isrjournals

International Journal of Advanced Research in Computer Science Engineering and Information Technology

Volume: 6, Issue: 3,Special Issue: 3 ,Apr,2024 ,ISSN_NO: 2321-3337

# DYNAMIC DETECTION OF DATA TRUTHFULNESS WITH VULGARITY REMOVAL AND SOCIAL MEDIA ANALYSIS USING BIG DATAS

**Aravindhan K[1], Mano S[2], Silambarasan M[3], Sundhari M[4*]**

[1234]UG Scholar-Dept CSE, GRT Institute of Engineering & Technology, Tiruttani, India.

[4*] Asst. Professor-Dept CSE, GRT Institute of Engineering & Technology, Tiruttani, India.

**arvindh10kumaresan@gmail.com, manosuresh2003@gmail.com, mathisilambarasan99@gmail.com**

**[*]Corresponding Author: sundhari.m@grt.edu.in**

## Abstract

Social media's surge in popularity made it possible to gather a lot of organically occurring data on people's conversations with one another. Social media conversations can frequently yield a number of characteristics, including the text content. The wealth of data enables researchers to look at human behaviour from a variety of angles the majority of research simply look at one dimension. As everyone knows, there are a lot of rumours on social media, and the information is also unreliable which in emotionally leads to several deaths. Our project works on this major role based on user input by examine the content of public posts. We are eliminating rumours from posts on our prototype social media. We also exclude vulgar phrases from data posts and expresses on their dissatisfaction, frustration, and protests. In order to effectively analyze data, we use big data to filter the content and compare it with our specified keywords with the obscene keywords, finally user inputs are sent to big data for efficient filtering and comparison created using Java user interface and a MySQL backend database for the best reliable platform for user

***Keywords**: Vulgar phrases, big data, Filtering*

## 1. Introduction

In today's digital age, the proliferation of unverified information across online social media platforms poses a significant challenge in discerning trustworthy content from the noise.

The prevalence of noisy data sourced from numerous unvetted contributors necessitates innovative approaches to ensure the reliability of information. In response, this study presents a Scalable and Robust Truth Discovery (SRTD) scheme designed to tackle this pressing issue. By jointly assessing the reliability of sources and the credibility of claims, the SRTD scheme offers a principled solution to the challenges of identifying trustworthy information amidst the vast expanse of online data. Moreover, the modification phase of this scheme incorporates the removal of vulgar language from social media posts, alongside the analysis of content reflecting public frustration, agitation, or protest. These enhancements not only contribute to filtering out undesirable or criminal content but also facilitate a more nuanced understanding of societal sentiments expressed through online platforms. This paper thus presents a comprehensive framework for addressing the complexities of information reliability in the era of big data and online social interaction.

## 2. Related Work

Despite the fact that social psychology and communications have a wealth of study on influence, the emergence of social media raises fresh concerns about the definition and assessment of influence in these domains. In this work, we offer a novel interpretation of influence that is specifically designed for online environments, along with a corresponding

methodology for measuring impact. As per our definition, influence comprises the ability to modify the emotional expression patterns of users on social media. The context of the relationships between exchanging users or the content of a user's communication could be the source of influence. Whatever the source, determining influence necessitates first spotting changes in users' patterns of expressed emotion levels and then analyzing the degree to which these changes might. [1]

This work examines models and methods for interactive sensing in social networks, where users serve as sensors and the sharing of information among users is usedto maximize sensing. In order to approximate an underlying condition of nature, social learning is utilized to mimic human interaction. The following inquiries are addressed in this context: How can self interested agents that communicate through social learning strike a balance betweentheir personal privacy and the group's reputation? How may protocols be created in online reputation blogs where users leave suggestions to avoid data incest? How can a global decision-maker use individual sensing of one another to identify changes in the fundamental state of nature? When individual agents have restricted abilities to sense, compute. [2]

Social media is now widely used and crucial for social networking and content sharing in recent years. However, there is still a lot of untapped potential in the information produced by these websites. Inthis research, we show that real-world outcomes may be predicted using information from social media. Specifically, we leverage the conversation on Twitter.com to predict movie box officereceipts. We demonstrate that a straightforward model constructed from the frequency of tweet creation on specific subjects can outperform predictors based on the market. We also show how sentimentanalysis on Twitter may be used to enhance social media prediction accuracy. [3]

One of the most significant developments in the field of language technologies duringthe past ten years is sentiment analysis. In this work, we investigate the topic of collective sentiment mining from forum postings in a Massive Open Online Course (MOOC) to track the prevailing views among students regarding the course and its main components, including peer evaluation and lectures. We find a relationship between the sentiment ratio (as determined by daily forum postings) and the daily dropout rate of students. We assess the effect of sentiment on attrition over time at the user level. The subtle variations in the practical applications of these linguistic behaviors among the three MOOCs are made clear by a qualitative analysis. There is discussion of the implications for practice and research. [4]

