JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

PREVENT CYBER CRIME BY USING DATA ANALYTICS MODEL

[1]Prakruthi R, [2]Dr. Veena M N

[1]PG Student, [2]Professor
[1]Department of MCA
PES College of Engineering, Mandya, Karnataka, India

Abstract: The term "Cybercrime" refers to claimed wrongdoing and federal offences involving computers, communications, aims, and instruments, as well as to correspond with the widespread use of latest technology. Pornography, cyber-bullying, identity theft, cyber fraud, credit-and debit-card theft, cyber crime, privacy violations, graphic violence, malware, and other cyber hacking may be the common types of cyber-crime. In order to achieve this we are using four phases: In the first phase, For the investigation of cybercrime, we offer a data-analysis approach.; the second phase, we determine the CaaS; the third phase, we use an appropriate classification model; and in forth phase, we will create a sample application to demonstrate how to use the proposed classification, the structure of the model can be applied in practice. This article contributes to the design of artifact, as well as the ideas and methodologies utilized in the field, by using a design science research approach. They also provide useful information on the practice, such as advice on how governments and businesses of all sizes should prepare for cybercrime assaults on the dark web.

***IndexTerms* - Crimeware-as-a-service, Underground economy, Cybercrime**

I. Introduction

Cybercrime is becoming common place, posing new challenges in terms of avoiding and detecting misconduct. This course examines issues with avoidance and guidance, as well as the occurrence of crimes involving personal computers, based on an extensive prologue to the history, capabilities, and advancements of the internet. Programmer dreams and reality, PC legal sciences, ID Burglary, spam, malware, phishing, extortion, wrongdoing product toolboxes, ensuring individual protection, passwords, and wrong doing groups on the internet will all be examples of illustrative subjects. [1]. When a computer or computer network is targeted, or the device is networked, cybercrime has taken place. Criminals and hackers are responsible for the majority of cybercrimes, but not all [4].

A new profession has emerged in the economics of internet crime: the control of illicit black money. This economic strategy not only provides an estimated technique for assessing internet crimes, but also provides facts on system dependability and divergence to analysts. [2]. Cyber bullying and harassment, Financial extortion, Internet bomb threats, Classified global security data theft, Password trafficking, Enterprise trade secret theft, Personally data hacking, Copyright violations, such as software piracy, Credit card theft and fraud, Email phishing are examples of Internet crimes [5].

II. Literature Survey

Many mainstream areas are affected by cybercrime, including defences, social media, the government, the commercial sector and the military and scientific communities. Internet fraudsters hack into the data to track their whereabouts and record their thoughts [8]. Few people have been exploiting the internet technology for criminal actions, such as unauthorised access to other people's networks, frauds, and other illegal acts. This type of illegal activity, or offense/crime, is known as cyber crime. [3]. A key problem of our day is the protection and safety of information. Numerous cybercrime incidents have been reported in India during the past few years. Research on cybercrime cases under the IT Act and Indian Penal Code in top Indian states and cities is based on quantitative analysis of these instances [6]. Every minute, a new Internet user is added to the Indian population. Because of its confluence with digital platforms and devices, protecting parents and kids against cybercrime has become a difficult issue [7].

Analyzing the data collected is not feasible using standard analysis approaches. Instead of utilising standard data analysis approaches, big data analytics may be used to analyse this huge amount of data [9]. Data analytics targeting to discovering dynamics of cybercrime underground economy. Towards this end, a framework is proposed and implemented to have a mechanism to analyse crime scenarios that are associated with underground economy. A classification model is used to analysis and decision making. An algorithm by name Crime ware Classification (CC) is proposed and implemented to achieve this. The algorithm takes dataset as input and provides training before actual prediction [2].

III. PROPOSED METHODOLOGY

Hacked computers and malware infect computers, allowing identity thieves to steal information and commit financial fraud. Cybercrime also includes crimes against people who reveal personal information, images, video and audio recordings and documents without the consent of the individuals who have given their information to them. The proposed work helps the user from being attack by the hackers. With this it may come to know about the threads and corrupted data which is being sent by the users. This project will give Security as a service between the two users or between two organizations. This will protect the user data from being stolen by the hackers which they might sell the user data to black market which will be misuse to do any crimes. And if any data to be shared to website it will check the data that it may correct or not if it will be harmful then it will be rejected and if it will correct data then that data will be uploaded and gives the users a valid access to deal with that file.

