



# Emerging areas in Cyber Security and Forensics



**Dr. Lokesh Chouhan**  
Associate Professor



गृह मंत्रालय  
MINISTRY OF  
HOME AFFAIRS

राष्ट्रीय न्यायालयिक विज्ञान विश्वविद्यालय  
(राष्ट्रीय महत्त्व का संस्थान, गृह मंत्रालय, भारत सरकार)

**National Forensic Sciences University**  
(An Institution of National Importance under Ministry of Home Affairs,  
Government of India)



E-Mail: [Lokeshchouhan@gmail.com](mailto:Lokeshchouhan@gmail.com), [Lokesh.chouhan\\_goa@nfsu.ac.in](mailto:Lokesh.chouhan_goa@nfsu.ac.in)

Mob: +91-898924399, 9827235155

# Content

1. Introduction  
to Cyber Crimes  
and Forensics

2. Forensics and  
Digital Forensics

3. Interesting  
Cases

4. Social Media

5. Do and  
Don't !

6. Career

# Why Information Security

- It is not only about securing information from **unauthorized access**.
- Information Security is basically the practice of preventing **unauthorized access, use, disclosure, disruption, modification, inspection, recording or destruction** of information. Information can be physical or electronic one.

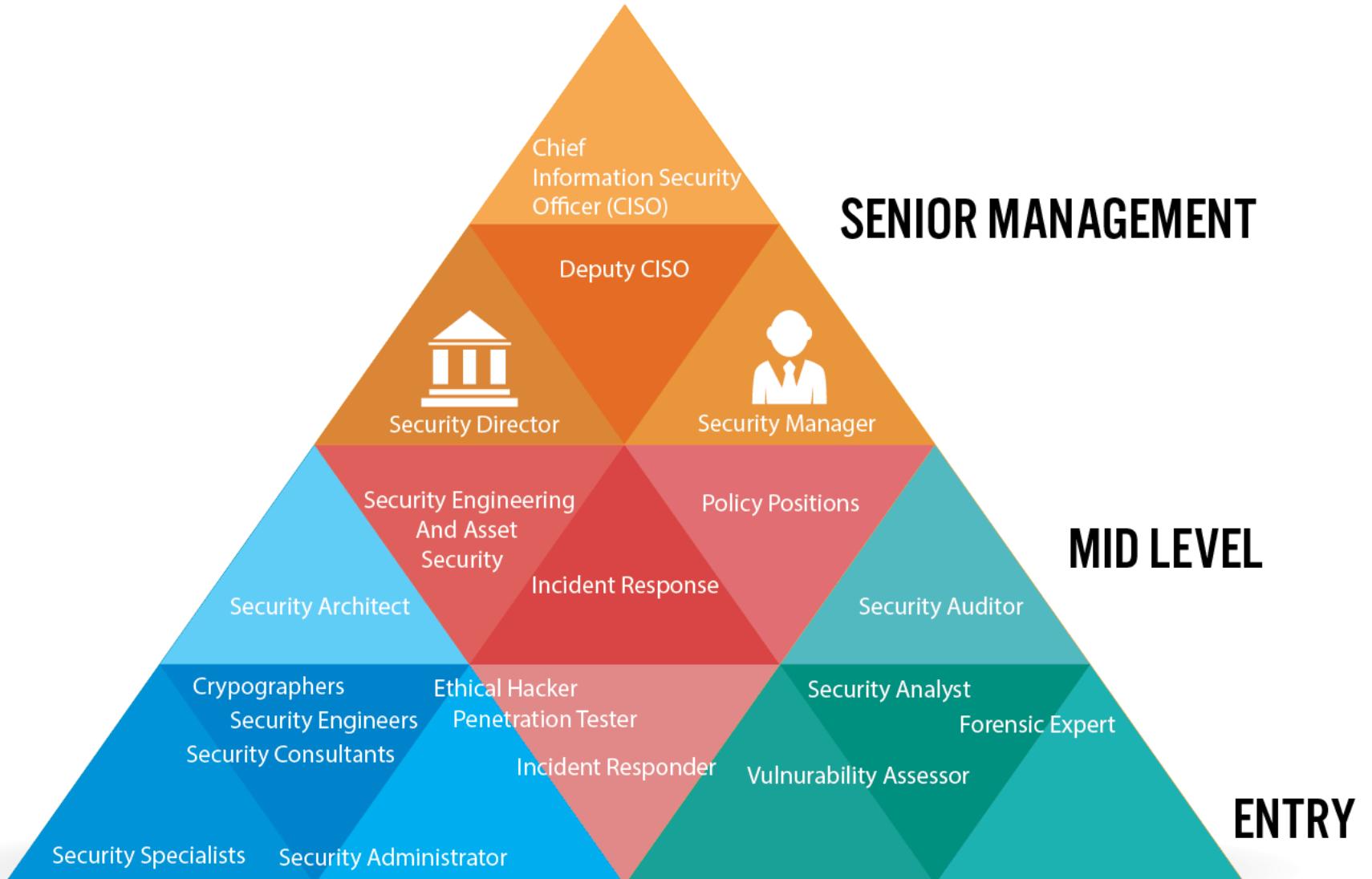
# Why Information and Cyber Security

- Information can be anything like
- Your details or we can say your profile on **social media**, **your data in mobile phone**, **your biometrics** etc.
- Thus Information Security spans so many research areas like
  - Cryptography, Mobile Computing, Cyber Forensics, Online Social Media etc.

# Career in the Cyber Security



## Security and Digital





# 2016 Cybersecurity Skills Gap

## Too Many Threats

**\$1 BILLION:**

PERSONALLY IDENTIFIABLE INFORMATION (PII) RECORDS STOLEN IN 2014.

**97%**

BELIEVE APTs REPRESENT CREDIBLE THREAT TO NATIONAL SECURITY AND ECONOMIC STABILITY.

**MORE THAN 1 IN 4**

ORGANIZATIONS HAVE EXPERIENCED AN APT ATTACK.<sup>1</sup>

**\$150 MILLION:**

AVERAGE COST OF A DATA BREACH BY 2020.<sup>2</sup>

**1 IN 2**

BELIEVE THE IT DEPARTMENT IS UNAWARE OF ALL OF ORGANIZATION'S INTERNET OF THINGS (IOT) DEVICES.<sup>3</sup>

**74%**

BELIEVE LIKELIHOOD OF ORGANIZATION BEING HACKED THROUGH IOT DEVICES IS HIGH OR MEDIUM.<sup>4</sup>

**Cyberattacks are growing, but the talent pool of defenders is not keeping pace.**

## Too Few Professionals

**2 MILLION:**

GLOBAL SHORTAGE OF CYBERSECURITY PROFESSIONALS BY 2019.<sup>5</sup>

**3X**

RATE OF CYBERSECURITY JOB GROWTH VS. IT JOBS OVERALL, 2010-14.<sup>6</sup>

**84%**

ORGANIZATIONS BELIEVE HALF OR FEWER OF APPLICANTS FOR OPEN SECURITY JOBS ARE QUALIFIED.<sup>7</sup>

**53%**

OF ORGANIZATIONS EXPERIENCE DELAYS AS LONG AS 6 MONTHS TO FIND QUALIFIED SECURITY CANDIDATES.<sup>8</sup>

**77%**

OF WOMEN SAID THAT NO HIGH SCHOOL TEACHER OR GUIDANCE COUNSELOR MENTIONED CYBERSECURITY AS CAREER. FOR MEN, IT IS 67%.<sup>9</sup>

