e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:04/Issue:03/March-2022 Impact Factor- 6.752 www.irjmets.com

PREDICTION OF SUICIDE USING SOCIAL MEDIA DATA

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ABSTRACT

People like new technology by victimization online social media as a communication channel to precise their dangerous thoughts. Suicide could be a troubling general medical issue & increasing fatal once a year-round the world. This work naturally removed casual inactive subjects from online web-based life twitter human activity unsafe ideations. Right off the bat showing emotion assessed the idle points and later comprehensively contrasted them with probability variables planned by house specialists. This exhibits totally different techniques to understand dangerous celebration through online user contents significantly by considering Twitter information for past last two years as the associate objective of early detection by suggests that of sentiment analysis and supervised learning strategies. Analysing the text descriptions and user's language exposes wealthy information which will be utilized as a primary cautioning system for dangerous detection. to spot tweets exhibiting dangerous celebration, many options are extracted, and a collection of options are planned for coaching the model over the dataset by victimization ensemble and baseline classifiers. supported the result of baseline classifier; improved ensemble random forest (RF) algorithmic program achieved associate a lot of accuracies compared to alternative classification strategies for dangerous prediction with tweets containing dangerous thought is healthier in comparison to the present system. Such experimentation and observation could facilitate individual and population-wide interference by subject matter and inform dangerous analysis andpolicy. The experimental analysis expresses the feasibility of the methodology employed by providinga benchmarkfor dangerous detection on online social networks.

I. INTRODUCTION

Social media has modified the planet. it's become Associate in Nursing every day a part of our lives. many people are these days active on many in style social networks like Facebook, Twitter, Instagram, etc. They share photos and posts on their way of life and experiences like their food, their garments, and their journeys. Some folks are additional is active on social networks, whereas others are less, therefore. It offers substantial data at a good speed and services adapt additional to the wants of users. These will consult the net to form social communications, social interaction (between people or teams of individuals), and content creation.

On the other side, social networks can reflect different social phenomena such as diseases, depression, suicide, etc. In a particular way, suicide is complex and dangerous that should be considered and studied in order to reduce mortality rates. A recent study revealed that close to 800 000 people commit suicide every year, which means one person every 40 seconds. Thus, this growing phenomenon presents one of the biggest challenges the world is facing today. Understanding the symptoms related to suicidal tendencies is important to prevent such deaths.

In this context, social networks like Twitter and Facebook are increasingly associated with phenomena such as harassment, cyberbullying, or even suicide. It is therefore, very important to detect potential victims at the earliest in order to strengthen suicide prevention on the web. For example, the two rappers of American Freddy E and Capital Steez gave suicide comments on their Twitter account.

Indeed, one of the greatest things that characterize social networks is their use in extracting emotional thoughts and feelings of depression. For that reason, many researchers use social networks to study suicide. As an example, Twitter has become a very popular social network where millions of users share their opinions and feelings using short texts called tweets, which contain semantic expressions such as emoticons, hashtags, special characters, etc. Consequently, Twitter provides a rich source of data for text mining.

II. PROBLEM DEFINITION

Suicide is one of the leading sources of death worldwide. Suicide has been identified not only as an individual situation but also can happen due to social media influence as the internet has become more involved in people's everyday life it can affect the mental health of humans.

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There are a variety of social media platforms that are accessible to the public platforms such as Facebook, Instagram, Twitter, and many more these platforms were intended to connect people virtually, but can lead to cyberbullying, insecurity, emotional distress, and ultimately suicide.

To detect such activity suicide-ideation prediction system can help to predict and can sometimes be used to prevent such activity from happening.

III. PROPOSED METHOD

- **Retrieve Twitter Dataset**
  - Using Twitter API dataset for our project.
- **Applying Pre-processing.**
  - Applying algorithm on a dataset of Twitter API.
- **Removing Special Letters (), #tags (), URL ()**
  - With the help of the algorithm removing special letters, URLs, and hashtags for finding main information on the dataset.
- **Basic English Words ()**
  - Collecting English words from dataset.
- **Replacing emoji into word**
  - Using Algorithm Emojis expressed by the user can be replaced in words such happy, sad, angry.
- **Replacing synonyms words with root form of dictionary words**
  - Main intention of this step to find whether the post related to some suicide or not.
- **Applying Acronyms**
  - Such as GM- Good Morning, etc.
- **Applying N-gram Model**
- **Classify using classification**