SYSTEM ARCHITECTURE

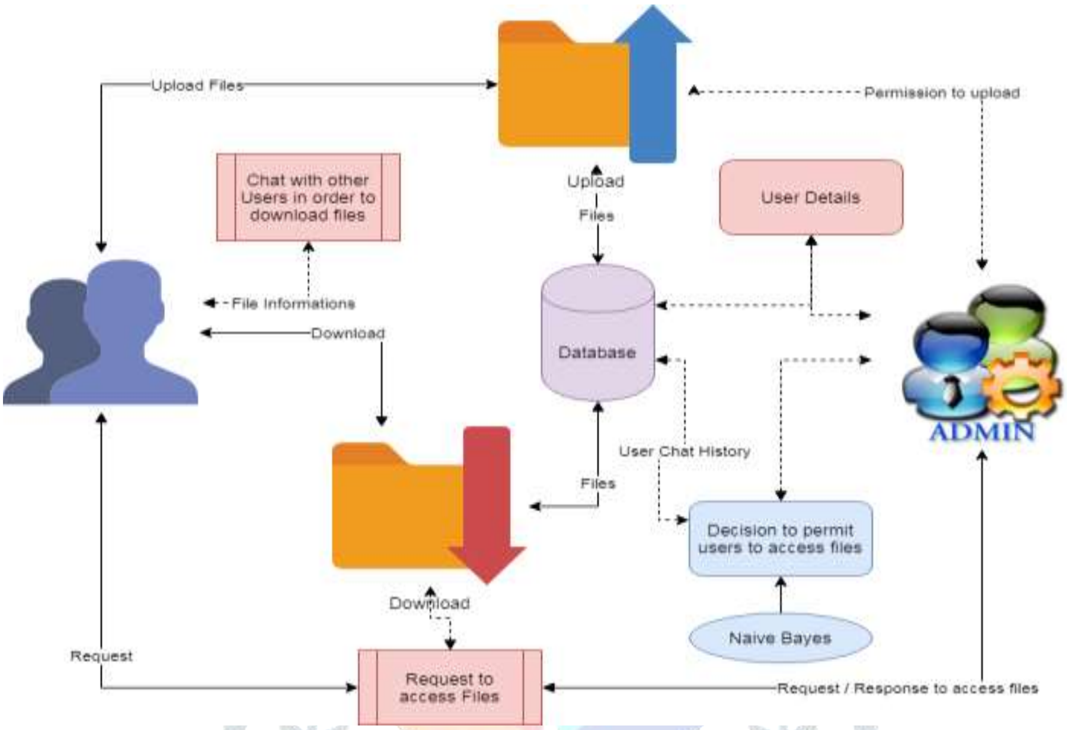


Figure 3.1: Proposed Model

IV. ALGORITHM

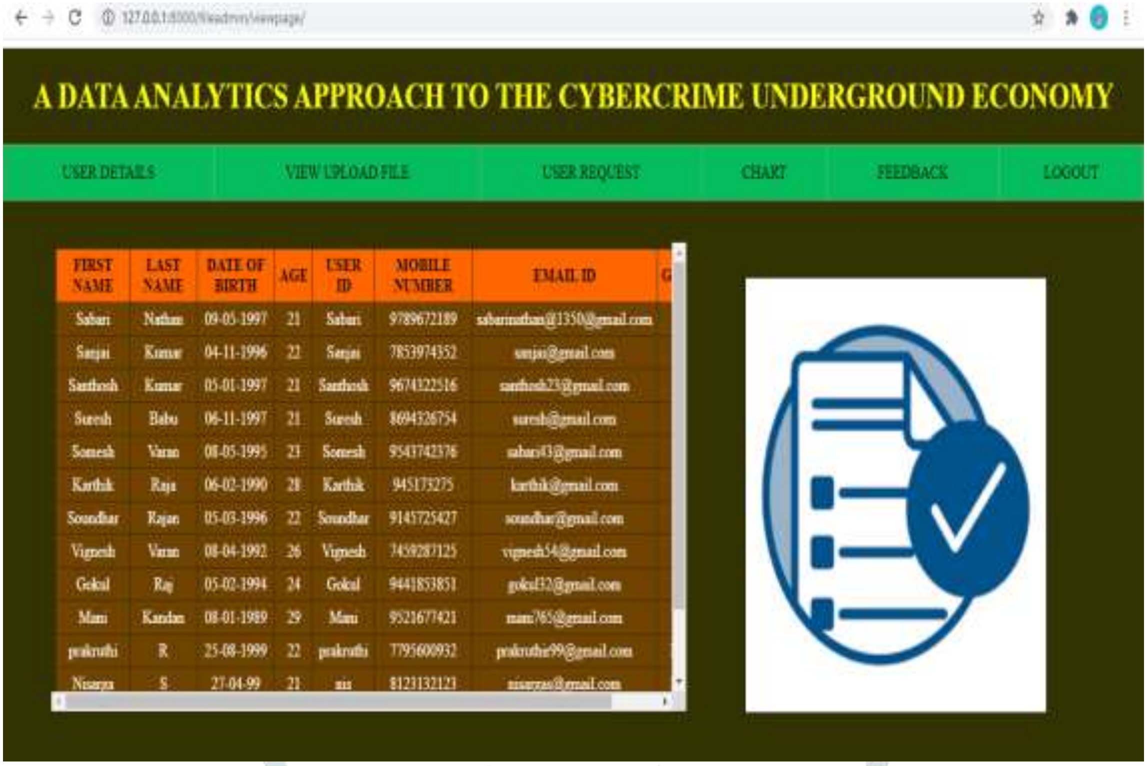
Naive Bayes Classifier

Naive Bayes is a machine learning model that is utilised for huge amounts of data; even if you are dealing with data that contains millions of records, Naive Bayes is the preferred technique. When it comes to natural language processing tasks such as emotional analysis, it produces excellent results. It is a categorization method that is both quick and simple to use. It is a theorem that deals with conditional