**89%**

OF U.S. CONSUMERS BELIEVE IT IS IMPORTANT FOR ORGANIZATIONS TO HAVE CYBERSECURITY-CERTIFIED EMPLOYEES.<sup>10</sup>

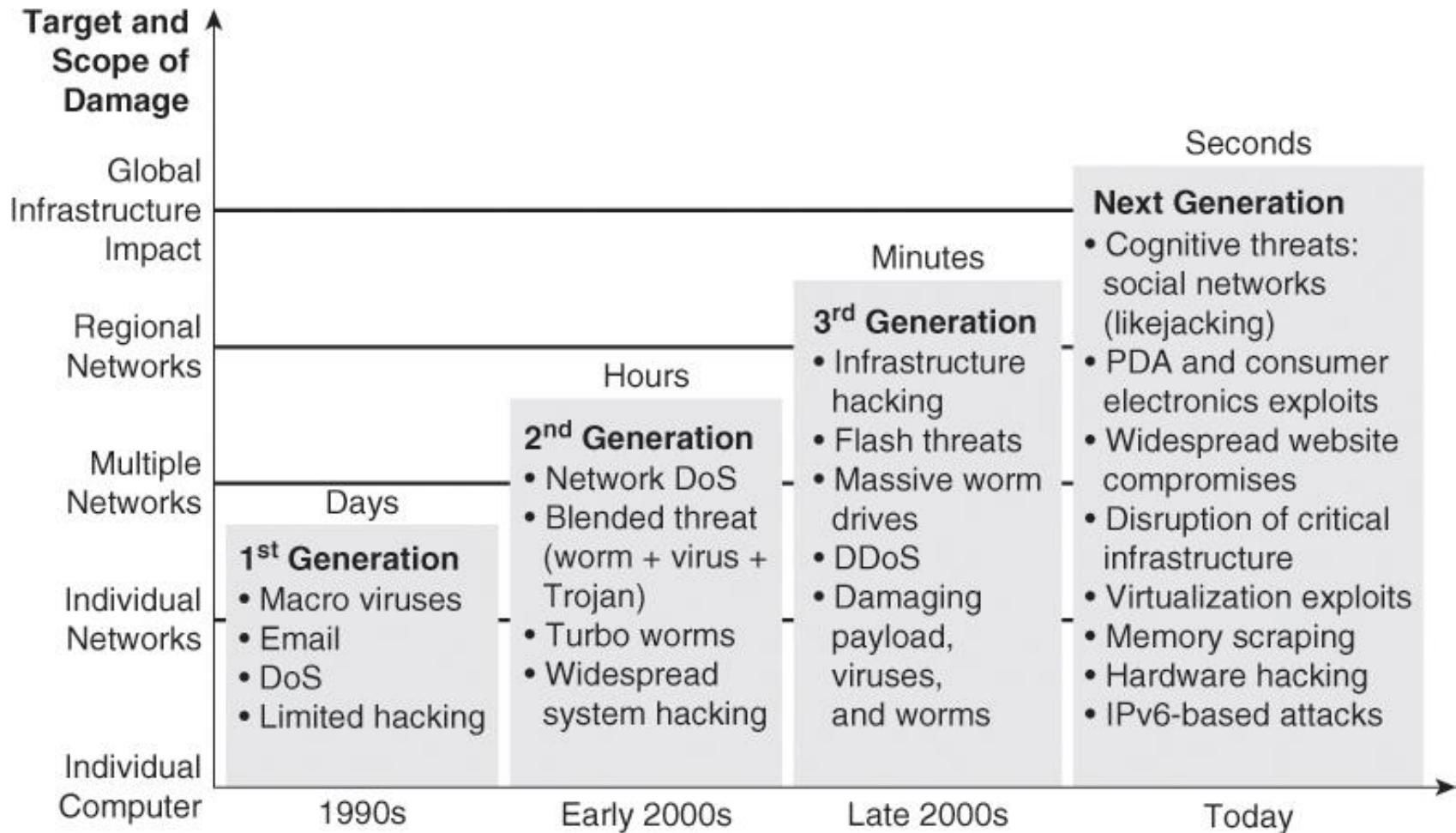
Although attacks are growing in frequency and sophistication, the availability of sufficiently skilled cybersecurity professionals is falling behind. Cybersecurity Nexus (CSX) is addressing this gap by creating a skilled global cybersecurity workforce. From the Cybersecurity Fundamentals Certificate for university students to CSXP, the first vendor-neutral, performance-based cybersecurity certification, CSX is attracting and enabling cybersecurity professionals at every stage of their careers.

SOURCES: 1. 2015 Cost of Data Breach Study: Global Analysis, IBM and Ponemon Institute, Mar 2015. 2. 2015-2016 APT Study, October 2015. 3. ISACA 2015 APT Study. 4. The Future of Cybersecurity & Security Professional and Corporate Threats & Risks Report: Juniper Research, Mar 2015. 5. ISACA 2013 IT Risk/Resilient Business Member Study, September 2013. 6. ISACA 2015 IT Risk/Resilient Business Member Study, T. UK House of Lords Digital Skills Committee, 8. Burning Glass Job Market Indicators: Cybersecurity Jobs, 2015. 9. State of Cybersecurity Infrastructure, ISACA and RSA Conference, April 2015. 10. State of Cybersecurity Infrastructure, InfraGard 2013. 11. Surveying Our Future: Closing the Cyber Talent Gap, PwC and ISACA, October 2015. 12. 2015 ISACA Risk/Priority Assessment Data from Study, September 2015.

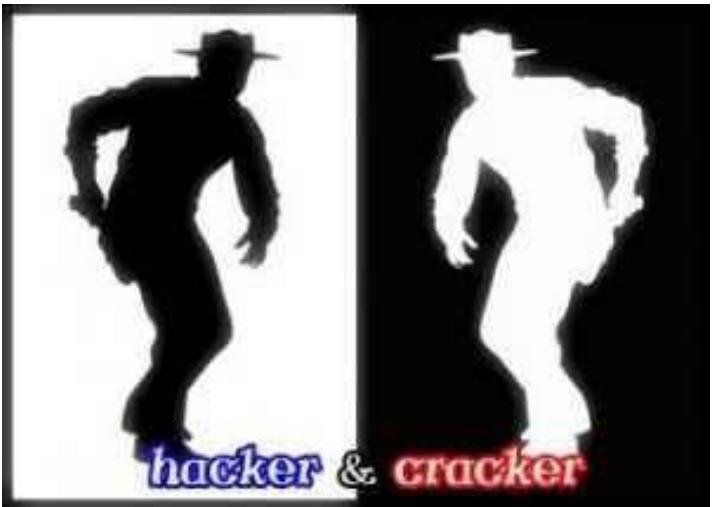
<sup>11</sup> "Employee" refers to data security professionals with at least one year of experience in security, irrespective of professional background.



# CYBER THREAT EVOLUTION



# Hacker and Cracker



## Hacker

- A Hacker is a person who just wants to know the inner workings of computer systems, helping to improve them if they detect flaws in their security.

## Cracker

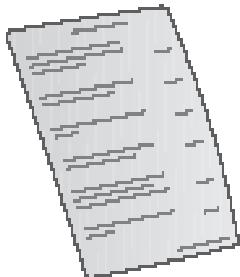
- A Cracker is a person with high skills in computer systems (the same way that hackers), these skills are regularly used for personal benefit or for harm.

# Following the Legal Process

A criminal case follows three stages:

## 1 Complaint

- Someone files a complaint



## 2 Investigation

- A specialist investigates the complaint



## 3 Prosecution

- Prosecutor collects evidence and builds a case



Figure 1-6 The public-sector case flow  
Dr. Lokesh Chouhan || Cyber Security and Digital Forensics

## Forensic Science

**Forensic science** is the application of science to criminal and civil laws.



Forensic scientists **collect, preserve, and analyse** scientific evidence during the course of an investigation.



While some forensic scientists travel to the scene to collect the evidence themselves, others occupy a purely laboratory role, performing analysis on objects brought to them by other individuals.

# Types of Forensics

## Physiological sciences

- Forensic anthropology
- Forensic dentistry
- Forensic entomology
- Forensic pathology
- Forensic botany
- Forensic biology
- DNA profiling
- DNA phenotyping
- Bloodstain pattern analysis
- Forensic chemistry

