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Online Child Predeator Detection Using ML

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ABSTRACT: Professional analysts generally need to fully understand the risks and practices of online sex income in order to protect youth from online sex offenders. Although the Internet has many positive aspects, probably the most harmful problem is its use for online sexual exploitation. The Internet was intended as a means of communication that allows promiscuous sex access to countless children in an atmosphere of reasonable secrecy. The main purpose of our task is to isolate the tension of the hunter based on comments and online media accounts and send the hunting record to the digital cell administrator. A recent public survey found that about one in five young people look for sex on the Internet. per year (Finkelhor, Mitchell, & Wolak, 2000; Mitchell, Finkelhor, & Wolak, 2001). This task report presents our current progress in building the framework. With the framework created in this way, young hunter accounts identify all reports to the administrator for further action.

KEYWORDS: ML, dataset, Training Module, Predator.

I.INTRODUCTION

The exposure of children to pedophiles online is one of the fastest growing problems in social media. In March 2014, the National Society for the Prevention of Cruelty to Children (NSPCC) reported that i) 12% of 11-16 year olds in the UK had received unwanted sexual messages; and ii) 8% of 11-16 year olds in the UK have received requests to send or respond to sexual messages [16]. Therefore, the detection of child cybercriminals is a critical issue that must be addressed. Young children have started using social media as their main means of communication [20]. Furthermore, the recent Study on Awareness, Youth and Mobile Phones (SCAMP) found that 70% of 11-12 year olds in the UK now own a mobile phone, rising to 90% by the age of 14 [28]. Although social media channels (eg chat rooms, photo and video sites, microblogs) serve as contact points for pedophiles (predators) who may exploit children (victims), automatic detection of child abuse online remains an open question. . A common attack by pedophiles is so-called online child care, where adults communicate with minors through social media to ultimately exchange sexual content. Such treatment consists of establishing a trusting relationship with the minor, which later leads to persuading the child to meet him in person [19] Previous research in online cyberpedophilia detection, including the efforts of the First International Sexual Predator Detection Competition (PAN'12)[11], focused on the automatic detection of predators in chat logs. However, little has been done to understand the behavior of predators during the various stages of online child luring, which include deceptive trust development, luring, and seeking physical access (Section 2). Characterizing such steps is a critical issue because most sexually abused children are forced to voluntarily agree to physically approach a predator [36]. This suggests that understanding the different strategies a predator uses to manipulate children's behavior can help children respond to such situations. In addition, early detection of such actions can facilitate detection of harmful online conversations. We believe that a deeper characterization of predatory behavior at such stages can help develop more effective control systems that can potentially reduce the number of abused children. This paper advances the state of the art in predator detection by proposing a more accurate characterization of predatory behavior at each stage of online childcare [21]. The main contributions of this paper can be summarized as follows: (1) we propose an approach to automatically identify treatment stages in online chat based on several features: i) lexical; ii) syntactic; (iii) emotion; (iv) content; v) psycholinguistic; and vi) discourse models.(2) We create classification models for each stage using single and multiple features. Our results show that using only tag-discourse patterns can achieve an average accuracy (P) of 4.63% compared to lexical features. Using combined features in classifiers consistently improves performance for P by 7.6% across all treatment phases. (3) We present an analysis to identify the most characteristic features that characterize each online treatment phase. The rest of the paper is structured as follows: Section 2 introduces Olson's theory of attractive communication, which describes the stages of carnivorous childcare. Part 3 presents work related to identifying predator-victim online conversations and previous work in online child care. Section 4 presents a series of features selected to characterize the language used by predators. Section 5 presents our method for characterizing and identifying treatment phases. Results and discussion are presented in Chapters 6 and 7.

Conclusions are presented in Chapter 8

II.PROBLEM STATEMENT

Today, professional psychologists should be more holistic

- Understand the dangers of online erotic solicitation and ways to protect young people from online erotic predators. Although the Internet has many positive aspects, one of the most harmful aspects is its potential use for online sexual exploitation.
- We offer a system to detect child/sexualpredators through comments and messages on social networks.