probability. If something has already happened, then there is a conditional chance that it will happen again. Prior information can be used to calculate the conditional probability of an occurrence.

$P(A|B) = P(B|A) * P(A) / P(B)$

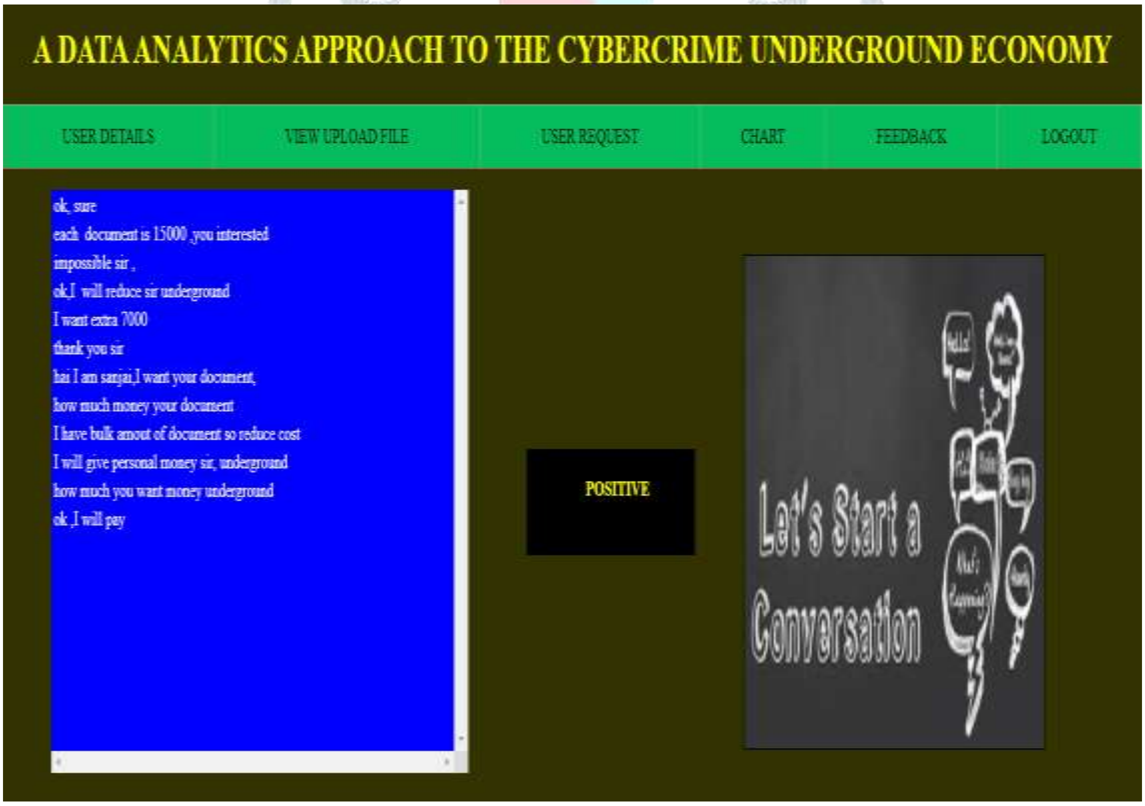
Where,
P (A|B) is Posterior probability: Hypothesis A probability for occurrence B.
P (B|A) is probability of likelihood: Probability of proof given the probability of a hypothesis.
P (A) is Prior Probability: Hypothesis probability before evidence is observed.
P (B) is Marginal Probability: Evidence Probability.