## Social sciences

- Forensic psychology
- Forensic psychiatry

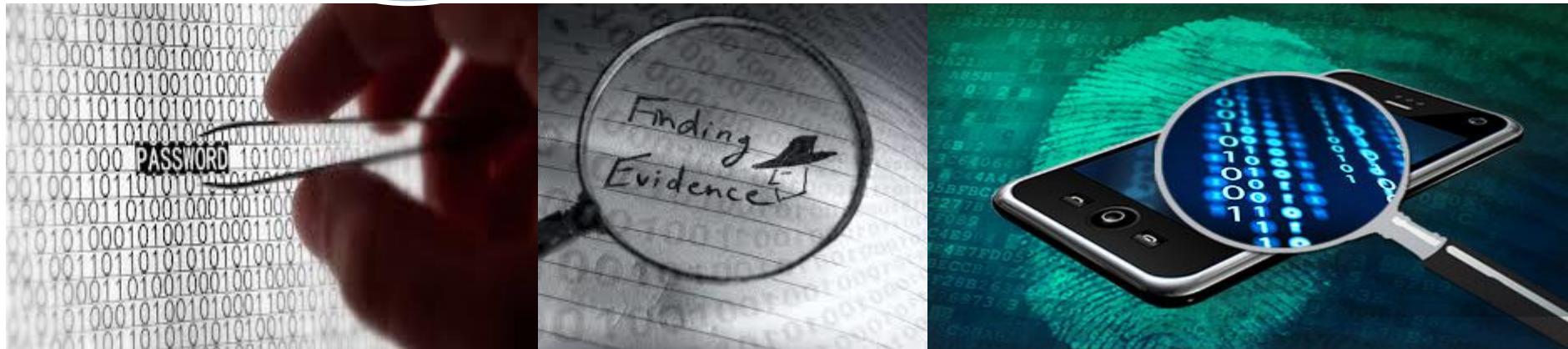
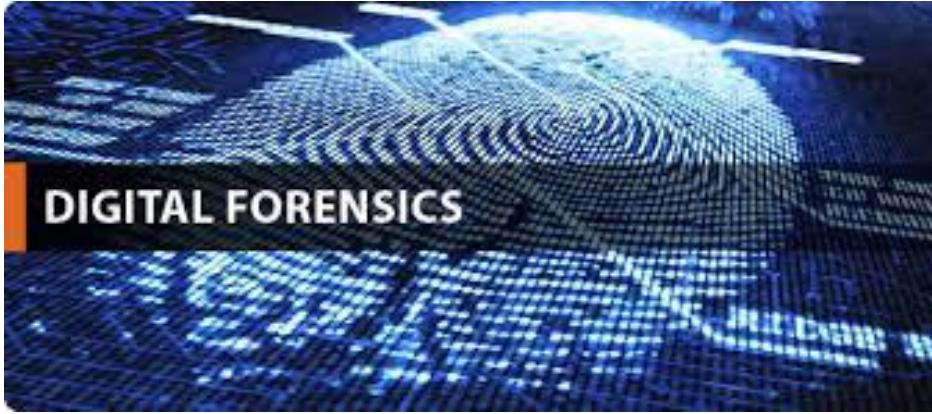
## Forensic Criminalistics

- Ballistics
- Ballistic fingerprinting
- Body identification
- Fingerprint analysis
- Forensic accounting
- Forensic arts
- Forensic footwear evidence
- Forensic toxicology
- Gloveprint analysis
- Palmprint analysis
- Questioned document examination
- Vein matching

## Digital forensics

- Computer forensics
- Forensic data analysis
- Database forensics
- Mobile device forensics
- Network forensics
- Forensic video
- Forensic audio

# Digital Forensic



Digital forensics (sometimes known as digital forensic science) is a branch of **forensic science** encompassing the recovery and investigation of material found in digital devices, often in relation to computer crime.

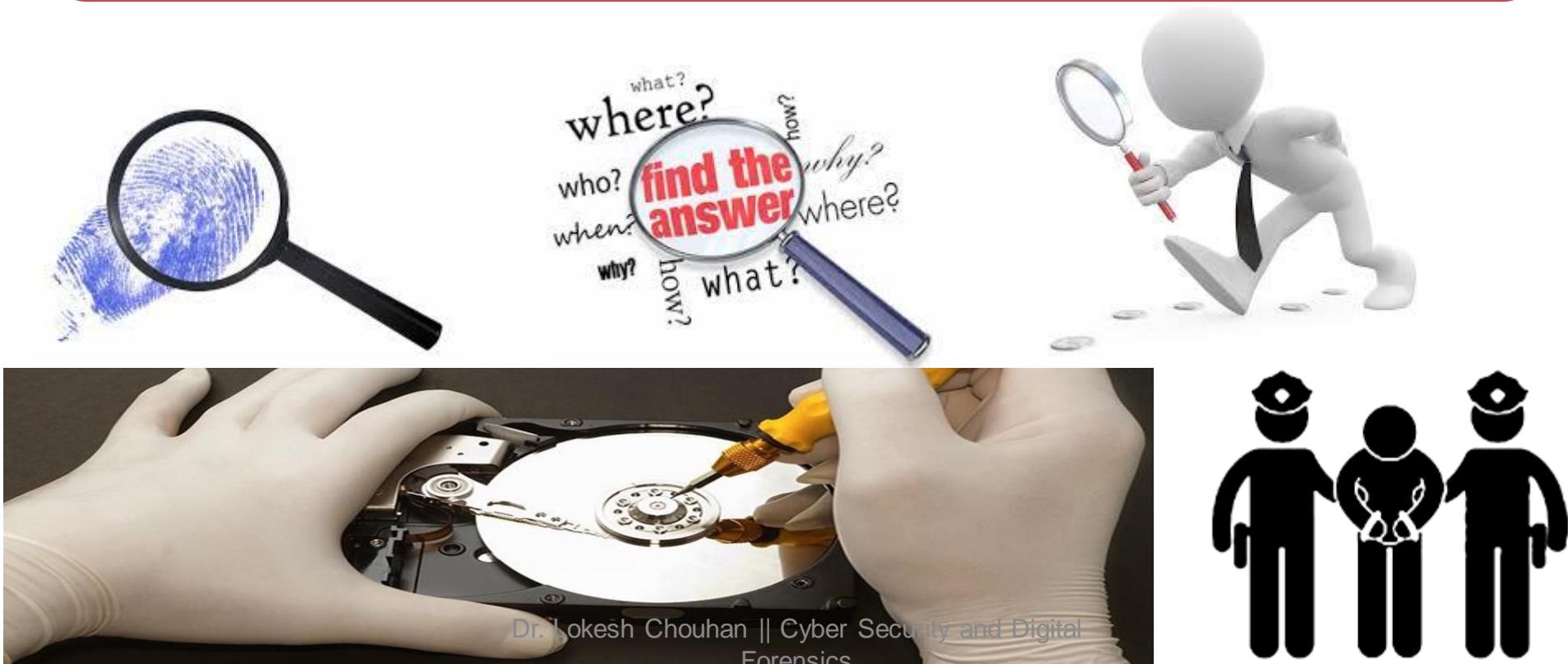
# Definition

Computer forensics (sometimes known as computer forensic science) is a branch of **digital forensic science** pertaining to legal evidence found in computers and digital storage media.

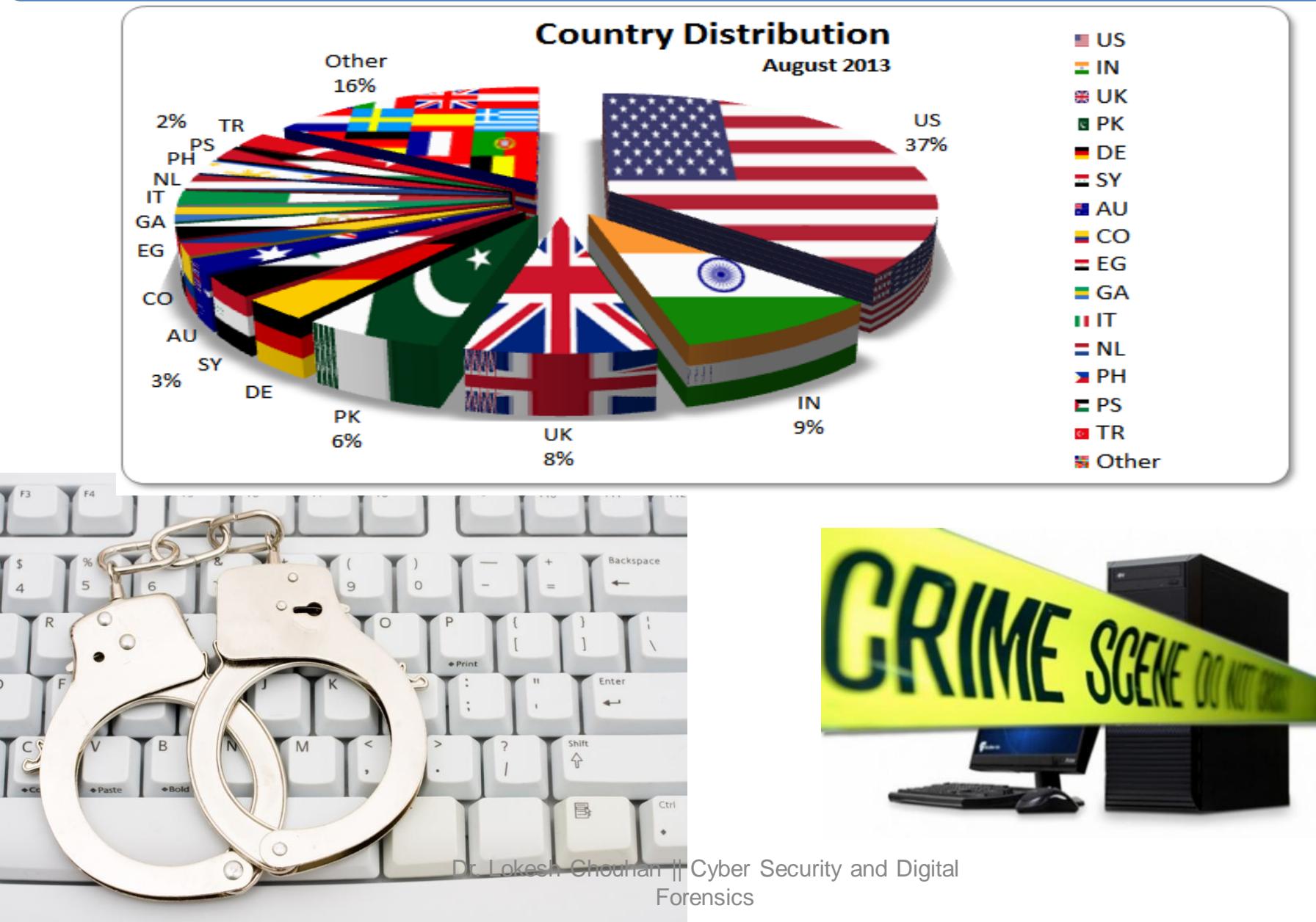
The goal of computer forensics is to examine digital media in a forensically sound manner with the aim of identifying, preserving, recovering, analyzing and presenting facts and opinions about the digital information

