DETECT DEPRESSION FROM A PERSON'S TWEETS

DEPBOTS

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ABSTRACT

In the 21st century, mental illness has surged, leading to the development of various methods for treatment. As we know that mental illness has increased rapidly so much that several methods have been introduced to cure them. But the main issue is detecting whether the person is really ill or not. Through technology such as Artificial Intelligence and Machine Learning the diagnosis and management of mental illnesses like depression can be achieved.

MAIN OBJECTIVE :

Detecting mental illness such as depressive and an individual's depressive or non- depressive behaviour through their tweets on social media platforms.

EXPECTED OUTCOMES :

Detected a person’s depressive behaviour classifying their tweets through AI.

INTRODUCTION

BACKGROUND:

The primary challenge remains accurately detecting whether an individual is truly suffering from a mental health condition. Leveraging technology to address this issue can significantly enhance the diagnosis and management of mental illnesses like depression.

AI and machine learning algorithms can analyse patterns in speech, text, and behaviour to identify signs of depression and other mental health issues. These technologies can process large datasets, identifying subtle indicators that might be missed by human observation.

PROBLEM STATEMENT

Detect depression from a person's tweets

OBJECTIVES

To detect depression from a person's tweet and their emotional behavioural conditions.

METHODOLOGY

METHODS

1. Using machine learning algorithms such as SVM
2. Using NLP and RNN

PROCEDURE

- Setting of the environment
- Collecting the dataset
- Loading the dataset
- Data Preprocessing
- Applying machine learning algorithms
- Building , training and evaluating the model

DATASET INFORMATION

DESCRIPTION

This is the sentiment140 dataset. It contains 1,600,000 tweets extracted using the twitter api . The tweets have been annotated (0 = negative, 4 = positive) and they can be used to detect sentiment.

CONTENT

It contains the following 6 fields:

1. **target**: the polarity of the tweet (*0* = negative, *2* = neutral, *4* = positive)
2. **ids**: The id of the tweet (*2087*)
3. **date**: the date of the tweet (*Sat May 16 23:58:44 UTC 2009*)
4. **flag**: The query (*lyx*). If there is no query, then this value is NO_QUERY.
5. **user**: the user that tweeted (*robotickilldozr*)
6. **text**: the text of the tweet (*Lyx is cool*)

SOURCE AND FORMAT

Source is available on kaggle and format is on CSV.

CONCLUSION

Successful detection of an individual's mental illness such as depression through their behavioural patterns and their tweets.

REFERENCES

1. Dataset by Kaggle https://www.kaggle.com/datasets/kazanova/sentiment140?resource=download&select=training.1600000.processed.noemoticon.csv