer is important so that we fete our own weakness. It's displayed by a study that compares sentiment data on consumer tweets on Big Six (Britain's largest and oldest gas and electricity supplier and new entrant energy consumer). In addition, sentiment analysis on social media allows the association to estimate the success position of a program as shown in a study where a high positive sentiment is is attained from a tweet on community development program exertion. The result can help to ameliorate the overall living standard of the community

4. Methodologies in Sentiment Analysis:

4.1 Lexicon-based approaches: These rely on sentiment lexicons or dictionaries containing words and their associated sentiment scores to classify text sentiment

In the realm of sentiment analysis, wordbook-grounded approaches represent a abecedarian methodology that hinges on the application of sentiment dictionaries or wordbooks containing a curated list of words and their associated sentiment scores. These sentiment scores serve as quantifiable pointers of the emotional tone conveyed by the words, allowing for the automated bracket of textbook-grounded content into different sentiment orders, similar as positive, negative, or neutral.

A) Sentiment Dictionaries or wordbooks:

Sentiment dictionaries, at their core, are strictly constructed collections of words or expressions, strictly annotated with sentiment markers reflecting the emotional connotation

each word or expression carries. These markers generally classify the words or expressions into three primary sentiment oppositeness

- Positive These encompass words or expressions that convey positive feelings or sentiments, similar as" joyous,"" awful," or" exhilarating."
- Negative This order encompasses words or expressions that synopsize negative sentiments or feelings, similar as" disappointing,"" frustrating," or" spiteful."
- Neutral The neutral order comprises words or expressions that neither transude particularly positive nor negative feelings, frequently serving as connectors or common words like" the,"" and," or" in."

B) Text Analysis Process

The operation of wordbook- grounded sentiment analysis involves a methodical examination of textual content. The textbook is first tokenized, meaning it's divided into individual words or expressions, which are alsocross-referenced with entries in the sentiment wordbook.

C) Sentiment Score computation

For each word or expression encountered in the textbook, the wordbook- grounded approach retrieves its matching sentiment score from the sentiment wordbook. These scores are generally represented as numerical values, with positive values denoting positive sentiments, negative values signifying negative sentiments, and values near to zero signifying impartiality.

D) Aggregation Strategies

To gauge the overall sentiment of the entire textbook, the sentiment scores of individual words or expressions must be added up . Several strategies can be employed for aggregation totality This system involves adding up the sentiment scores of all words or expressions in the textbook. Comprising Then, the average sentiment score of all words or expressions is calculated. Weighted Average Certain words or expressions may be assigned lesser significance or weight grounded on their applicability or significance in the textbook.

E) Sentiment Bracket

Grounded on the accrued sentiment score, the textbook is distributed into predefined sentiment classes. The bracket thresholds are generally established in advance and can vary depending on the specific wordbook and operation. Common orders include

- Positive Sentiment If the added up score surpasses a destined threshold, the textbook is distributed as expressing a positive sentiment.
- Negative Sentiment Again, if the added up score falls below the predefined threshold, the textbook is distributed as conveying a negative sentiment.
- Neutral Sentiment In cases where the score is in propinquity to zero or within a predefined narrow range, the textbook is classified as neutral in sentiment.

F) Advantages and Limitations

wordbook- grounded approaches are valued for their translucency and simplicity. They exceed in cases where the textbook contains unequivocal sentiment- laden words. still, they may encounter challenges when dealing with sardonic or ironic expressions, environment-dependent sentiments, and new or rare words that don't feature in the wordbook. nonetheless, these styles remain vital tools in sentiment analysis, and they're frequently employed in cold-blooded approaches, where they're rounded by other ways to enhance delicacy and accommodate more complex textbook data.

4.2 Machine Learning Techniques for Sentiment Classification: Supervised and Unsupervised Models

In the sphere of sentiment analysis, machine literacy ways play a vital part in automating the process of classifying textbook data into different sentiment orders, similar as positive, negative, or neutral. Two primary orders of machine literacy models employed for this purpose are supervised and unsupervised models. Within these orders, specific algorithms like Support Vector Machines(SVM), Naive Bayes, and intermittent Neural Networks(RNNs) have gained elevation for their effectiveness in sentiment bracket tasks.

A) Supervised Machine Learning Models

Supervised machine literacy models bear labeled training data, where each data point is associated with a given sentiment marker. These models learn from this labeled data to make prognostications on unseen or new textbook data. In the environment of sentiment analysis, supervised models are trained to identify patterns and features in textbook that relate with specific sentiment orders. Prominent algorithms in this order include

Support Vector Machines (SVM) is a extensively used supervised literacy algorithm known for its efficacity in double and multiclass bracket tasks. In the environment of sentiment analysis, SVM aims to find a hyperplane that stylish separates textbook data points into different

sentiment orders. It relies on a kernel function to collude data into a advanced- dimensional space, making it possible to identify a clear boundary between sentiment classes.

Naive Bayes The Naive Bayes algorithm is grounded on probabilistic principles, particularly Bayes' theorem. It assumes that words or features in a document are conditionally independent, which simplifies the computation of chances. In sentiment analysis, Naive Bayes models calculate the probability of a textbook belonging to each sentiment order and classify it grounded on the loftiest probability.