# Locard's Exchange Principle

It is impossible for the criminal to act, especially considering the intensity of a crime, without leaving traces of his presence.



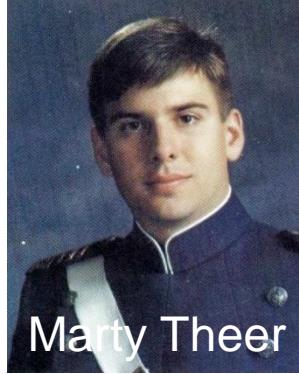
# Interesting Cases



## 2000 Michelle Theer



- On Dec. 17, 2000, John Diamond shot and killed **Air Force Capt. Marty Theer**. "There [was] no direct evidence, no eyewitness evidence. There is no physical evidence.
- what prosecutors did have was 88,000 e-mails and instant messages on **Theer's** computer, including personal ads that Theer had written in 1999, web-mail that she had written in response to those ads: clear evidence of a sexual relationship between **Theer** and **Diamond** and messages documenting the conspiracy to murder **Theer**'s husband.
- **Theer** was found guilty on December 3, 2004 of murder



Marty Theer



Michelle Catherine  
THEER



John Diamond

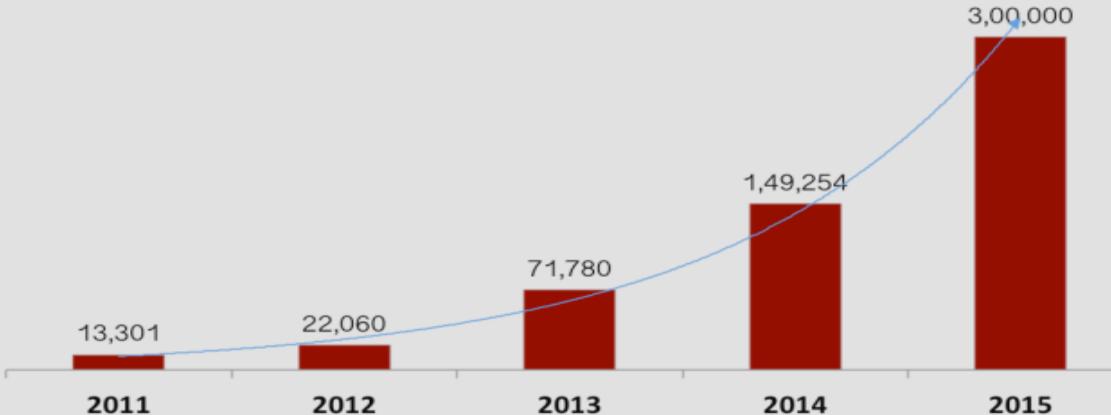
## 2008 Brad Cooper

- Brad Cooper was arrested for the murder of his wife Nancy Cooper.
- At Cooper's murder trial, Det. Jim Young described how he had attempted to access text messages on the phone but instead wiped the phone's memory by repeatedly entering incorrect SIM lock codes and PUK codes.
- The defense team argued that an "inept" police investigation ignored and destroyed important evidence that would have shown Cooper's innocence.

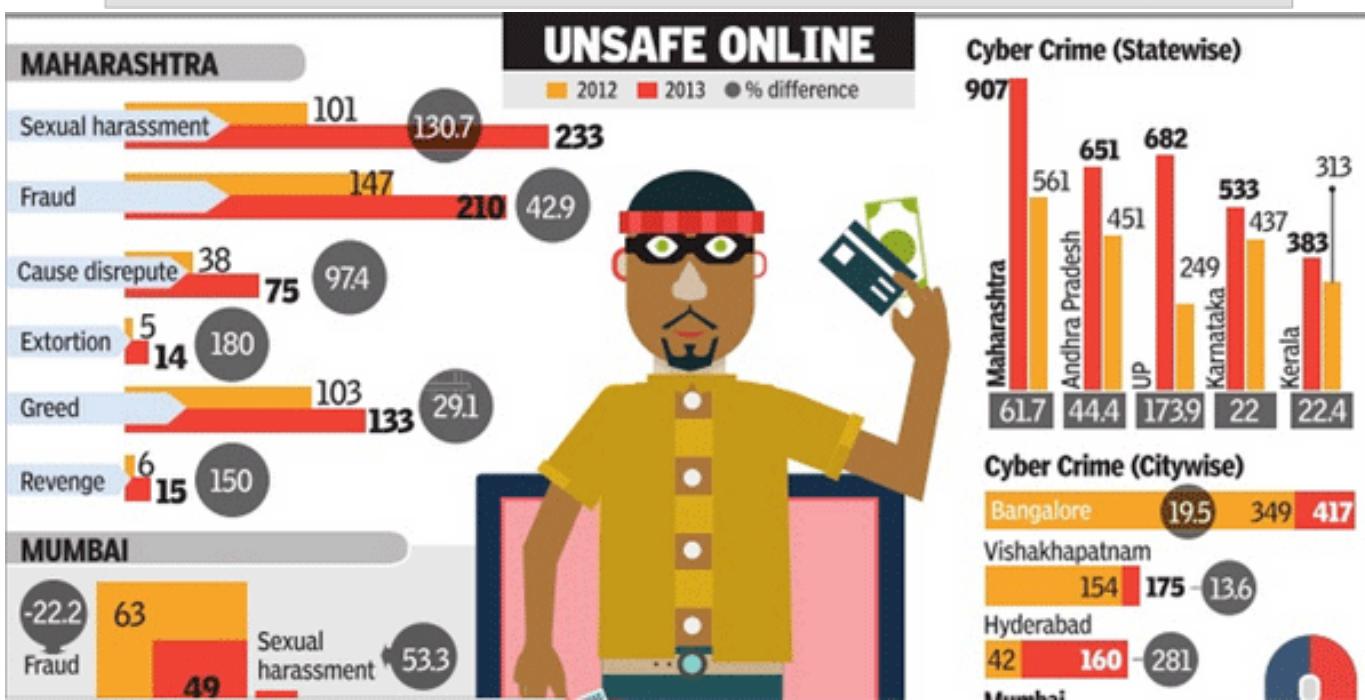


# Cases from India

## NUMBER OF CYBER CRIME CASES IN INDIA



SOURCE: ASSOCHAM- Mahindra SSG Report, Jan 2015



# Case - 1: Blackmailing

**State**

:

**Maharashtra**

**City**

:

