Towards the Detection of Cyberbullying Based on

Social Network Mining Techniques

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**In the approach, there are three main techniques for cyberbullying discovery will be studied, including keyword matching technique, opinion mining and social network analysis.**

The simplest one is based on dictionary which collect a set of keywords that related to cyberbullying.

we have proposed an approach which is based on techniques of SNM. he process of the cyberbullying approach is shown

Dataset

collected data from four major social networking websites in Taiwan, which including Facebook, Twitter, Ptt (https://www.ptt.cc) and CK101 <https://ck101.com/>).

we collected 100 posts which are considered as cyberbullying happen for each website as well as another 100 without cyberbullying.

Features

Three features will be extracted from the data, which are keywords, SNA measurements and Sentiments. After features selection and pattern matching we then can detect posts in those websites where cyberbullying happen. We extracted keywords, SNA measurements, and sentiments.

Classification

which is one of the most well know data mining techniques will be used to analyze the information gain. This approach can help to identify important features from the seven experiments. Among all the features, sentimental is an important feature that can be used to understand the sentiment when user posts a message in social media. The extraction approach of sentimental features is shown in figure 3 and the approach is

very common used in most of the sentimental extraction approach.

Accuracy

evaluate the accuracy of the discovered cyberbullying posts. In our experiment, precission and recall are the measurements for us to validate the accuracy. The first evaluation result shows the precission accuracy is around **0.79** and the recall is **0.71**. It means more than **70%** of cyberbullying posts can be detected correctly by using our approach, which is better than what we expected, but maybe can be improved by considering different weights for different features.

Drawbacks

Accuracy is low due to the weakness of the dataset.