

ISSN: 2582-6433



# INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS

Open Access, Refereed Journal Multi Disciplinary  
Peer Reviewed 6th Edition

VOLUME 2 ISSUE 7

[www.ijlra.com](http://www.ijlra.com)

## **DISCLAIMER**

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume 2 Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner whatsoever for any consequences for any action taken by anyone on the basis of information in the Journal.

Copyright © International Journal for Legal Research & Analysis



IJLRA

## **EDITORIAL TEAM**

### **EDITORS**

#### **Megha Middha**



*Megha Middha, Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar*

*Megha Middha, is working as an Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar (Rajasthan). She has an experience in the teaching of almost 3 years. She has completed her graduation in BBA LL.B (H) from Amity University, Rajasthan (Gold Medalist) and did her post-graduation (LL.M in Business Laws) from NLSIU, Bengaluru. Currently, she is enrolled in a Ph.D. course in the Department of Law at Mohanlal Sukhadia University, Udaipur (Rajasthan). She wishes to excel in academics and research and contribute as much as she can to society. Through her interactions with the students, she tries to inculcate a sense of deep thinking power in her students and enlighten and guide them to the fact how they can*

*bring a change to the society*

#### **Dr. Samrat Datta**

*Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board*



## Dr. Namita Jain



**Head & Associate Professor**

*School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC - NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.*

*Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi.(2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020). Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019*

## Mrs.S.Kalpana

**Assistant professor of Law**

*Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law, Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr. Ambedkar Law College, Pudupakkam. Published one book. Published 8 Articles in various reputed Law Journals. Conducted 1 Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration. 10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.*



## Avinash Kumar



*learning.*

*Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC - NET examination and has been awarded ICSSR - Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and*

## **ABOUT US**

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

# A Useful Servant But A Dangerous Master:

## Technology & Crime

Authored By-1. Siddharth Anand

2. Fariya Sharaf

### Abstract:

India is one of the fastest growing economies in the world and it is expected to grow at 9.5% in the year 2022<sup>1</sup>. The advancement and evolution of technology is undoubtedly, an important determinant of economic growth and modern India has had a very strong focus on the furtherance and expansion of technology, which has now reached the corners of our nation. A renowned Norwegian Diplomat, Christian Lange said that technology is a useful servant but a dangerous master<sup>2</sup> which clearly meant that if we want to use anything, we would best have control over it and adequate knowledge of what it can be used for. It's a blessing for all of us to be a part of this generation, which has witnessed the growth of internet and technology, but every story has two perspectives, and this paper aims to highlight both of them, in relation to the Indian Criminal Justice system.

Technology has improved the enforcement of laws by means of data mapping, smartphone tracking and a lot of other processes, which has made the jobs of law enforcement professionals much easier and has provided them with a tool, which can be a shield to protect the society. But we cannot deny the fact that the evolution of technology has proven to have detrimental and disastrous consequences and has been a facilitator in the commission of different forms of crime.

This paper aims to examine and highlight the role of technology in the imposition and implementation of laws. Technology being used by criminals for their gain is also brought into light through our research paper. We have deeply discussed our points as to why technology can be baleful, when exploited by criminals.

### **KEYWORDS:**

Technology, Evolution of Technology, Crimes, Cybercrimes, Law enforcement

---

<sup>1</sup> [https://www.google.com/amp/s/m.economictimes.com/news/economy/indicators/india-may-grow-at-9-5-in-2022-moodys/amp\\_articleshow/89813880.cms](https://www.google.com/amp/s/m.economictimes.com/news/economy/indicators/india-may-grow-at-9-5-in-2022-moodys/amp_articleshow/89813880.cms)