Recently, blogs and social networks have emerged as important tools for sentiment analysis in a variety of industries, including text filtering, public opinion monitoring, and customer relationship management. In fact, research firms, public opinion polls, and other text mining groups have demonstrated the great value of information gleaned from social media platforms like Facebook and Twitter. Web texts, on the other hand, are categorized as noisy because they have significant syntactic and lexical issues. In this study, we assessed customers' attitudes toward popular brands including Nokia, T-Mobile, IBM, KLM, and DHL by selecting 3516 tweets at random. To perform the study, we employed a vocabulary prepared by experts that included about 6800 seed adjectives with known orientation. Our findings suggest. [5]

## 3. Objective

Develop a robust algorithmic framework for dynamically assessing the truthfulness of digital data, encompassing text, images, and multimedia content. Implement an efficient mechanism for detecting and filtering vulgar language within digital content to enhance readability and promote respectful online discourse.

isrjournals

International Journal of Advanced Research in Computer Science Engineering and Information Technology

Volume: 6, Issue: 3,Special Issue: 3 ,Apr,2024 ,ISSN_NO: 2321-3337

## 4. Proposed System

Identifying trustworthy information in the presence of noisy data contributed by numerous unvetted sources from online social media (e.g., Twitter, Facebook, and Instagram) has been a crucial task in the era of big data. This task, referred to as truth discovery, targets at identifying the reliability of the sources and the truthfulness of claims they make without knowing either a priori.

## 5. Architecture Diagram

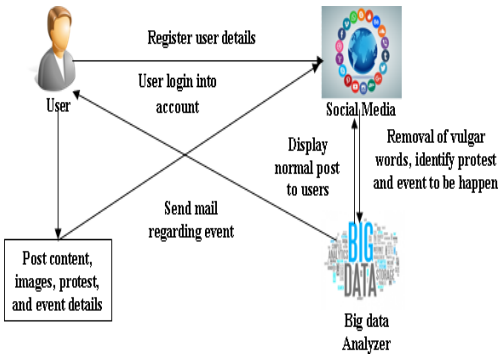


*Fig:5.1 Architecture diagram*

## Algorithms

### A. Asymmetric Key Encryption - Public-Key Cryptography

Asymmetric key encryption, also known as public-key cryptography, involves the use of two keys: a public key and a private key. The public key is shared openly and is used for encryption, while the private key is kept secret and is used for decryption. Messages encrypted with the public key can only be decrypted by the corresponding private key, and vice versa. This system allows for secure communication between parties without the need to exchange secret keys beforehand.

### B. Digital Signature

A digital signature is a cryptographic technique used to verify the authenticity and integrity of a digital message,document, or software. It works by creating a unique digital fingerprint of the content using a hashing algorithm and then encrypting that fingerprint with a private key. The recipient can then use the sender's public key to decrypt the signature and verify both the identity of the sender and that the content has not been altered since the signature was created sender and that thecontent has not been altered since the signaturewas created.

### C. Secure Hash Algorithm 256 SHA-256

SHA-256 is a widely-used cryptographic hash function that belongs to the SHA-2 (Secure Hash Algorithm 2) family. It takes an input message of any length and produces a fixed-size (256-bit) hash value, which serves as a unique digital fingerprint of the original data. SHA-256 is designed to be computationally secure, meaning that it is computationally infeasible to generate the same hash value for two different inputs or to reconstruct the original message from its hash value

## 6. Implementation

### a. User Registration

In this module, we deploy a user interface design for the users to post their post in social media like dummy URL. The main objective of the project is to identify and analysis the user posts and to filter the rumor postings not to be posted in our social media like URL. This system will effectively work in cleaning unwanted postings from our social media like URL. All the users will have a login followed by postings which is shared to the centralized server then the postings will be posted for the public usage.

### b. Big Data Analysis

This is the main module of the project, where big data is deployed for effective data analysis to identify the users' input keywords from the training set, so as to identify the intension of the user from our social media like URL. Every user will have unique data postings which is to be analyzed from the predefined data set. Postings of the user are analyzed by the

helps to alert the common public and the police.

### c. Database Maintenance

We deploy a centralized server which monitors all the activities of the users regarding the postings. Once user post the data in this server, it will display as in our social media like URL. This server acts like face book page to accept all the postings from all the users.

### d. Rumor Detection

We deploy effective Rumor detection from the centralized server by analyzing the posted data with comparison with number of likes and dislikes of the same data by users. We analysis the posted data with the maximum popularity of like and dislikes of the postings by the users. If a post has maximum dislikes our data analysis system will identify that post to be rumor so that the same post will be circulated in the social media. this is an effective system to remove all the unwanted data from our social media like URL.