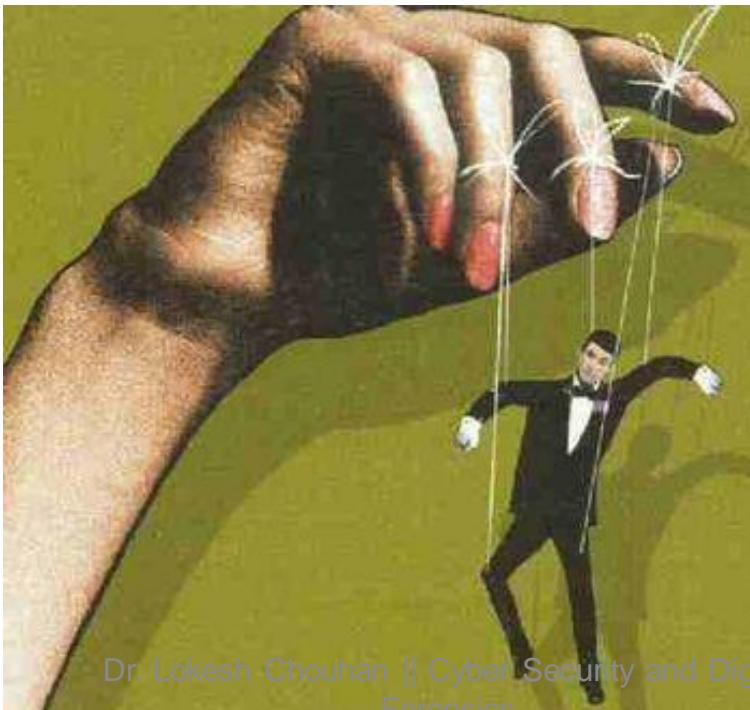
**Mumbai**

**Sections of Law**

:

**292, 389, 420, 465, 467, 468,  
469, 471, 474 IPC**

**r/w 67 of IT Act 2000.**



## Case - 1: Blackmailing

- The **accused** posed to be a **young girl** living in Kolkata and lured a **non-resident Indian (NRI)** working in Dubai (the complainant) to enter into an e-mail correspondence.
- Subsequently, the **accused** began corresponding with the complainant using different e-mail IDs, under the guise of different **female names** which made the complainant believe that **he** was corresponding with **different girls**.



## Case - 1: Blackmailing

- This case won the first runner up position for the **India Cyber Cop Award**, for its investigating officer **Mr Deepak Dhole, Inspector, Mumbai Police**.
- This case was a classic example of social engineering when Internet was just beginning to take off in India. The police response was swift and the case investigation thorough and professional.

## 2. Hyderabad Bomb Blast



## 2. Hyderabad Bomb Blast

- On 21 February 2013, at around 19:00 IST, two blasts occurred in the city of Hyderabad, India. The **bombs** exploded in Dilsukhnagar, a crowded shopping area, within 100 metres (330 ft) of each other.
- The **first explosion** occurred outside a roadside eatery named A1 Mirchi, next to the Anand Tiffin Centre and opposite the Konark movie hall, followed by the **second one** two minutes later near the Route 107 bus stand close to the Venkatadri theatre.

## 2. Hyderabad Bomb Blast

- The **NIA** conducted raids at various places in UP, Bihar and Maharashtra, looking for alleged terror modules.
- **Forensic investigation** revealed that the **two bombs** used were packed with huge amounts of iron nails and bolts and ammonium nitrate, which were held together with a copper string.
- Closed-circuit television footage collected from the traffic signal near the blast site revealed movements of **five men** who allegedly had planted explosives at the blast sites. However, the faces of the suspects were not clearly seen.



## 2. Hyderabad Bomb Blast

- Cyber Forensic team found one CD
- CD: Photograph of **Aishwarya Rai**.
- This was only the evidence.
- CCTV potages are also checked later on.



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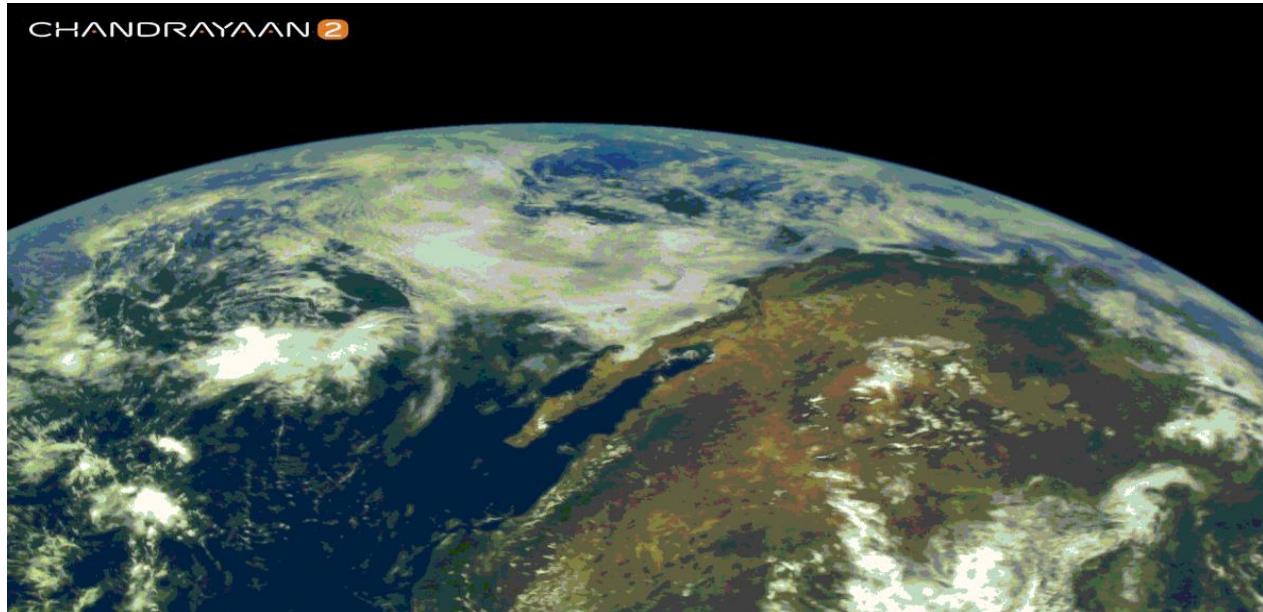
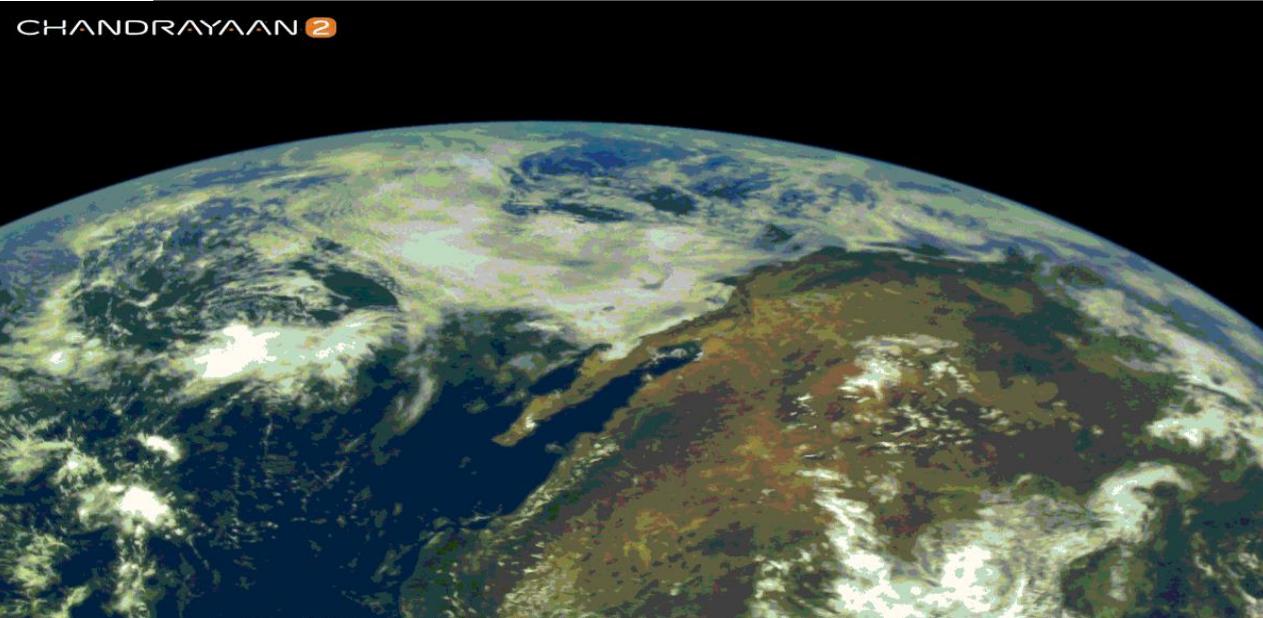


# Find out differences



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Forensics

Find out  
differences



## SMS SCAM

**"Nothing is impossible."**

***The word itself is: I M Possible."***



•••• Telstra 4G 8:40 97%

◀ Messages +44 7937 985879 Contact



Text Message  
Today 06:51

Dear NAB Bank User,  
We have detected some unusual activity.  
We urgently ask you to follow the account review link:  
<http://bit.do/nab-bank>

## SMS SCAM

- The alleged mastermind behind a Rs 400 million SMS fraud that duped at least 50,000 people has been arrested along with an associate more than two months after the scam was unearthed.
- Jayanand Nadar, 30, and Ramesh Gala, 26, were arrested late from a hotel in Mira Road in the western suburbs. Nadar, a first year college dropout, along with his brother Jayaraj had allegedly duped at least 50,000 people of Rs.400 million, said officials in the city police's Economic Offences Wing (EOW).