IV. FIGURES

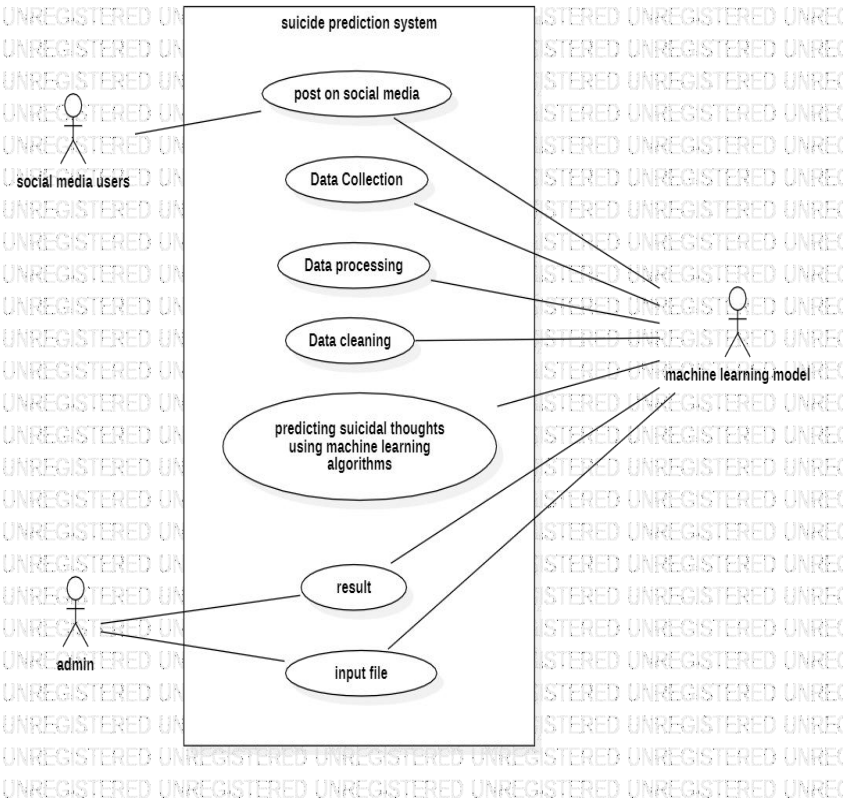

Fig 1: Use case Diagram

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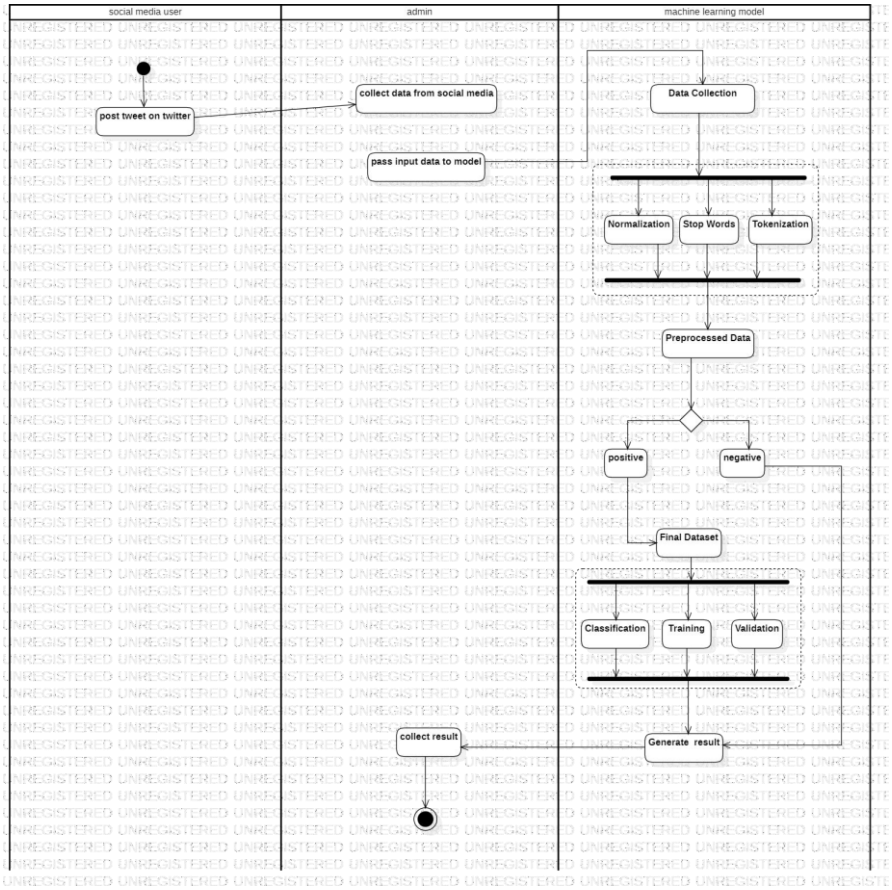

Fig 2: Activity Diagram

V. CONCLUSION

The suicide prediction system uses the different types of machine learning algorithms for the prediction of suicidal ideation posts in social media and preventing such types of events from happening As we are using different types of machine learning result of our model is very accurate. As part of this work, we present our method potentially based on different machine learning for using the social network Twitter as a preventive force in the fight against suicide. In our future work, we plan to further improve and refine our techniques in order to enhance the accuracy of our method.

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