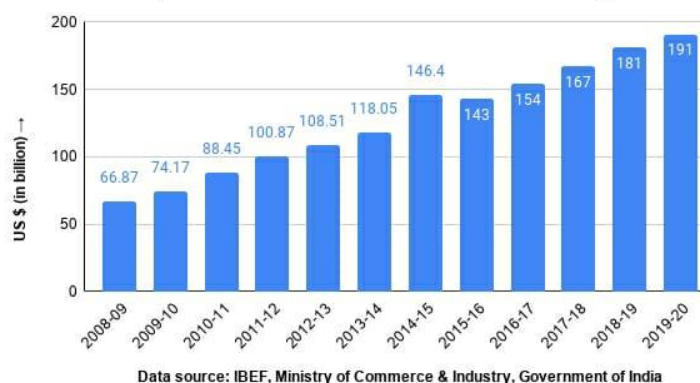
<sup>2</sup> <https://www.quotemaster.org/technology+and+happiness>

## **Evolution Of Technology And Internet In India:**

It's a matter of pride for all of us to acknowledge that India ranks third among the most attractive investment destinations for technology transactions across the globe and there has been a very strong focus on science and technology, as these are the basic facets that contribute largely to the economic growth of any country. Computers are now a part of our lives and with the growth of internet in a developing nation like ours, chances of misuse of these facilities is at its peak. There are various factors that have led to this rapid growth of technology in India. Liberalization policies like reducing trade barriers and eliminating import duties on technology products have turned out to be really instrumental and impactful in the entire advancement journey of IT.

Till the year 1970, we had no guiding policy or framework for computer / software technology, though the government knew that IT can make their vision of making India, the greatest economy, a reality. Bhabha committee in 1963 highlighted the need for the development of electronics and computers for the growth of India and based on their recommendations, the Government of India established DoE, that is, Department of Electronics in 1970, and there was no looking back since then. In 1972, the government allowed hardware import and software export, which helped Tata Consultancy Services (TCS) in getting global recognition. The growth of market size of India's IT industry is illustrated in the graph below.<sup>3</sup>

**Graph 1. Market size of India's IT industry**



The next turning point in this evolution came in the year 1986 when the government brought a liberalization policy for the IT industry, which de-licensed hardware import and supported duty-free export, which helped the industry in earning large amount of force exchange. In the last ten years, India has emerged as a tech hub for a lot of global software companies and India

<sup>3</sup> <https://diplomatist.com/2020/08/29/it-industry-boosting-indias-growth/>

has become the world's largest sourcing destination for this industry.

## Advancement Related To The Web

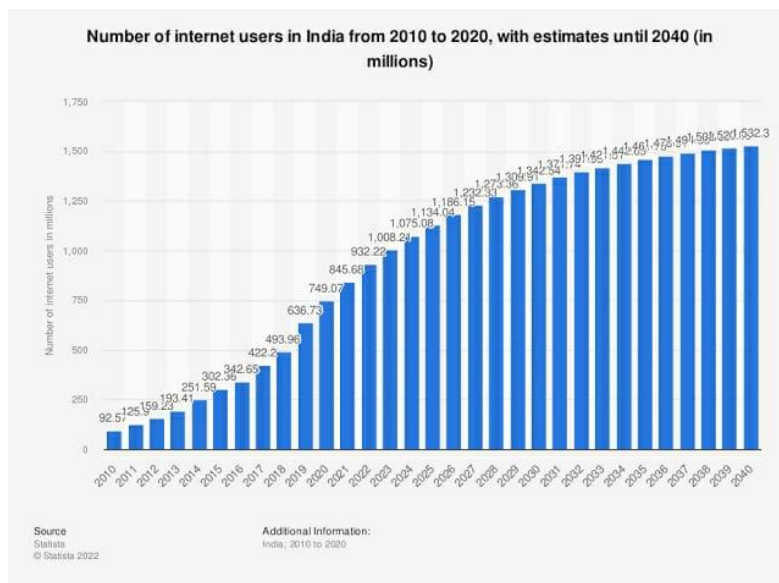
With over 560 million active internet users, India is the second largest online market in the world, and the only country ahead of us is China. By the year 2023, it is estimated that over 650 million internet users will be active in India, which might be the largest base of internet users at that point of time. There has been a consistent increase in the internet penetration rate, and it is now close to approximately 50%. This figure might not look appealing at the first glance, but this rate was mere 4% in 2007. If we talk about Indian states, Maharashtra has the highest internet penetration, followed by Goa and Kerala, while Bihar has the lowest. So the growth can be perceived very clearly from this data and from the change in our lifestyle, being so close to people virtually, yet too far to know them in reality. The table that is attached below shows an overview of internet subscriber statistics in India as of 30 June 2021<sup>4</sup>.