B)Unsupervised Machine Learning Models

Unsupervised machine literacy models don't calculate on labeled training data. rather, they aim to discover essential structures, patterns, or clusters within the data. In sentiment analysis, unsupervised models are frequently used for tasks like sentiment opposition discovery, where the thing is to identify whether the sentiment of a given textbook is positive, negative, or neutral. Notable unsupervised ways include

intermittent Neural Networks(RNNs) RNNs are a class of neural network infrastructures particularly well- suited for successional data, similar as textbook. They've the capability to capture environment and dependences among words in a judgment . In sentiment analysis, RNNs can be used for tasks like sentiment bracket at the judgment or document position. Long Short- Term Memory(LSTM) and Reopened intermittent Unit(GRU) variants of RNNs have been particularly effective in handling sequences of textbook data.

C) Advantages and Limitations

- Supervised Models Supervised models, similar as SVM and Naive Bayes, excel when labeled training data is available. They can achieve high delicacy and can be fine- tuned for specific sentiment analysis tasks. still, they may struggle with nebulosity and environment-dependent sentiment.

- Unsupervised Models Unsupervised models, like RNNs, are precious when labeled data is scarce. They can identify sentiment patterns without the need for unequivocal markers but may bear further data and complex preprocessing way. They're also less interpretable compared to some supervised models.

Mongrel Approaches In practice, numerous sentiment analysis systems employ cold-blooded approaches that combine both supervised and unsupervised ways to work the strengths of each model order and ameliorate overall delicacy in sentiment bracket tasks.

These machine literacy ways have significantly advanced sentiment analysis capabilities and continue to be at the van of exploration and operation in understanding and interpreting textual sentiment in colorful surrounds.

5. Applications of Sentiment Analysis in Social Media:

Operations of Sentiment Analysis in Social Media Harnessing Public Opinion for Informed Decision- Making

In the ultramodern digital age, where billions of people laboriously engage in social media platforms, the wealth of stoner- generated content has opened up multitudinous openings for sentiment analysis. Sentiment analysis, also known as opinion mining, is the process of automatically rooting sentiments, opinions, and feelings expressed in textual data. When applied to social media data, sentiment analysis offers precious perceptivity into public sentiment and is necessary in informing decision- making across colorful disciplines. This section explores the multifaceted operations of sentiment analysis in social media.

5.1 Brand Monitoring and Reputation Management

One of the most current operations of sentiment analysis in social media is brand monitoring and character operation. Companies and associations laboriously cover social media channels to gauge public sentiment about their products, services, and brand. By assaying stoner- generated content, sentiment analysis can help identify trends, sentiment shifts, and arising issues. This information is vital for making data-driven opinions, casting marketing strategies, and fleetly addressing any negative sentiment that might affect a brand's character.

5.2 Client Feedback Analysis

Understanding client opinions and feedback is consummate for businesses aiming to ameliorate their products and services continuously. Sentiment analysis assists in aggregating and assaying client feedback from social media platforms, product reviews, and client service relations. This provides companies with practicable perceptivity into client preferences, pain points, and areas for improvement.

5.3Political Sentiment Analysis

Sentiment analysis is a potent tool for political juggernauts and government realities. During choices or political events, covering public sentiment on social media platforms can help gauge public opinion and prognosticate political issues. assaying social media sentiment can guide crusade strategies, identify namer enterprises, and track the effectiveness of political messaging.

5.4 Stock Market Prediction

fiscal requests are told by a multitude of factors, including public sentiment. Sentiment analysis of fiscal news papers, social media conversations, and request- related tweets can give dealers and investors with precious perceptivity into request sentiment. Prophetic models that incorporate sentiment data can be used to anticipate stock request trends and make informed investment opinions.

5.5 Disaster Response and Crisis Management

During natural disasters, extremities, or public heads, sentiment analysis in social media can be a critical tool for disaster response and extremity operation. assaying social media posts, hashtags, and geolocation data can help authorities assess public sentiment and identify areas taking immediate attention. This aids in the allocation of coffers, communication with affected populations, and overall disaster response collaboration.

5.6 Healthcare and Public Health Monitoring

Monitoring sentiment on social media platforms can give precious perceptivity into public health enterprises and complaint outbreaks. Health associations can use sentiment analysis to track the spread of health- related information, identify arising health pitfalls, and assess public sentiment toward healthcare programs and practices.

5.7 Market Research and Consumer perceptivity

Sentiment analysis is an integral element of request exploration and consumer perceptivity. It enables businesses to identify arising trends, consumer preferences, and competitive analysis by examining exchanges and sentiments expressed on social media platforms. This information aids in product development, marketing strategies, and competitive positioning.

5.8 Sentiment- Driven Content Curation

Content generators, publishers, and marketers influence sentiment analysis to curate content that aligns with the prevailing sentiment on social media. By understanding the sentiment of their target followership, they can knitter content to elicit specific feelings or responses, leading to increased engagement and brand fidelity.