# Phishing email

**From:** \*\*\*\*\*Bank [mailto:support@\*\*\*\*Bank.com]

**Sent:** 08 June 2004 03:25

**To:** India

**Subject:** Official information from \*\*\*\*\* Bank

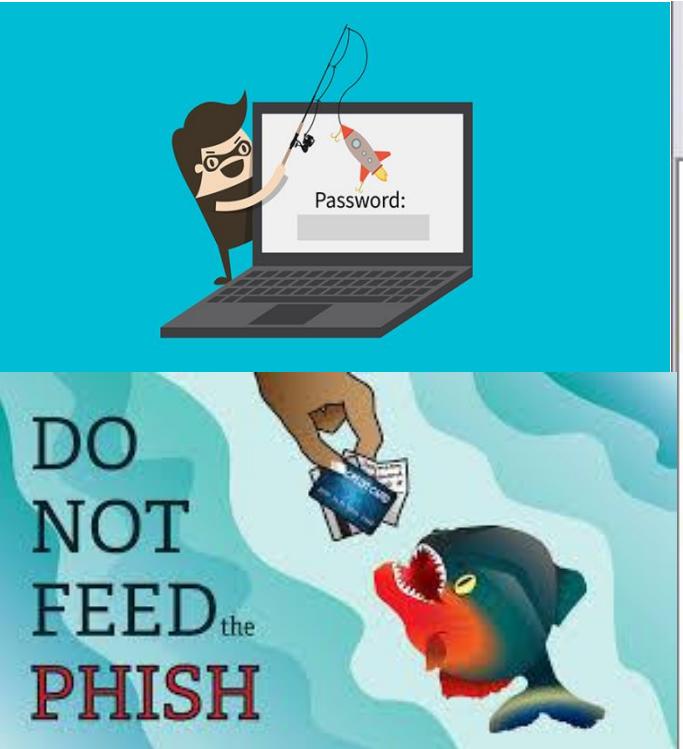
Dear valued \*\*\*\*\* Bank Customer!

For security purposes your account has been randomly chosen for verification. To verify your account information we are asking you to provide us with all the data we are requesting. Otherwise we will not be able to verify your identity and access to your account will be denied. Please click on the link below to get to the bank secure page and verify your account details. Thank you.

[https://infinity.\\*\\*\\*\\*\\*bank.co.in/Verify.jsp](https://infinity.*****bank.co.in/Verify.jsp)

\*\*\*\*\* Bank Limited

# Phishing



**From:** admin@reply8647.user.ebaybid.com  
**Date:** Wednesday, October 11, 2006 7:50 AM  
**To:** [REDACTED] @hotmail.com  
**Subject:** RE: Alert Message 99820565515184

**1. Questionable Sender's Address**

**eBay** eBay sent this message to [REDACTED] (member). This message originated from eBay.

**2. Sense of Urgency**

Hurry! Message for [REDACTED] @hotmail.com. Update Now!

Dear [REDACTED] @hotmail.com,

We are contacting you to remind you that on 10 OCT 2006 we identified some unusual activity in your account coming from a foreign IP address 201.8.43.167 ( IP address located in China ). We have been notified that a card associated with your account has been reported as lost or stolen and involved in fraudulent transactions or that there were additional problems with your card.

**3. Non-US Dating Format**

According to our site policy you will have to confirm that you are the real owner of the eBay account by completing the following form or else your account will be marked as fraudulent , and will remain open for investigation. You will pay for the fees which will result from the financial transactions between eBay and FIT ( Fraud Investigations Team ).

**4. Threat!**

[https://signin.ebay.com/ws/eBayISAPI.dll?SignIn&co\\_partnerId=2&pUserId=&siteid=0&pageType=&pa1=&i1=&bshowqif=&UsingSSL=yes](https://signin.ebay.com/ws/eBayISAPI.dll?SignIn&co_partnerId=2&pUserId=&siteid=0&pageType=&pa1=&i1=&bshowqif=&UsingSSL=yes)

eBay's Privacy Policy and Law Enforcement Disclosure: We care deeply about the privacy of the eBay community and will protect the privacy of our members even while working closely with law enforcement to prevent criminal activity. Please visit eBay's Privacy Central for more information.

**5. Link & URL in Status Bar Doesn't Match**

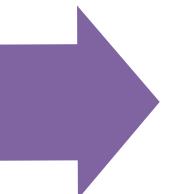
http://user47id.com/.../

# Principal approached to Cyber Cell



IP Address Class	IP Address Range (First octet decimal value)
Class A	1-126 (00000001 to 01111110)
Class B	128-191 (10000000 to 10111111)
Class C	192-223 (11000000 to 11011111)
Class D	224-239 (11100000 to 11101111)
Class E	240-255 (11110000 to 11111111)

Some school's (Bombay Scottish and GHK School, Santacruz) Principal contacted to cyber cell, as they were getting huge number of wrong messages about school and their staff.



Investigating Team investigated that messages were coming from school IP itself.

# Principal approached to Cyber Cell

A specific group of school students continuously uploading abusing words and bad comments about their school.



# HACKING

- INDIAN WEBSITES ARE NEW TARGET OF HACKERS



"**GForce**," a group of anonymous hackers whose members write slogans critical of India and its claim over Kashmir, have owned up to several instances of hacking of Indian sites run by the Indian government.



## Central Bureau of Investigation

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- [CFSI](#)
- [CBI Academy](#)
- [Missing Persons](#)

### Oooopsss! WTF? CBI? Cyber Crime? Hacked? hahaha funny aint it! :P

This attempt is in response to the pakistani websites hacked by 'Indian Cyber Army'. We told you before too ..we are sleeping but not dead..remember PCA(pakistan cyber army)..back off kids or we will smoke your d00rs off like we did before..lets see what you investigating agency so called CBI can do for you or for us! haha..one more attempt from your side..we got you every website lying around here like its our local server! bushahaha..so we would like to say to your 31337 hackers and your 31337 NIC team..go and read some more books ..you guys are seriously bunch of script\_kiddies! ..you know nothing rite now..got root access to NTC server? wtf..mass defacements..how about something like this..a planned attack! haha..btw we got root to your NIC too :P ..your filtering sucks..have fun! and DO NOT DISTURB..we got better things to do.. D ..stop complaining about pakistani websites security..secure your own ass first..thats what intelligent people do!..lol..tata :D

A message by Pakistan Cyber Army

### Pakistan Zindabad!

Join  
F1  
com

Motto Mi



Interview  
Contact  
Appointm

MoU Sign  
NASSCO

Draft CBI

Extract -



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Forensics  
**PAKISTAN  
CYBER ARMY**

# Major Cyber Attacks

**INCOME TAX RAID CASE**

**SOURCE CODE THEFT CASE**

**CYBER SABOTAGE CASE**

**LOTTERY FRAUD CASE**

**ACCOUNTING FRAUD CASE**

**DIGITAL SIGNATURE FRAUD CASE**

# Even More Specific Attacks

**1. ORKUT FAKE PROFILE CASES**

**2. EMAIL ACCOUNT HACKING**

**3. CREDIT CARD FRAUD**

**4. ONLINE SHARE TRADING FRAUD**

**5. TAX EVASION AND MONEY LAUNDERING**

**6. SOURCE CODE THEFT**

**7. THEFT OF CONFIDENTIAL INFORMATION.**

**8. SOFTWARE PIRACY**

**9. MUSIC PIRACY**

**10. EMAIL SCAMS**

**11. PHISHING**

**12. CYBER PORNOGRAPHY**

**13. ONLINE SALE OF ILLEGAL ARTICLES**

**14. USE OF INTERNET AND COMPUTERS BY TERRORISTS**

**15. VIRUS ATTACKS**

**16. WEB DEFACEMENT**



Ministry of Electronics and Information Technology  
Government of India



# Report & Contribute to a **SECURE & SAFE DIGITAL INDIA**

If you're ignoring cyber incidents you are not just potentially putting your life at stake but also the lives of 1.2 billion people

**Section 70B of IT Act read with Rule 12 (1) (a)**  
provides for Mandatory reporting of cyber security incidents by

- SERVICE PROVIDERS
- DATA CENTERS
- BODY CORPORATES
- INTER MEDIARIES

in the following cases :

- Probing of critical networks
- Attacks on Servers & network devices
- Unauthorised access of IT systems/data
- Identity theft, spoofing & phishing attacks
- Defacement of websites
- Attacks on critical infrastructure & Wireless network
- Malicious code attacks
- Attacks on applications such as e-Governance, e-Commerce, etc

Therefore if you are a Service Provider, Data Centre, Body Corporate or Inter Mediary  
Report any cyber incident without delay to [incident@cert-in.org.in](mailto:incident@cert-in.org.in)

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\*Information Technology (The Indian Computer Emergency Response Team & Manner of Performing Function and Duties) Rules 2013.