Statistic	Figures
Total subscribers	833.71 million
Narrowband subscribers	40.93 million
Broadband subscribers	792.78 million
Wired subscribers	23.58 million
Wireless subscribers	810.13 million
Urban subscribers	496.84 million
Rural subscribers	336.87 million
Overall net penetration	61.06%
Urban net penetration	105.06%
Rural net penetration	37.74%

The graph attached below depicts the growth of Internet in India and has analyzed the growth pattern to calculate the number of active internet users that we might have by the year 2040<sup>5</sup>. The dynamic growth of internet in our country can be traced from the fact that people from both rural as well as the urban parts of the country is on the web now.

<sup>4</sup> "The Indian Telecom Services Performance Indicators" (PDF). TRAI. Retrieved 9 May 2021.

<sup>5</sup> <https://www.statista.com/statistics/255146/number-of-internet-users-in-india/>



Technological advancement and the evolution of internet has helped massively in solving crimes and has been a very effective tool for law enforcement professionals. Weather and climate scientists have been using the concept of data mapping, and now in the 21<sup>st</sup> century, criminal justice professionals are also using this effective mechanism of mapping, to have a crystal clear geographical look at the types of crime and the volume of crime that happens in a particular area. This has also helped the police department in formulating better strategies to reduce crime.

Cell phones have made our lives so easy and now, the access to internet is at our fingertips. Apart from being a very basic element of our lives, smartphones can be used to fight crimes. Cellphones allow us to contact the police right from the crime scene and this certainly has proved to be a powerful crime-fighting tool. Smartphones and cellphones have become a regular part of criminal investigation and is a very essential part of digital forensics, which is a branch of science encompassing the recovery and investigation of material found in digital and electronic devices, which includes computers, cell phones and digital cameras.

Tracking subjects and criminals via their mobile devices has been utilized for many years now and with the advancement of technology, this method of tracking criminals has become a very crucial part of criminal investigations. Every time a person uses a cell phone, a signal is sent out that highlights where the user of that cell is, which is the most vital information to track the location of the criminal. A mission mode project, crime and criminal tracking network & systems (CCTNS) has been adopted to create a comprehensive and integrated system for enhancing the creation of a nationwide networking infrastructure for evolution of IT based tracking of criminals.

Most of the smartphones that we get to see in the market is equipped with good cameras, which

ensures that bystanders can take photos and videos of criminals, which would help in their identification at a later stage in the investigation.

The mental peace of the citizens of any country can be equated with the overall growth of the society. The government of different countries encourage the launch of devices and the inculcation of technology in the lifestyle of their citizens, to prevent them from being prey to the criminals, who are felonies to any developing nation. One of these innovations is the use of CCTV cameras. CCTV relies on strategic placement of cameras in such a way that it turns out to be really effective in crime prevention, especially in traffic violations, crime against property and crime against persons.

Closed circuit television or CCTV was first used in Germany in the year 1942 to observe the launch of V-2 rockets<sup>6</sup>. Earlier, there was no way of storing the footages recorded in the CCTV but the introduction of magnetic tapes to record videos enabled CCTV systems to record and store videos.