III.LITERATURE SURVEY

Title	Author	Publication	Summary
Not So Cute But Fuzzy	Tatiana R. Ringenberg, KanishkaMisra, Conversations Julia Taylor Rayz	2018	Assessing the risk of sexual predation in online chat rooms
Mitigating online sexual grooming cybercrime on social media using ML	CH. Ngejane, G.Mabuza-Hocquet, J. H. P. Eloff, and S Lefophane	2020	The purpose of this article is therefore to provide a brief overview of machine tilting techniques and algorithms that have been used to solve the problem.
Ensemble method for sexual predator identification	Muhamad Ali, PartickBours	April 2020	This study proposed a general strategy to solve the problem of detecting sexual predators from online chat logs
Sexual predator detection in chats with chained classifiers	Hee-EunLee, Tatiana Ermakova	2020	This paper describes a new approach to detect sexual predators in chat conversations based on classifications.
A Conversational Agent to Detect Online Sex Offenders	John Ibañez Rodriguez, Santia go Rocha Duran	2020	In this regard, online sex crimes are one of the most important preventable crimes, especially those involving child exploitation.

III.METHODOLOGY

The dataset for this study consists of hundreds of images. The methodology of this project focuses on creating a SVM model that filters unnecessary information from the input and detects predator through the output.

4.1 ALGORITHM:

SVM:

It is a supervised machine learning model that divides a dataset into different classes on a hyperplane which is used to find the maximum margin.

We'll feed labeled data to train our model, in the prediction phase labeled data will get matched with new data with the help of the SVM algorithm to give the desired output

4.2 UML DIAGRAM:

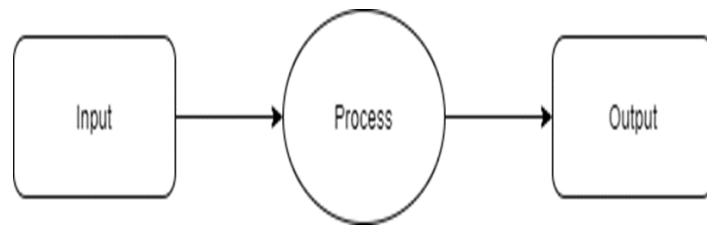


Fig: UML Diagram

4.3 SYSTEM ARCHITECTURE:

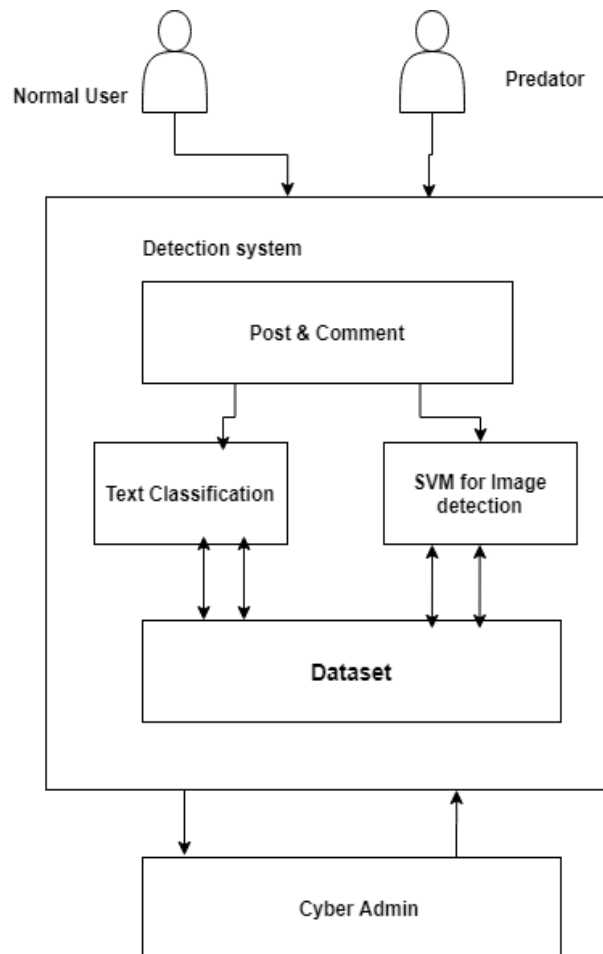


Fig 2: System Architecture



IV.CONCLUSION

The cost to children and society of sexual perpetration is too great to overlook the hazards of online solicitation. The groomer aims to build a relationship with a child to gain access to that child. When grooming takes place, commonly, an adult groomer is pretending to be a child with common hobbies or interests to build a relationship that includes trust with the child. In this project, we detect predators of a child for child safety. And send a report to the cyber admin for action.

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