**BREAKING NEWS**



Google

social media security



## Top stories



Homeland Security to collect social media usernames on immigration and visito...

CNN.com

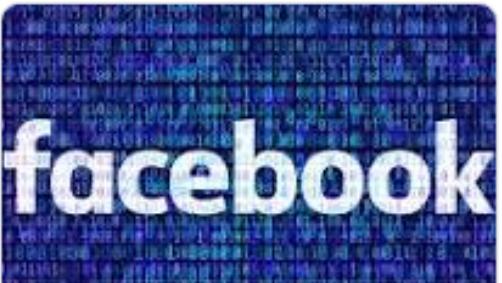
3 hours ago



Why Social Media is Increasingly Abused for Phishing Attacks

Security Boulevard

1 day ago



Facebook says Homeland Security can't make fake accounts

The Verge

2 days ago

# THE HINDU



JUST  
IN

3 ⏱ 28mins Sensex rallies over 300 points; Nifty reclaims 11,300

4 ⏱ 46mins CVC pulls up officials for delay in disposing of cases

5 ⏱ 52mins Trump vetoes congressional effort to block Saudi arms sale

MENU



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BUSINESS

## Cyber crimes in India extremely organised, collaborative in nature: IBM



SPECIAL CORRESPONDENT

BENGALURU, JULY 23, 2019 22:41 IST  
UPDATED: JULY 23, 2019 22:55 IST



**DNA** HOME PHOTOS INDIA ENTERTAINMENT SPORTS WORLD BUSINESS TECHNOLOGY

TRENDING# Karnataka Crisis Chandrayaan-2 Priyanka Chopra Narendra Modi Bihar floods

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## PHOTOS

**Ajaz Khan arrested by Mumbai Police's cyber cell for 'objectionable videos' that 'promote enmity'**

Khan, a former Bollywood actor, is often seen posting inflammatory videos on his social media handles.

DNA Web Team | Jul 18, 2019, 04:31 PM IST

Actor Ajaz Khan has been arrested by the BKC Cyber Cell for a provoking TikTok video. Khan, a former Bollywood actor, is often seen posting inflammatory videos on his social media handles.

Shiv Sena activist Ramesh Solanki, who had filed a complaint against the TikTok celebrities wrote on Twitter; "Its official Ajaz Khan is arrested by Cyber Cell Dept of @MumbaiPolice I thank @MumbaiPolice and @CPMumbaiPolice for arresting this hate monger Jai Hind Jai Sri Ram"

### 3. Govt issues notice to TikTok



Government has issued notices to social media platforms Tiktok and Helo along with a set of 21 questions threatening to ban these apps if it does not receive appropriate response, official sources said.

The action from Ministry of Electronics and IT (Meity) follows complaint by Rashtriya Swayamsevak Sangh affiliate Swadeshi Jagran Manch (SJM) to the Prime Minister,

# The Indian EXPRESS

Thursday, July 25, 2019

## Men at centre of TikTok video row are a social media rage

Team 07 had uploaded a video on the popular video-sharing app TikTok, allegedly warning of the consequences of Tabrez Ansari's lynching.



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Digital | News

## Faisu's TikTok account BLOCKED

TikTok blocks Faisu's account

Author: Editorial Team

10 Jul, 2019 13:41:21



# The Indian EXPRESS

## CYBER CRIME

0  
SHARES

 SHARE



ARTICLE    PHOTOS    VIDEOS

Result: 1- 8 out of 155 Article found



### Cyber crime becoming industry, may occur 'very often': Rajnath Singh

By: PTI | New Delhi | Updated: March 14, 2018 at 12:22 pm

Singh said penetration of Internet and self-radicalisation have further added to the woes of law enforcement agencies and that continuance of the availability of radicalised materials on Internet is likely to have drastic change in society.



### Cyber crime: Bank employee cheated of Rs 1.5 lakh

Written by Sagar Rajput | Mumbai | Updated: March 12, 2018 at 5:25 am

Borivali resident Sonal Maheshwari told the police that she discovered the theft when she checked her email account and found that Rs 1.56 lakh had been withdrawn from her bank account without her knowledge.



### Russian 'hacker' extradited to US from Spain

By: Reuters | Washington | Updated: February 3, 2018 at 11:02 am

Peter Levashov was charged by US prosecutors with causing intentional damage to a protected computer and wire fraud, which carry a potential prison sentence of up to 52 years if he is convicted at trial.



### Mumbai: Friend loses Rs 1 lakh after 'fake' email from Khadi Village Industries Association CEO

By: Express News Service | Mumbai | Updated: January 23, 2018 at 2:06 am

The police said that in the last week of December last year, a person posing as Shah sent emails to his family members and friends seeking monetary assistance for a friend whose daughter needed an urgent surgery.



### Cisco, Interpol join hands to fight cybercrimes, share cyber threat intelligence

By: IANS | Singapore | Updated: November 21, 2017 at 4:58 pm

SECTIONS

HOME | TOPIC | CYBER CRIME CASES

NDTV

### India Saw 350 Per Cent Rise In Cybercrime In 3 Years: Study

India News | Indo-Asian News Service | Thursday August 25, 2016



Blame it on systems that are built around technologies with weaker protocols which are inherently more vulnerable, India has witnessed a 350 per cent rise in cyber crime cases from 2011-2014, an Assocham-PwC joint study revealed on Thursday.

### Government Taking Action Against Websites Spreading Hatred: Kiren Rijiju

India News | Press Trust of India | Tuesday July 19, 2016



Government has cracked down on a number of websites for spreading hatred and communal tension after the Dadri incident, resulting in a rise in the number of cyber crime cases registered, Lok Sabha was informed today.

### Cyber criminals to be more aggressive in 2011: Study

Press Trust of India | Tuesday June 5, 2012



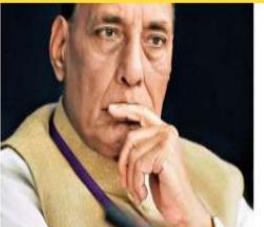
With the growing diversity of operating systems among companies, and the increasing use of mobile devices, cyber criminals will put a new spin on social engineering by 'malware campaign' under which they will bombard recipients with email that drop virus...

### Cyber criminals to be more aggressive in 2011: Study

India News | Press Trust of India | Monday January 3, 2011



With the growing diversity of operating systems among companies, and the increasing use of mobile devices, cyber criminals will put a new spin on social engineering by 'malware campaign' under which they will bombard recipients with email that drop virus downloaders. According to an internet security software and service pro...



INDIA

Cops have tough time with online crimes: Rajnath Singh

Rajnath says that cyber crime has become an industry globally and such offences may occur 'very often' due to availability of resource in the wrong hands



ANALYSIS

India to set up special agency to battle cyber terrorists

The Internet has expanded rapidly at a global scale and has been the most powerful technological revolution known in the history of man.



INDIA

National cyber agency to fight online attacks

PM Modi, during a recent meeting of state police chiefs, directed all states to revamp their cyber units so that crimes can be dealt with in a coordinated and cohesive manner



DELHI

Delhi police ropes in advisor for tech overhaul

Our focus will be on research policing and making the best use of the technology to curb crime, says Mohapatra



MUMBAI

Card users need to be more alert: Brijesh Singh

Brijesh Singh, Special Inspector General, Cyber Crime, Maharashtra Police, tells DNA why cases of skimming and similar cyber crimes are more frequent today and what the authorities can do to check the rising crime graph.