CCTV cameras are also installed in front of schools to restrain the kidnappers and criminals from inflicting any harm to the children studying there. The effectiveness of CCTVs can also be witnessed in banks, where identification of robbers can clearly be done from the footages recorded the camera. India's CCTV market is expected to register a compound annual growth rate of 22.35% over the forecast period from 2021 to 2026<sup>7</sup>, which would be a game changer.

The table attached below shows the effectiveness and usefulness of CCTV cameras in crime against property<sup>8</sup>.

---

<sup>6</sup> <https://m.timesofindia.com/india/learning-with-the-times-cctv-was-first-used-by-germans-in-1942-to-observe-v-2-rocket-launch/articleshow/46819159.cms>

<sup>7</sup> <https://www.mordorintelligence.com/industry-reports/india-cctv-market#:~:text=India%20CCTV%20market%20is%20expected,the%20last%20twenty-five%20years>

<sup>8</sup> College of Criminology Research Journal, Vol. 7, 2016

**Table 5. Usefulness of CCTV Cameras in Crimes Against Property**

	Indicators	WM	VI	Rank
1.	The CCTV aids in monitoring banks, malls or Other establishment.	3.40	Useful	9
2.	The CCTV guards and secure properties against criminal tendencies	3.18	Useful	13
3.	The presence of CCTV reduces property related crime	3.05	Useful	15
4.	Reduce theft of motor vehicles and some other forms of acquisitive crimes in areas where there are CCTV cameras.	3.25	Useful	12
5.	Secures the properties where the CCTV is Located	3.12	Useful	14
6.	The CCTV distinguishes the items taken by the criminals or thieves	3.44	Useful	8
7.	The CCTV records the position of the property and where and how they were stolen	3.35	Useful	10
8.	The installation of CCTV serves as a barrier for the possible offenders.	3.63	Highly Useful	2
9.	Monitors the incoming and outgoing individuals from the establishment through the CCTV.	3.71	Highly Useful	1
10.	The CCTV prevents theft in board daylight.	3.34	Useful	11
11.	Records the scenes that can help in solving the reported theft or robbery incident.	3.45	Useful	6.5
12.	Protection of the staff, students and employee vehicles.	3.47	Useful	5
13.	Protection of the institutional equipment from robbery or theft by students or outsiders.	3.45	Useful	6.5
14.	It is the eye for the premises or the places that cannot be supervise by man.	3.55	Highly Useful	4
15.	It lessens the incidences of pulling the fire alarms of the lobbies.	3.57	Highly Useful	3
<b>Composite Mean</b>		<b>3.40</b>	<b>Useful</b>	

Legend: 3.50 – 4.00 = Highly Useful; 2.50 – 3.49 = Useful; 1.50 – 2.49 = Less Useful; 1.00 – 1.49 = Not Useful

Law enforcement officers and those in the legal system are increasingly using IT tools to combat crime. With a population of over 140 crores, India generates a very big amount of data and according to IBM, the world generates 2.5 quintillion bytes of data a day<sup>9</sup>, which can be used by the police department to recognize criminals and processing of data for the benefit of the society turns out to be really fruitful in preventing crimes. The current expansion of the internet of things (IoT) is facilitating the collection of big data which is a very impactful approach in evidence-based policing.

Traditional and linear devices used in the past are incompetent and insufficient today and our police system cannot remain stuck at the same level and rapid advancement was definitely what was needed by investigation and enforcement agencies. Dubai introduced its first robot

<sup>9</sup> <https://www.purdueglobal.edu/blog/criminal-justice/growing-role-technology-criminal-justice/>

policeman, RoboCop in 2017, which clearly indicates that smart policing is going to be the future and in our country India, the SMART policing plan was introduced by the Prime Minister in 2014 at a conference of DGPs of state and central police organizations in Guwahati, where the use of various technologies such as artificial intelligence and sophisticated drones was highlighted. Blockchain, advanced biometric recognition device and body-worn cameras are used by law enforcement agencies all across the globe to combat crimes and societal evils.

