

ADAMANT TO SAVE LIVES...

A Step Against Cyber Crimes

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Abstract: *This Project is insight into the design and implementation of Developing a Server plugin for the security from Cyber crimes. Cyber Pornography is the most dangerous threat to the citizens. This would include pornographic websites or pornographic magazines produced using computers and the Internet. In order to improve the condition regarding People's safety in India and the associated crimes this project will be helpful. Through this the server will not let the cyber criminal to post Dishonourable photos or videos .It will check whether the pic to be posted is save for work or not and then allow or restrict accordingly. We did experiments with several photos and find out that this sever plugin can be used for safety and security, as a samll step can lead to drastic change.*

Index Terms : Not Safe For Work(NSFW), Suicides, Cyber Bullying, Sextortion, Child Pornography, Face Detection, Face Recognition

I. INTRODUCTION

In this era of 4G and 5G connections everything and everyone is moving fast and so is crime. we are more than aware of cyber crimes and how easy it is to commit them. Every coin has two sides and so does technological advancement. Crimes like Sextortion are not only capable of affecting women but men also and it has grown tremendously in the past few years, Sextortion is also termed as non-consensual pornography which is just a mere drop in the ocean of cyber crimes. Researches have shown that a dominating number of suicides have occurred due to cyber bullying, not undermining the fact that the people who have survived this had to take medical help. Cyber crime is a growing concern as no one is safe in this age of digitization. These vulnerabilities in the internet can be reduced if we are ready to do so, Internet is a free and open entity and that's how it hacking but that is not the solution. The solution is not letting it happen using technology. As there is a famous saying "Diamond cuts Diamond". There is an app named "Rethink". ReThink is the first-ever solution to proactively prevent cyberbullying before it happens. This app analyses the text that you are typing and provide you with suggestions that it may hurt the other person whereas not restricting you to send it but like a reminder that you should not do something in a moment of heat that you might regret later. Since the internet has the power to provide amount of information to the world it also has the power to destroy lives hence taking measures is important and this classification application can be used worldwide as

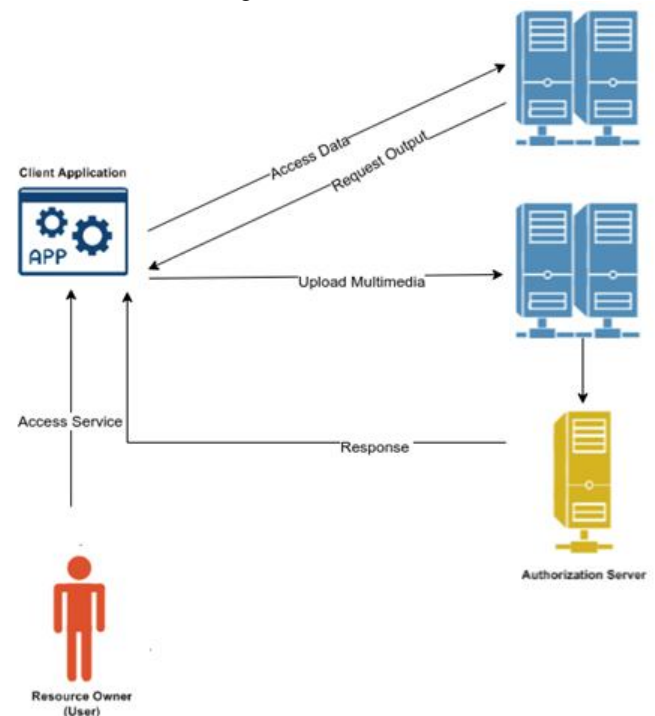
the above-mentioned problems are not country- specific they are even found in developed countries.