IV. EXPERIMENTAL RESULTS


A DATA ANALYTICS APPROACH TO THE CYBERCRIME UNDERGROUND ECONOMY
USER DETAILS
VIEW UPLOAD FILE
USER REQUEST
CHART
FEEDBACK
LOGOUT

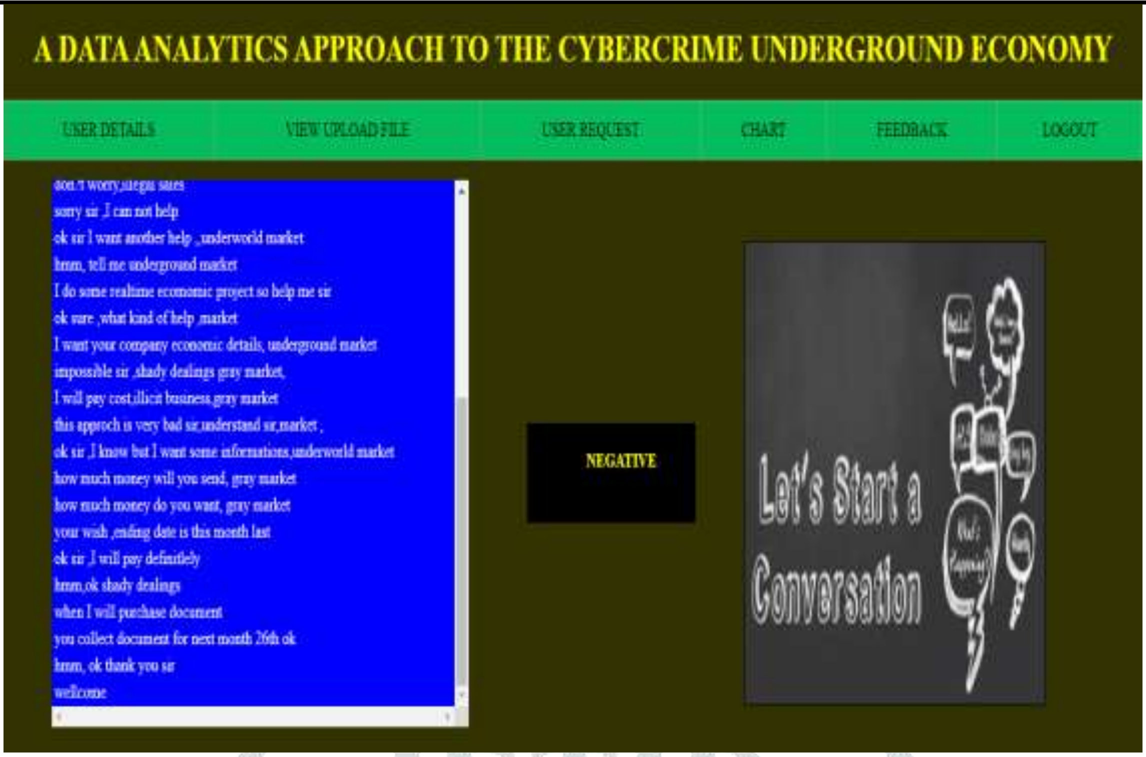
FIRST NAME	LAST NAME	DATE OF BIRTH	AGE	USER ID	MOBILE NUMBER	EMAIL ID	G
Sabari	Nathan	09-05-1997	21	Sabari	9789672189	sabarinathan@1350@gmail.com	
Sanjai	Kumar	04-11-1996	22	Sanjai	7853974352	sanjai@gmail.com	
Santhosh	Kumar	05-01-1997	21	Santhosh	9674322516	santhosh23@gmail.com	
Suresh	Babu	06-11-1997	21	Suresh	8694326754	suresh@gmail.com	
Somesh	Varan	08-05-1995	23	Somesh	9543742376	sabari43@gmail.com	
Karthik	Raja	06-02-1990	28	Karthik	945173275	karthik@gmail.com	
Soundhar	Rajan	05-03-1996	22	Soundhar	9145725427	soundhar@gmail.com	
Vignesh	Varan	08-04-1992	26	Vignesh	7459287125	vignesh54@gmail.com	
Gokul	Raj	05-02-1994	24	Gokul	9441853851	gokul32@gmail.com	
Mani	Kandan	08-01-1989	29	Mani	9521677421	mani765@gmail.com	
prakruthi	R	25-08-1999	22	prakruthi	7795600932	prakruthir99@gmail.com	
Nisarga	S	27-04-99	21	nis	8123132123	nisargas@gmail.com	