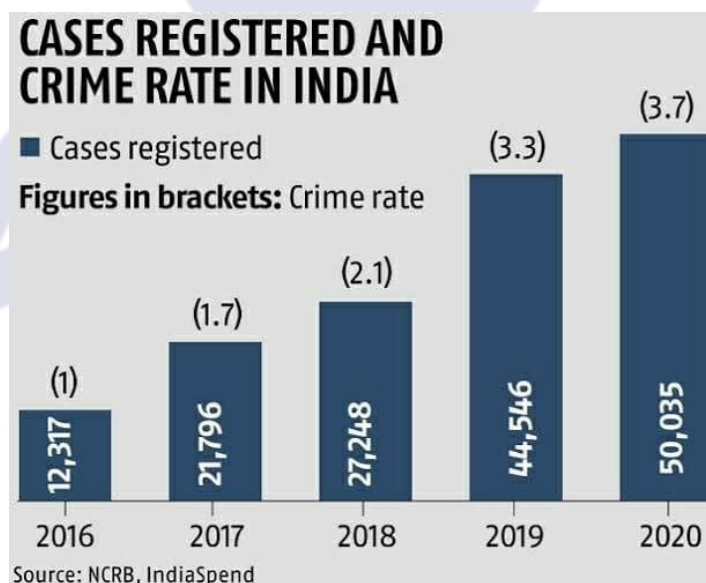
Drone technology is a better and cheaper alternative to helicopters in police investigation, to undertake activities like search and rescue and surveillance. Drones are also used in crime scene analysis and it also helps the police forces to get an aerial perspective of possible bomb threats. It is also used to provide essential aid when natural calamity strikes and it turns out to be a really great help in need.

The government has seen AI's benefits in a variety of fields, including banking and healthcare. The Andhra Pradesh Police department has created an application to assist in the tracking of old criminals and accused, which means that Artificial intelligence is a part of criminal investigation and law enforcement by the concerned authorities. An AI enabled app created by the startup Staqu is now used by the Uttar Pradesh to carry criminal records. The app has a feature called gang recognition tech which helps police in detecting a suspect and their associates as well. It is practically impossible for humans to handle huge amount of data and that is why, AI becomes a really crucial part of police investigation and data storage.

Technology has undoubtedly improved the law enforcement mechanism in our country and by providing so many ways to deal with crime, technology has made our society, a safer place to live in. But we cannot deny the fact that technology in the mainstream has proven to have detrimental and disastrous consequences and has been a facilitator in the commission of different forms of crime, which has led to an unprecedented growth in the crime rate. Information Communication technologies has benefitted both the police as well as the criminals.

## Technology: A Facilitator For Criminals

It is rightly said that technology makes it possible for people to gain control over everything, except over technology<sup>10</sup>. Technology simply means increased power and this power lies in the hands of each one of us and with that amplified power, the intensity of destruction that can be caused is also massive. Cybercrime is one example of how IT has changed crimes and it has allowed individuals to carry out the act of committing crimes right from their homes, under anonymity. In simpler words, cybercrime can be defined as any criminal activity while using a computer or any other electronic device. According to NCRB data, India registered 136 cybercrime cases every day in 2020 and cybercrimes have increased four times (306 percent) in the past four years in India<sup>11</sup>. The bar graph attached below shows the increase in the number of cases registered in India from 2016 to 2020<sup>12</sup>.



