A Survey on Adolescent Monitoring System Using Deep Learning

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Abstract: Today in 21st century people are connected through internet globally, internet was created such that people could connect, send file and share information with one another through internet . But there are problem with this system of internet these problem are defined as inappropriate content , hate speeches and fake news etc. As a result, inappropriate comments are turning into an problem where it slowly degrading the effectiveness of user experience and create distrust for the user , where he/she will discontinue the service because of these problem. Hence, automated detection and filter can be used for such inappropriate comments as it solve the present problem by filtering such harmful comment and with adolescent monitor system, a user can monitor their children activity and browsing history in internet.

Keywords: Deep learning; Parental control; Conversations; Text recognition.

I. INTRODUCTION

An Adolescent monitor system is a system where it help the guardian/user to keep track of their children's activities in internet. Here this system uses deep learning as tool for recognizing those harmful comment and censor those comment or message. Deep learning AI is able to learn without human supervision, drawing from data that is both unstructured and unlabeled.

Learning can be of two type that are supervised and unsupervised learning.

In this case supervise learning system is used where it is defined as system will use dataset as input to train algorithm to predict the outcome as output. So the system will analyze the message and compare it with repository and decide whether to censor the message or not.

With this deep learning technology a system can be designed which classify and track any usual activity of teenager doing in any social media through image recognition.

II. LITERATURE SURVEY

The below list (Table 1) outline survey of papers related to the topic in brief with possible gaps/limitations within the existing system.

Paper references	Existing system	Limitation
1	This method uses machine learning technique of unsupervised learning where observation cluster are similar to other cluster, with clustering results researcher can explore the cluster and its characteristics.	It depends upon the reports provided by college which could be incorrect which lead incorrect data level

2	In this system deep learning is used where it search any harmful text and it flag it as inappropriate.	We looked at our errors and categorized them in multiple categories. Since it is deep learning model, it is hard to pinpoint the exact reason behind error These categories are Misspellings, Inadequate training data, Borderline cases, Noise.
3	This approach suggests using following technology such as NLP Fuzzy set theory hypermedia, Boolean retrieval model, string searching algorithm, Bayer-Moore search	Main drawback of this type of algorithms takes long time to process
4	In this system it intercepts any call and try to read user number present in contact and then flag the user as follows if caller is not present in contacts it flag as unknown.	Flagged user can change number and send same message to potential user
5	Threat analysis such as extreme use of computer, violence in games, ease of accessing controversial content. Parents' concerns and attitudes Parental Restriction Methods where guardian can restrict the contact of the children for safety reasons	Children will not have privacy since parents can track all internet usage.
6	Android mobile phones, with the aim of minimizing risks and preventing threats against minors from materializing. The application is based on WhatsApp sender and receiver messages, and then, through an internal process in the mobile, send them to a central server where they are analysed and classified according to the text of the conversations.	If other user has his/her number this harmful user can send indirect message which trick the system to recognize it
7	In this application automatically hide the unknown user's identity if it is found unknown.	Sometime user wanted to know about flagged person then user will not get the detail as it get deleted from log
8	Text recognition is a technique that recognizes text from the paper document in the desired format. The text recognition process include pre-process, segmentation, feature extraction and postprocess. As same as text recognition in image recognises harmful image and filter	Due to their sheer simplicity, Naïve Bayes models are often beaten by models properly trained and tuned using the previous algorithms listed. Information theoretically infeasible Computationally infeasible Unautomated

Table 1. Survey of existing techniques

III. EXISTING SOLUTION

In present scenario there are many technology are present where teenage behavior in internet can be observed .Some of the present technology are:

a) GPS System: With the GPS system, guardian can locate their children by tracking their cell phones.

b) Rescue Time: The Rescue Time software helps parents to keep track of their children's website visits. The software saves the records which can be viewed by the parents to find out what websites their kids visited on the Internet.

IV. CONCLUSION.

We know that the computer has changed the course of human interaction. This paper describes a face in reality and the other step is to identify the object. We through this work plan to include more parameters and understand the challenges caused due to novel interaction with the Deep learning that offers through the mobile device. We can see a tremendous change the teenage behavior in their manners like them identify harmful content and ignore the same etc. This application helps guardian to monitor their children search history where they can guide them about harmful contents.

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REFERENCES

[1] Perceived Parental Control and Risk-Taking from a Machine Learning Approach paper, The European Conference on Psychology & the Behavioral Sciences 2018

[2] Deep learning for detecting inappropriate content in text paper , International Journal of Data Science and Analytics

[3] On the Development of Advanced Parental Control Tools paper , IEEE XPLORE 16 January 2017

[4] Spam Flagging and Call Blocking and Its Impact on Survey Research paper , "David Dutwin, SSRS Micheline Blum, Baruch College ,Kennon Copeland, NORC"

[5] Parental controls on children's computer and Internet use paper , IEEE XPLORE January 4, 2009

[6] Development of an Application for Parental Control of WhatsApp on Android Mobile Devices paper , IEEE Xplore: 26 December 2019

[7] Self-Hiding Behavior in Android Apps: Detection and Characterization paper, IEEE Xplore: 03 September 2018

[8] A Study on Text Recognition using Image Processing with Datamining techniques , International Journal of Computer Sciences and Engineering