6. Future Directions

6.1. The Evolution of Sentiment Analysis in Social Media and the Emergence of Emotion Detection.

Sentiment analysis, a vital subfield of natural language processing (NLP), has witnessed significant evolution, primarily fueled by advancements in NLP techniques and machine learning algorithms. While traditional sentiment analysis has focused on classifying text into broad sentiment categories (positive, negative, neutral), the field is now evolving to capture the nuances of human emotions expressed in text, going beyond simple sentiment classification. This research paper explores this evolving landscape, highlighting the significance of emotion detection as a promising future direction in sentiment analysis within social media contexts.

A) Evolution of Sentiment Analysis in Social Media:

Early Sentiment Classification: In its nascent stages, sentiment analysis primarily involved binary classification—distinguishing text as either positive or negative. This approach, while useful, was limited in capturing the full spectrum of human emotions and sentiments.

Over time, researchers developed more sophisticated techniques for fine-grained sentiment analysis. This allowed for sentiment classification into multiple categories, enabling a more nuanced understanding of text sentiment, such as strongly positive, mildly positive, strongly negative, mildly negative, and neutral.

Contextual Analysis: Advances in machine learning, including deep learning models like Recurrent Neural Networks (RNNs) and Transformers, have enabled sentiment analysis models to consider context more effectively. This contextual understanding helps in discerning sentiment shifts within longer pieces of text and understanding sarcasm or irony.

B) The Emergence of Emotion Detection:

While sentiment analysis has made substantial progress, it still falls short in capturing the intricate range of emotions expressed in human communication. Emotions are more multifaceted than simple sentiment, encompassing a broader array of feelings, such as happiness, sadness, anger, fear, and more. Recognizing this limitation, researchers and practitioners are increasingly turning to emotion detection as a promising research direction within the field of sentiment analysis.

Emotion detection involves several key aspects:

- **Emotion Classification:** Unlike sentiment analysis, which categorizes text into a few broad categories, emotion detection aims to classify text into a more extensive range of emotions. This can include joy, surprise, disgust, trust, anticipation, and others, in addition to basic sentiments like positivity and negativity.
- **Multimodal Analysis:** Emotion detection can go beyond text and incorporate other modalities such as images, audio, and video to better understand and capture emotions. This holistic approach

enables a more comprehensive analysis of user-generated content on social media platforms.

- **Cultural and Contextual Sensitivity:** Emotions are highly influenced by cultural and contextual factors. Future research in emotion detection should consider the cultural nuances and diverse contexts in which social media content is generated.

C) Applications of Emotion Detection:

Emotion detection has a wide array of potential applications in social media and beyond:

- **Content Personalization:** Emotion-aware content recommendation systems can provide users with more personalized content based on their emotional state and preferences.
- **Mental Health Monitoring:** Emotion detection can be used to monitor users' emotional well-being on social media platforms, potentially aiding in early mental health intervention.
- **Marketing and Advertising:** Understanding user emotions can enhance the effectiveness of marketing campaigns by tailoring content that resonates emotionally with the audience.
- **Education and Learning:** Emotion detection can be applied in educational technology to gauge students' emotional responses to learning materials, helping educators adapt their teaching methods.

7. CONCLUSIONS

The conducted methodical literature review provides information on studies on sentiment analysis in social media. The paper makes the following three benefactions. First, we show what's the system used in assaying sentiment in social media. There's colorful system introduced by inquiries, still, the most common system uses in wordbook grounded system is SentiWordnet and TF- IDF while for machine literacy is Naïve Bayes and SVM. Choosing the applicable system of sentiment analysis is depending on the data itself. Both styles demonstrated a analogous delicacy. The effects that need to take into consideration is the structure of the textbook, time and quantum of data. However, a small quantum of data and limited time available to analyses, it's recommended to go for wordbook-grounded system, If the data structure is messy. Bigger data is suitable for machine literacy grounded system as it requires further time and data to train. In order to ameliorate the quality and delicacy of the result, it's suggested to combine both wordbook and machine literacy system. Second, we identify what's the most common type of social media point to prize information for sentiment analysis. The most popular social media point to prize information is Twitter. Utmost of the reviewed paper use Twitter as their social media environment. This is due to the vacuity, availability and uproariousness of Twitter content. There are millions of tweets every day on nearly any content. This indicates that social media is getting a precious source of information. Still, lower attention is given to other social media sources similar as blogs, WordPress, YouTube and others. The content of each social media might be different, and it's worth exploring other sources might open to new knowledge and findings. Third, we demonstrate the operation of sentiment analysis in social media. Sentiment analysis has a broad operation and can be employed in different areas similar as perfecting quality and strategy in business, political soothsaying an election result, examiner complaint outbreak, produce mindfulness on the significance of data security, perception towards a particular sport, and ameliorate detect and response to the disaster. This shows that sentiment analysis plays a huge part to understand people perception and helps in decision timber. For unborn recommendation, farther disquisition is demanded to develop a universal model of sentiment analysis that can be applied to a different type of data, explores other implicit social networking spots to gain druggies opinion and expanding the environment of sentiment analysis operation.

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