Figure 5.1: User Registration Details


A DATA ANALYTICS APPROACH TO THE CYBERCRIME UNDERGROUND ECONOMY
USER DETAILS
VIEW UPLOAD FILE
USER REQUEST
CHART
FEEDBACK
LOGOUT
POSITIVE
Let's Start a Conversation

ok, sure
each document is 15000 ,you interested
impossible sir ,
ok,I will reduce sir underground
I want extra 7000
thank you sir
hai I am sanjai,I want your document,
how much money your document
I have bulk amout of document so reduce cost
I will give personal money sir, underground
how much you want money underground
ok ,I will pay

Figure 5.3: Positive Conversation


A DATA ANALYTICS APPROACH TO THE CYBERCRIME UNDERGROUND ECONOMY
USER DETAILS
VIEW UPLOAD FILE
USER REQUEST
CHART
FEEDBACK
LOGOUT
NEGATIVE
Let's Start a Conversation

don't worry,illegal sales
sorry sir ,I can not help
ok sir I want another help ,underworld market
hmm, tell me underground market
I do some realtime economic project so help me sir
ok sure ,what kind of help ,market
I want your company economic details, underground market
impossible sir ,shady dealings gray market,
I will pay cost,illicit business,gray market
this approch is very bad sir,understand sir,market ,
ok sir ,I know but I want some informations,underworld market
how much money will you send, gray market
how much money do you want, gray market
your wish ,ending date is this month last
ok sir ,I will pay definitlely
hmm,ok shady dealings
when I will purchase document
you collect document for next month 26th ok
hmm, ok thank you sir
wellcome

