**CHAPTER ONE**

**INTRODUCTION**

**1.1 Introduction**

The Oxford Advanced Learner’s Dictionary of Current English (2004) defines communication as the activity or process of expressing ideas and feelings or of giving people information. Giffin & Patten (1976) also state that communication is the process of creating meaning as well as ascribing it. It is the exchange of ideas and interaction among group members. Earlier, there was only verbal and non-verbal communication, but now there is another more effective form of communication, which is Online communication. Many people have started to communicate with the help of online communication. In fact, during the recent pandemic of COVID-19, online communication has picked up like anything.

More and more information is being churned out online ever than before. There is a lot of information for the reader to read online. People have started doing everything online, including but not limited to banking, reserving tickets, booking travel, planning travel, purchasing any and every kind of things, teaching, conducting meetings and seminars, one on one or group discussions, dating, sending information.

Every other activity which is possible is being done online. While basic tech literacy is essential for online activities, many can perform activities even with very little knowledge. The growth of online communication is fast and rapidly replacing traditional communication methods.

Over the years’ online communication has been affected with different problems which include:

Privacy: Although the internet has made communication easier, quicker and convenient, privacy problems have emerged. From email hacking to phone signal interceptions, more and more people are now troubled about their private information.

Lack of job security: Since technology keeps on changing, job security has become a problem. This means that IT experts need to be continuously learning to keep up with the changes if they want to retain their jobs.

Overruling cultures: While the internet has made the universe a global village, some cultures have consumed others. For instance, teenagers in western countries have influenced most teenagers in other parts of the world on how they dress, act and behave.

Toxic Words: According to research on computer-mediated communication by Lincoln Dahlberg and others, a term now heavily used by reporters, “trolling” is frequently used interchangeably to refer to bullying and hate speech, muddying the waters around the word’s definition and descriptive power. As a catchall media label, “trolling” invokes a kind of nebulous Internet folk devil rather than an actual person or persons behind the computer screen. It obscures the underlying hate speech. If observers were to shift away from such uses of “troll” and “trolling,” they could actually name specific toxic behaviors the sexism, racism, homophobia, transphobia, that they actually represent. Toxic behavior is pervasive in every online environment.

Toxicity can be manifested in different ways. It spans a wide spectrum that includes subtle and indirect signals; that can often be no less toxic than overly offensive language (Jurgens et al., 2019). While the research community has made enormous progress in detecting overly offensive language and hate speech (Schmidt and Wiegand, 2017; Waseem et al., 2018; Fortuna and Nunes, 2018; Qian et al., 2019), there has been less focus on computationally evaluating other subtle expressions of toxicity. The Ever increasing toxicity in online communication has given rise to the need of writing assistant tools that help prevent the use of toxic words in online communication in real time. Writing assistant tools are tools that help check for a specified error in writing and help in correcting or preventing them. AI writing assistants have come a long way since a Stanford student created the first spell-check software in the early 1970s. Since then, spell check, grammar checking, and autocorrect functionality have become commonplace, and people expect artificial intelligence to help them in their daily lives.

Having consider the problems attached to online communication this work will be focusing on the use of Toxic words. Which will lead to the development of a tool called Toxic Checker.

The researcher will be developing a writing assistant tool that check for the presence of toxic words in a text and prevent it from been sent.

**1.2 Statement of the problem**

The use of Toxic words in online communication has been a concern to the environment, which has led to the withdrawal of some people from the online environment with the aim of avoiding hate speech and online bully.

Social media can be a powerful tool that enables virtual human interactions, connecting people and enhancing businesses’ presence. On the other hand, since users feel somehow protected under their virtual identities, social media has also become a platform for hate speech and use of toxic language. Although hate speech is a crime in most countries, identifying cases in social media is not an easy task, given the massive amounts of data posted every day. Therefore, automatic approaches for detecting online hate speech have received significant attention in recent years (Waseem and Hovy, 2016; Davidson et al., 2017; Zampieri et al., 2019b).

An attempt to deal with this issue is the introduction of crowdsourcing voting schemes that give the possibility to denounce inappropriate comments in online environments to the users. Among many others, Facebook, for example, allows its users to report a post in terms of violence or hate speech. This scheme allows Facebook to identify fake accounts, offensive comments, etc. However, these methodologies are often inefficient, as they fail to detect toxic comments in real time, becoming a requirement within social network communities. A toxic post might have been published online much earlier than the time it is reported and, during the time it is online, it might cause problems and offenses to several users which might have undesired behaviors (e.g., leaving the underlying social platform).

This had led to the development of Toxic Checker: A dictionary based writing assistant tool for toxic language prevention in online communication.

**1.3 Aim and Objectives**

The aim of the research is to develop a writing assistant tool that help prevent the use of toxic words in online communication and the objectives are as follows:

To help reduce the rate of toxicity in online communication.

To design a tool that will prevent the use of toxic words in Real time in online communication.

**1.4 Research Methodology:**

To achieve the aim of this work the waterfall development model will be adopted and the following steps will be taken:

Source for the frequently use toxic words in online communication across various social medias (Facebook, Twitter, Whatsapp)

Designing a tool using python together with javascript that check for the presence of toxic words in user input and helps prevent it and also check for the overall sentiment of a sentence and determine if it will be allowed or not.

**1.5 Contribution to Knowledge**

On completion of this work we should now have a tool that check user input for toxic words before allowing user to send the message.

**1.6 Research questions**

What is Toxicity in Online communication?

How can toxicity be prevent in online communication in real time?

**1.7 Scope of the study**

The work is focus on the prevention of individual toxic words that is commonly use across popular social media platforms which include facebook, blog posts, twitter and whatsapp .

**1.8 Definition of Terms**

Toxic: extremely harsh, malicious, or harmful

Online Communication: is how people communicate, connect, transact to send, retrieve, or receive information of any kind via the internet using digital media

Research: A careful study of a subject to discover facts, establish a theory or develop a plan of action based on the facts discovered.