

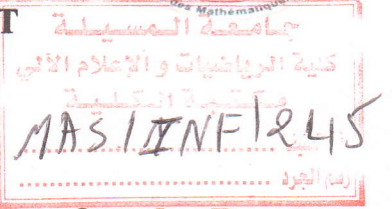
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Suicide detection in social networks

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GENERAL INTRODUCTION

At present, the suicide phenomenon is raising, having a relevant impact on our society. Each year about one million people die as a result of suicidal behavior becoming an economic, social and human problem. On the other hand, the use of Social Networks as a means of communication is becoming extremely popular, through which their emotional states and impressions are exchanged, and people find that writing about their feeling and sharing it to the world through this social networks is much easier than talking about it in real life so they will not be embarrassed or humiliated by other people, which they of course do not know their condition or they do know their conditions but do not care, and doing it any way for fun or other reasons. So people are more comfortable in these social networks and they feel more secure in it, especially when they talk anonymously, therefore, it is no surprise that more and more people with depression publish their suicide notes in these communication channels.

In this context, Information Technologies, Communications and more specifically Language Technologies play an important role in the early detection of suicide, their causes and their terrible consequences. Based on these considerations, it is mandatory to provide societal, environmentally approaches and solutions to tackle these societal challenges. This work is an exhaustive survey of the different researches in this scope, in order to explain which methodologies, technologies and resources are used in the detection of suicide by means of the Social Networks analysis as well as to preventing it.

Our program here has the same role, which is to detect suicidal people only from their publication in to social networks like Facebook or tweeter. In this search paper we are going to focus in the social network tweeter and we are going to mention all the reasons why we have chosen it, specifically in the later chapters, also we want to note that when we detect the suicidal person then we could prevent it is suicide, we can talk to him about his conditions, and perhaps he does not know that he is doing things which they are signs of suicide, or even we could recommend some authority or divisions or organization all over the world that take good cares of suicidal people, and treat them in where ever suicide level they are in, or where ever they are from, also whatever their financial state.

So we are going to talk about suicide in the first chapter, and all the risk factors and protective ones, and how it evolved over the years in two or three countries, and what are the reasons of its

growth especially in the twenty first century, after that we'll see if suicide effects health and or does it affect on others, other than the suicidal person, also we will take a tour in the suicidal person mind and how he thinks, and how all of them are divided in two parts, also how each of the parts think and want, we will mention the most common suicide warning signs that could happen to the suicidal person and in that point we could detect if there is suicidal thought or not, and by that we could interfere and prevent him or her from committing suicide, so before last we will say if its treatable or not and finally we will clarify what to do If someone you know exhibits warning signs of suicide.

In the second chapter, we will talk about social networks, in the beginning we define the meaning of social network sites SNS, its characteristics, its history and what people do on SNS also we will see the usage of social networks, and some advantages and disadvantages, we will talk about the impact and the affects of the SNS in work productivity, and finally we see some tips about how we could remain safe from SNS.

In the third chapter, we link between them between social networks and suicide that how we can detect or predict suicide or even prevent it, by using the new medium of communication which is social networks. So we will talk about the early detection and the meaning is that when the person started to think about committing suicide, and we can know that by analyzing the signs that could lead to suicide. Then we will explain each of the three levels in detection, and in here where our work start to be more and more clear, after that we mention some of the myths which are out there, and we correct them, then finally we jump to the protective factors where everyone can fort and protect himself to fall for this kind of things.

In the fourth chapter, the creation of our program or the implementation of the early work, so we will create a program which is capable of detecting suicide notes or tweets, and we will clarify why we use tweets, and we will make the program more adaptive which means that it can learn from the suicidal tweets that has been detected. And the tools that will help us create the program are the first and the main one is the Netbeans IDE version 8.0.2 with the latest JDK and we will use xampp which is an integrated server package of Apache, MySQL, PHP, Perl and it will help us with the creation of our database and the manipulation of it.

GENERAL CONCLUSION

Due to various reasons, people may not have an appropriate way to alleviate their depressions in real life, which is a symptom that leads to committing suicide, so this kind of people will try to express such feeling with the world, and they begin searching for ways.

In the present most of them use the social network for that, so as you saw in the previous chapters that we gave a better looking to this phenomenon, and how we can detect it in social network also preventing it.

This work aims to create a program, which will be capable of detecting suicide in social networks, so the results obtained from this study or this program were acceptable.

While we have identified some interesting and promising results, future work will be setting a machine classification which means that the classification will be automatic, and perhaps we could integrate data mining in our work.

We could develop a machine classification method, which could automatically distinguish between text containing suicidal ideation, and other forms of suicidal communication, and could be used to derive a much larger dataset from social media streams for further validation and experimentation.

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المخلص:

الانتحار هو ظاهرة اجتماعية والتي لها تأثير على مجتمعنا ؛ أيضا الانتحار هو مشكل يتعلق بالصحة النفسية والذي يتطلب استراتيجيات للكشف المبكر عنه. بالتالي فإن العمل الذي تم في إطار هذه المذكرة المتعلقة بتحقيق نظام مما يجعل الكشف عن انتحار محتمل في الشبكات الاجتماعية، علاوة على ذلك، يستند هذا النظام على بعض التغريدات الانتحارية التي أثبتت أن الأشخاص الذين قاموا بالتغريد فعلا انتحروا.

الكلمات المفتاحية: كشف الانتحار, الشبكة الاجتماعية, تصنيف التغريدات.

Abstract:

Suicide is phenomenon, which has a relevant impact on our society; also it is a major psychological health problem which requires early detection strategies. So the work undertaken within the framework of this research paper related to the realization of a system which makes the detection of suicide possible in social networks, moreover, this system is based on some suicidal tweets that have proved that people who tweeted them has really committed a suicide.

Key words: detection suicide, social network, tweet classification.

Résumé:

Le suicide est un phénomène qui a un impact significatif sur notre société; il est aussi un problème de santé psychologique majeur qui nécessite des stratégies de détection précoce. Ainsi, les travaux entrepris dans le cadre de ce document de recherche liés à la réalisation d'un système qui rend la détection du suicide possible dans les réseaux sociaux, de plus, ce système est basé sur certains tweets suicidaires qui ont prouvé que les personnes qui les tweeté a vraiment commis un suicide.

Mots clés: suicide de détection, réseaux sociaux, classification tweet.