Figure 5.3: Negative Conversation

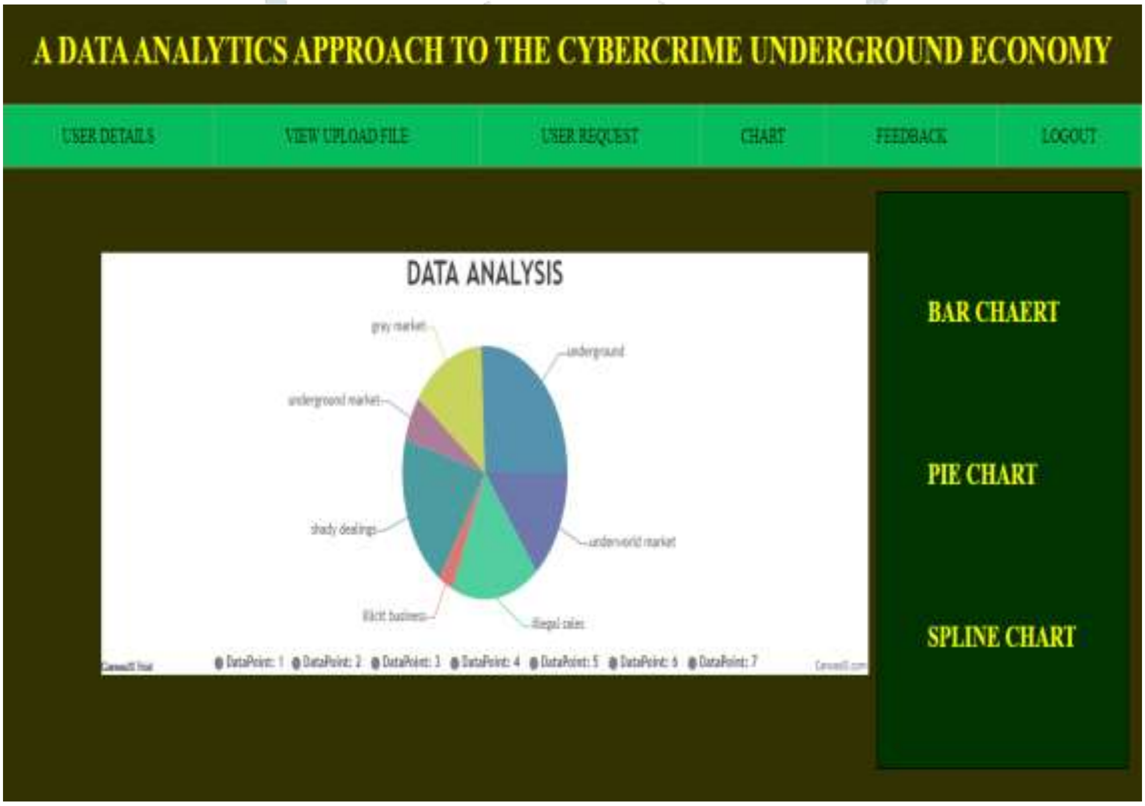


Figure 5.4: Graphical Representation

VI. CONCLUSION

The proposed system will help the user from being attack by the hackers. With this it may come to know about the threats and corrupted data which is being sent by the users. This work will give Security as a service between the two users or between two organizations. This will protect the user data from being stolen by the hackers which they might sell the user data to black market which will be misuse to do any crimes.

REFERENCES

[1] Y. Karali , S. Panda , C.S. Panda, "An Analytical Study of Cyber Crime Cases at the Most Vulnerable States and Cities in India", 2015.

[2] Jigar Shah, "A Study of Awareness about Cyber Laws for Indian Youth", 2016.

[3] M.ShivaTeja, G.Shiva Krishna, Shobini B, "A Framework for Data Analytics to Discover Cyber Crime Underground Economy", 2019.

[4] Dr. Fatma Mohamed Abdullah, "Using Big Data Analytics to Predict and Reduce Cyber Crimes", 2019

[5] Aayisha Beevi Syed Abdul, Bhavya Bharath, "Data Mining Approach To Estimate The Association With Organized Cyber Attacks And National Security", Vol. 7, Issue 01, 2019

[6] Umer Asgher, "Analysis Of Increasing Malwares And Cyber Crimes Using Economic Approach".

[7] A.R. Raghavan, Latha Parthiban, "The Growing Case Of Cybercrime And Types Of Cybercrime On A Global Scale".

[8] Mr. Sk. Mahaboob Basha, R. Neelima, G. Sai Ranjitha, Sohail Eajaz Mohammad "A Framework To Determine Cybercrime Information Through Data Analytic Approach", 2020

[9] Animesh Sarmah, Roshmi Sarmah , Amlan Jyoti Baruah, "A brief study on Cyber Crime and Cyber Law's of India", 2017.

[10] A.R. Raghavan1 & Latha Parthiban "The Growing Case Of Cybercrime And Types Of Cybercrime On A Global Scale", 2014.

[11] Aloysius Hari Kristianto, Pramatatya Resindra Widya, Jones Parlindungan Nadapdap "The portrait of the underground economy and tax evasion: Description analysis from border region", 2021

[12] Dr. A. Swarupa Rani & G.Manasa "An Effective Data Analytics Approach to Cybercrime Underground Economy Using Ml Methodologies", 2019