Cybercrimes can be of various types, namely<sup>13</sup>:

1. Identity theft: It is a crime in which an attacker uses deceptive and fraudulent means to obtain personal or sensitive information about a person and misuses it. When the criminal obtains those personal data, they use it to steal money, access more private information and in some serious situations, tax or health insurance fraud can also be committed by the attacker<sup>14</sup>. Government issued identification cards such as aadhar

<sup>10</sup> [https://www.searchquotes.com/search/Technology\\_Is\\_A\\_Curse/](https://www.searchquotes.com/search/Technology_Is_A_Curse/)

<sup>11</sup> [https://www.google.com/amp/s/wap.business-standard.com/article-amp/current-affairs/india-registered-136-cybercrime-cases-every-day-in-2020-ncrb-data-122022100007\\_1.html](https://www.google.com/amp/s/wap.business-standard.com/article-amp/current-affairs/india-registered-136-cybercrime-cases-every-day-in-2020-ncrb-data-122022100007_1.html)

<sup>12</sup> [https://www.google.com/amp/s/wap.business-standard.com/article-amp/current-affairs/india-registered-136-cybercrime-cases-every-day-in-2020-ncrb-data-122022100007\\_1.html](https://www.google.com/amp/s/wap.business-standard.com/article-amp/current-affairs/india-registered-136-cybercrime-cases-every-day-in-2020-ncrb-data-122022100007_1.html)

<sup>13</sup> <https://www.google.com/amp/s/blog.ipleaders.in/critical-analysis-cybercrime-india/%3famp=1>

<sup>14</sup> <https://www.google.com/amp/s/blog.ipleaders.in/critical-analysis-cybercrime-india/%3famp=1>

card and pan cards can be used to issue sim cards, which could be used in the commission of more serious crimes. The criminal also has a chance to create phone / internet account and claim government benefits in the name of the victim.

2. **Phishing:** Phishing attacks are the act of sending fraudulent communications and emails that appear to come from a reputed source, with the objective of attaining sensitive data like credit card and login informations. It is one of the most dangerous form of security attack and some of the common features of Phishing emails are:
  - i. Too good to be true, basically lucrative offers and eye-catching statements.
  - ii. Sense of urgency
  - iii. Involvement of a lot of hyperlinks
  - iv. Unusual sender
3. **Social Engineering:** Attackers use this method to make a direct emotional connection and bond with the victim, generally via phone call or email. They can sell your information at a later point of time after gaining your trust. In simpler words, it is the psychological manipulation of a person, which forces him to disclose a plethora of sensitive information to various people, who are potential criminals. Phishing as discussed above is the most common form of social engineering.

There are a lot of statutes that aim at preventing the citizens of the country in becoming preys to these predators under anonymity. The Indian Penal Code, 1860 and the Information technology Act, 2000 penalizes a variety of cybercrimes but the number of cases that come up each day related to cybercrimes is increasing day by day, with the advancement of technology and the increase in the accessibility of the internet.

## Conclusion

The invention of technology and technological advancement is a boon for our society but as with every invention comes its bane too, now it is on humans who are the creator of technology that how they use it , technological advancement can do wonders in our life if used properly and are even beneficial for the state to implement their policies and curb the rate of crime and offences with the introduction of CCTV cameras and other electronic evidence, the step taken by the government of India in amending the Code of Criminal Procedure 1973 in the year 2022 as the Criminal Procedure (identification )Act 2022 also emphasizes on the use of technology in pursuance of curbing crime as the new bill focuses on taking impression of convicts fingerprints to eyeballs and all these information will be stored in online data and will be retrieved if needed just by a click, the technology has facilitated not only the lawmakers but the one who violates the law are also at benefit by deducing new methods of hacking the personal details of individuals and the increased rate of credit card frauds and banking frauds are all results of technological advancements, as it is very well said that no matter how good a law is it, the one who are following and implementing that law reflects the true essence of that law, so if we as individuals are not ready to mend our ways and stop the misuse of technology we are at a loss and we are loosing at every pedestal because we are wasting our energy in trying to invent ways to commit crimes from the technological inventions, crime is the deviant behavior of an individual and technology is the invention of individual so when this deviant behavior and invention combine it is a very lethal and insidious combination, so we must try to refrain and prevent this combination, and try to use the technological advancement in nurturing and improving our lives and making our country a crime free state and reach the utopian picture of our country which will be devoid of every crime and ill-evils of the society.