### e. Removal of Vulgar Postings & Alerting System

In this Module, we compare the postings of the user with the predefined vulgar words which was trained in the centralized server. Our application will compare with the trained vulgar keywords and its synonyms from the server and our application will remove all the vulgar postings from the server. the centralized server identifies the intension of the most of the user by comparing user content of the postings from the training set, automatic alert is notified to warn the common public.

## 7. Experimental Results

***Fig: 8.1 Login***

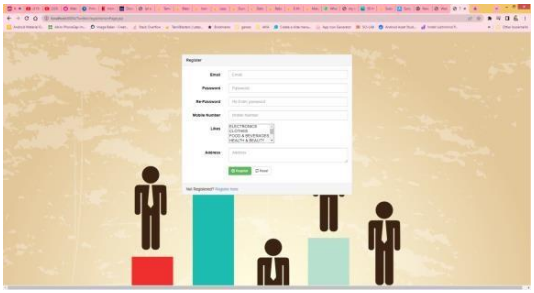

***Fig: 8.2 Registration***

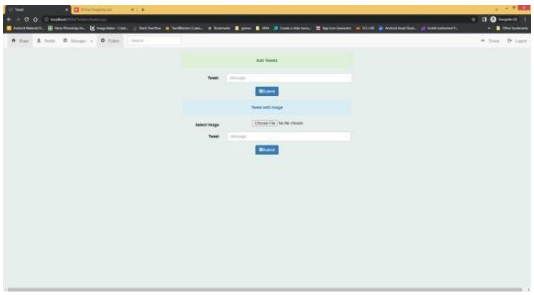

***Fig: 8.3 Tweet page***

## 8. Conclusion & Future Work

The overall implementation of the project isaimed at the removal of vulgar words postings and then big data is applied for effective filtering for the postings to extract the data and finally alert the common public. The postings are analyzed using big data for data filtering so that people expressions are monitored by comparingwith the given preset data set and alert is made to save common people.

## 9. References

[1] es Servi, *Senior Member, IEEE* and Sara Beth Elson," A Mathematical Approach to Gauging Influence by Identifying Shifts in the Emotions of Social Media Users" December 2014.

[2] Vikram Krishnamurthy, Fellow, IEEE and H. Vincent Poor, Fellow, IEEE "A Tutorial on Interactive Sensing in Social Networks" March 2014.

[3] SitaramAsur, Bernardo A. Huberman, "Predicting the Future with Social Media".

[4] Miaomiao Wen, Diyi Yang, Carolyn Penstein Rosé, "Sentiment Analysis in MOOC Discussion Forums: What does it tell us?".

[5] Mohamed M. Mostafa, "More than words: Social networks' text mining for consumer brand sentiments".

[6] O. Banerjee, L. E. Ghaoui, and A. dAspremont. Model selection through sparse maximum likelihood estimation for multivariate gaussian or binary data. Journal of Machine learning research, 9(Mar):485–516, 2008.

[7] S. Bhuta and U. Doshi. A review of techniques for sentiment analysis of twitter data. In Proc. Int Issues and Challenges in Intelligent Computing Techniques (ICICT) Conf, pages 583–591, Feb. 2014.

[8] J. Bian, Y. Yang, H. Zhang, and T.-S. Chua. Multimedia summarization for social events in microblog stream. IEEE Transactions o multimedia, 17(2):216–228, 2015.

[9] P. Bui, D. Rajan, B. Abdul-Wahid, J. Izaguirre, and D. Thain. Work queue+ python: A framework for scalable scientific ensemble applications. In Workshop on python for high performance and scientific computing at sc11, 2011.

[10] P.-T. Chen, F. Chen, and Z. Qian. Road traffic congestion monitoring in social media with hinge-loss markov random fields. In Data Mining (ICDM), 2014 IEEE International Conference on, pages 80–89. IEEE, 2014.

[11] X. L. Dong, L. Berti-Equille, and D. Srivastava. Integrating conflicting data: the role of source dependence. In Proceedings of the VLDB Endowment, pages 550–561, 2009.

[12] X. X. et al. Towards confidence in the truth: A bootstrapping based truth discovery approach. In Proceedings of the 22th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining - KDD '16, 2016.

[13] R. Farkas, V. Vincze, G. Mora, J. Csirik, and G. Szarvas. The coal- 2010 shared task: Learning to detect hedges and their scope in natural language text. In In Proceedings of the Fourteenth Conference on Computational Natural Language Learning., 2010.

[14] R. Feldman and M. Taqqu. A practical guide to heavy tails: statistical techniques and applications. Springer Science & Business Media, 1998.

[15] A. Galland, S. Abiteboul, A. Marian, and P. Senellart. Corroborating information from disagreeing views. In In Proc. of the ACM International Conference on Web Search and Data Mining (WSDM'10), pages 131–140, 2010.