II. PROPOSED SOLUTION

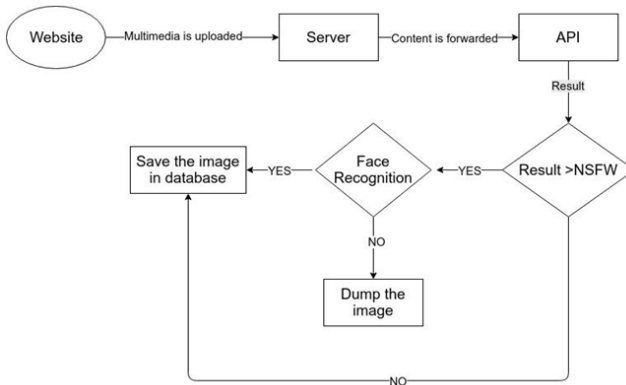
In order to make the web a safer place by using NSFW filter and facial recognition various procedures are required.: Proposed application works as follows:

- Any multimedia either image or video is uploaded on the website.
- That image will be analysed by the NSFW filter and classified as safe or not safe.
- Then according to the classification the further processing of the images are done.
- On the basis of the further processing steps database is accessed.
- Which may or may not include face recognition.

Proposed application will take an input in the form of image which a person will post on internet. The image will be processed by the server to check whether it is safe for work or not and the complete process of the proposed work will be as shown in figure.



III. WORK FLOW



1. An application is being designed to detect if any multimedia that is being uploaded on the web falls under the safe for work or not.
2. The NSFW parameter is decided using nudity detection algorithm based on deep Artificial Intelligence
3. Now when the parameter is extracted it goes through a condition check and if the condition is satisfied the multimedia will be stored in the database
4. Otherwise it goes through the face detection and face recognition processes.
5. If the face recognition verifies with recognition result then it will be available for further use.
6. Otherwise i.e. if both the above conditions do not satisfies, the multimedia is not provided access on the web.

NSFW

NSFW stands for not safe for work. It is an internet slang used to mark distinguish websites that contain nudity or adult content . Not Safe work parameter plays a very important role in this project and this project as the whole project revolves around the classification of an image as nude or not .

Nude Detection Algorithm:

NSFW detection is based on the RGB and HSV values of a image using these values it detects the skin tone and then identifies how the skin pixels distribution is present and analyses with the nudity parameters

- Detects the skin coloured pixels in the image. Forms skin regions based on skin pixels detected
- Analyze the skin region for nudity clues in the image.
- Classify the image as nude or not nude.

The classification of the images is based on the numerical value that varies from from 0 to 1 . This parameters value can be established. So that any image or video that can be considered Dishonourable should have a higher NSFW value. Hence classification of safe multimedia is achieved.

IV. TECHNOLOGY STACK

• DEEP LEARNING

Deep learning architectures such as deep neural networks, deep belief networks and recurrent neural networks have been applied to fields , where they have produced results comparable to and in some cases superior to human experts.

1. IMAGE PROCESSING:

It is a method to convert an image into digital form and perform some operations on it, in order to get an enhanced image or to extract some useful information from it. It is a type of signal dispensation in which input is image, like video frame or photograph and output may be image or characteristics associated with that image.

2. IMAGE RECOGNITION:

Image recognition is used to perform a large number of machine based visual tasks, such as labeling the content of images with meta-tags, performing image content search and guiding autonomous robots, self-driving cars and accident avoidance systems.

• NGINX

NGINX is a powerful web server and uses a non-threaded, event-driven architecture that enables it to outperform Apache if configured correctly. It can also do other important things, such as load balancing, HTTP caching, or be used as a reverse proxy.

• MINIO

It is a high performance DIstributed object storage server, designed for large scale private cloud infrastructure. Minio is the best suited for storing unstructured data such as photos, videos, log files, backups and container/ VM images. Sixe of an object can range from a few KBs to a maximum of 5TBs.

• Server Plugin

Server plugins are C++ code libraries that modify the behaviour of dedicated servers. They are used to provide everything from maintenance tools to additional gametypes.

• HTML,CSS

Hypertext Markup Language is the standard markup language for creating web pages and web applications. With Cascading Style Sheets and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

V. RESULT AND CONCLUSION

As per today's scenario cyberbulling is the most threatened terror of our society. Many People whether Male or Female have been cursed by it.In order to improve the condition regarding women safety in India and the associated crimes our project will really be helpful. It will let the girl to know that from where all these activities are taking place and the server would not allow the cyber criminal to post such

photos or videos .The server will check whether the pic to be posted is save for work or not through the database and if not then it will not allow the user to do so.

This little Effort will reduce so many suicides and crimes which are so common now a days.

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