INDIA

PM Narendra Modi asks top police officials to deal with cyber crime on priority

PM Modi said cyber security issues should be dealt with immediately and should receive highest priority, according to an official release.



MUMBAI

No need to phish for this clone

Your debit cards are under attack from clones, created by skimmers and shimmers. As cyber crime acquires new vocabulary, DNA lifts the lid off

Dr. Lokesh Chouhan || Cyber Security and Digital Forensics



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## Sextortion, sexting, revenge porn concern in India: Microsoft

The study noted that 77 percent Indians reported behavioural concerns like cyberbullying, trolling, online harassment, sexual solicitation, sexting, revenge porn or sextortion.

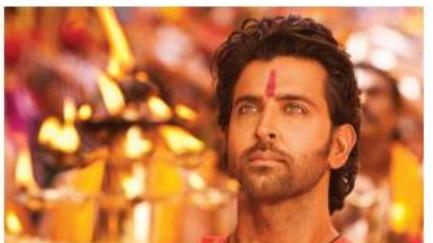
Feb 07, 2017, 20:19 PM IST



## India to see 65% rise in mobile frauds in 2017: Study

With the surge in digital transactions via e-wallets and other online payment gateways, mobile frauds are expected to grow to 60-65 percent in the country by 2017, a leading industry body said on Monday.

Dec 12, 2016, 16:38 PM IST



## Hrithik Roshan's Facebook account hacked, now restored

Bollywood star Hrithik Roshan's account on social networking site, Facebook, was hacked but the issue was solved within a day and the actor is back to using it now.

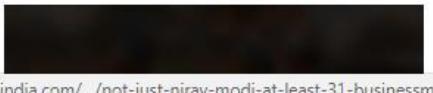
Sep 06, 2016, 20:05 PM IST



## Hunt on to nab the person who applied for CRPF job using PM Narendra Modi's name and photo

It's really shocking how a miscreant used PM Narendra Modi's name to get a job in CRPF!

Aug 09, 2016, 10:27 AM IST



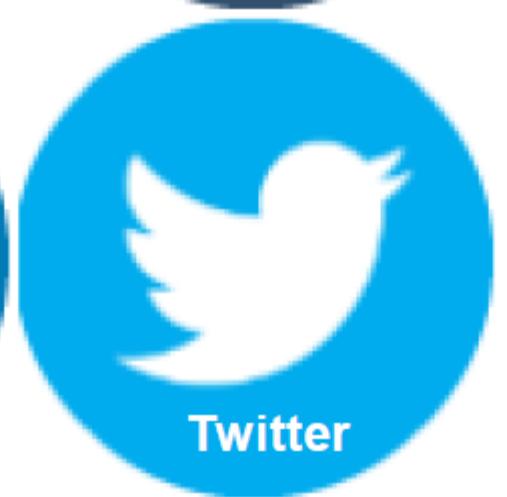
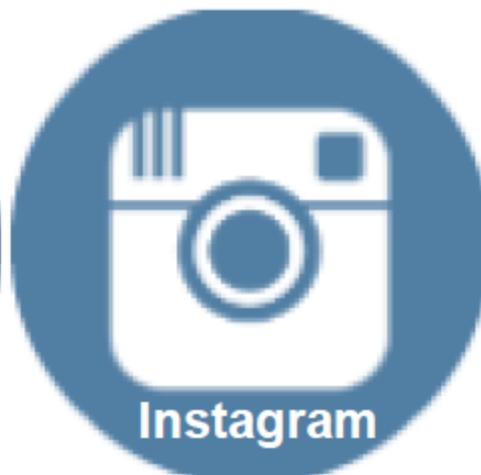
## Kolkata Police hires IT experts to stifle online recruitment by terror groups

Seeking to keep a tight rein on the efforts of terror groups to "pick up" youths from the city, India.com/[/not-just-pirav-modi-at-least-31-businessmen-have-fled-india-to-the-kashmir-during-mosque-attack](#) and 120 others have fled to India

# A SOCIAL NETWORK



Is a social structure  
where users establish  
relationships based  
on their common  
interests



If Facebook  
were a country  
it'd be  
the world's  
3rd largest



# Example of use of Social Media

## Prime Minister Narendra Modi's Facebook page



Narendra Modi   
Politician

Use App    Liked    Share    ...

**Timeline**    About    Photos    Likes    More ▾

Politician

Search for posts on this Page

34,280,640 people like this  
Biebe Natso and 857 other friends

Narendra Modi updated their cover photo.  
Yesterday at 12:40pm - 



# Recent Evolution



## Recent Evolution

# 'QUICK FORWARD' BUTTON TO GO

- WhatsApp will remove 'quick forward' button next to media messages
- Step comes after Centre asks company to do its bit to curb fake news or face possible legal action
- It warns WhatsApp that failure to contain fake



news will make it an 'abettor' of any resultant crime

- Co recently introduced features to help users in India identify forwarded messages
- Rumours on WhatsApp have resulted in the lynching of over 20 people recently

## US Internet Users Who Do Not Trust that Social Networks Will Protect Their Data and Information, by Demographic, May 2018

% of respondents in each group

### Gender

Male	61%
Female	61%

### Generation

Millennials (18-35)	56%
Gen X (36-50)	63%
Baby boomers (51-70)	63%
Seniors (71+)	64%
<b>Total</b>	<b>61%</b>

Note: responses of "very little" and "no trust"

Source: Rad Campaign and Lincoln Park Strategies, "The State of Social Media and Online Privacy," May 23, 2018

# What do you think ?

- Posting on Facebook or any social media website?



# What do you think ?



- Like any post on Facebook or any social media website??



# What do you think ?

- Sending Multiple copy/ Flooding of Mail to someone?



# What do you think ?

- Sending Multiple copy of Mail to known person?



# What do you think ?

- Changing IP (location) of your PC ?



# What do you think ?

- Calling/Sending messages multiple times to any number?



# What do you think ?

- Posting any **sensitive information** or pornographic material to social sites?



# What do you think ?

- Posting **sensitive information** or pornographic material by some other person to your page/group?



# What do you think ?

- post any private or sensitive information, such as credit card numbers, passwords or other private information, on public sites?



# What do you think ?

- Holding **sensitive information** or pornographic material to your personal system/Mobile?



# So•cial En•gin•eer•ing

## TYPES OF ATTACKS

PHISHING



SPEAR PHISHING



VISHING



SMISHING



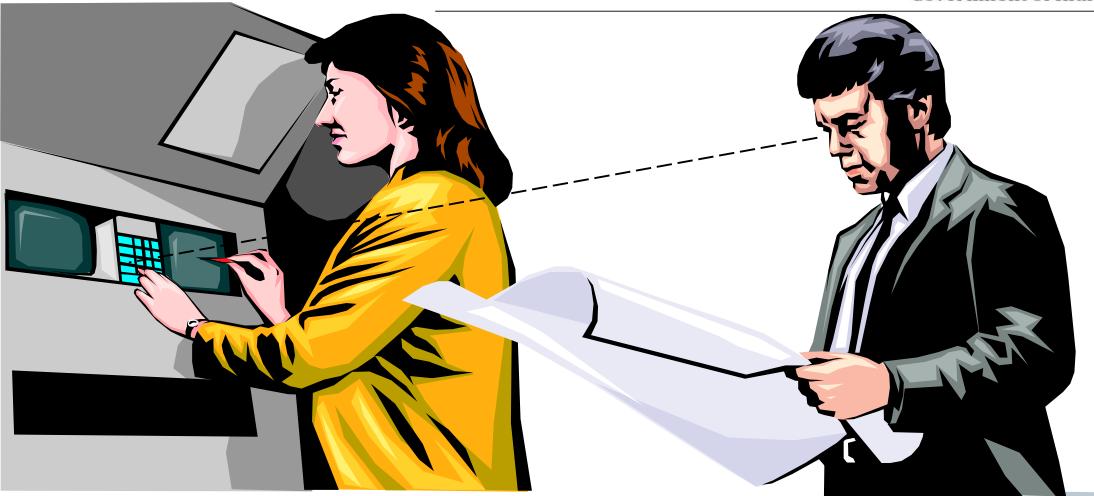
MINING SOCIAL MEDIA



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Dr. Lokesh Chouhan  
NFSU Goa  
[Lokesh.chouhan\\_goa@nfsu.ac.in](mailto:Lokesh.chouhan_goa@nfsu.ac.in)