

Data protection and Privacy Rights of Citizens: A significant Human Rights issue in India

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Abstract: The growth of India's internet population and the speed at which the country is adapting to technology has made it a large market for many global players. New technology is impacting India. The government has recognized this, and created the "Digital India" initiative, which promises to have large disruptions in all sectors of society. In this digital age of e-commerce, mobile apps, and banking etc., people also knowingly or unknowingly may share sensitive personal data. Users agree to provide personal data by checking the 'I agree' box in their settings. They don't need to read the privacy policy to do this and risk these sensitive details being leaked to hackers. In this paper we will take about the data protection and data privacy and reason why data leaks hampering of human rights.

Keywords: Bitcoin, Cryptocurrency, Decentralized currency, PayPal, Digital Currency.

I. INTRODUCTION

Users' concern about their privacy on social media has spiked in recent years, largely due to data breaches, which led to re-considering their relationships with social apps and the information security in these apps. A specific incident is the story of Cambridge Analytica's consulting agency, which was dramatic and alarming. It is of high concern that Facebook has been exploiting the private information of 50 million Americans during the 2016 election. We may not have control of our own data, and this is unjust.¹

Social media users are increasingly worried about the businesses and also due to advertisers using their content. A new study by the Pew Trust has shown that 80% of social media users are concerned about this. As of now, there is no regulation for limiting exploitation. Organizations whose job is to safeguard personal data are now under tighter scrutiny because of the rise in high profile cyber security breaches. Businesses and consumers need to protect sensitive information in a world that is constantly connected.

Cyber threats will also rise over the coming few years, so being prepared will act as the key. Privacy is important for most people who use the internet. There is no such thing as absolute anonymity and this is especially true in the digital world because websites and social media platforms follow what people do online. But you can protect your personal data by doing things like using private browsing extensions and creating new emails from time to time.²

It's becoming more and more difficult to secure your online presence. Scammers are trying to get the complete hold of your email address, also the social media trackers may collect your data, identity, the vestry to steal it, and automatic bots are sharing it without you knowing. Data and cyber security best practices are imperative in today's society. It is just as necessary to safeguard personal data and educate audiences on how they can protect themselves when using the internet. Businesses are pouring a lot of money into advertising for their brands on social media, and that's why marketers need accurate demographic to target them with their ads. Tools like Facebook and Instagram let advertisers maximize the ad dollar they spend. One downside to hyper-targeting customers is that they increasingly use ad blockers. For instance, customers are encouraged to use an ad blocker for the android or the similar sort of solution for the iOS devices in order to get rid of the intrusive ads which are being popping up on each of the website.³

Online advertisers will manipulate social media data to find clues about your interests so that they can advertise to you.

Some issues which are relevant to data security and data privacy:

- **Data Scraping Challenges:** Data harvesters, who are usually research companies, track people's online activity and harvest personal data from the social media, also the job sites and also online forums. Research companies sell this information to other companies so that they can use it to make targeted ads for their products. It might be argued that people knowingly share this information on social media and thus it is free for anyone to use the data. The issue with that is that researchers don't ask for the owner's consent beforehand, which brings up an ethics problem as well as a privacy issue. "One strong argument for serious online privacy violation takes place in May 2011. Nielsen Co., a media-research company, was caught scraping every message off Patients ⁴ Like Me's online forums, where

people talk about their emotional problems – in what they think is the safe, also the private environment.”.

- **Facebook's newest security issue:** Facebook apps leak identifying information which is being collected by the advertising and also the Internet tracking companies, without the users having any sort of clue. An app might request an “access token” during installation. However, if you have granted access tokens to certain apps, they may share your data with advertisers without informing you of the risks. Some Facebook apps like Farmville and Gifts can leak your access tokens to the advertisers, as a result granting them the full access to the personal profile data such as the chat logs, the photos, location and browsing history. There is no disclaimer whatsoever stating that the user’s data will be transferred. This puts online privacy and also safety at risk. “There are apps that have been shown to leak information, examples of which include Farmville and Family Tree”.⁵
- **Online social tracking:** The Like, Tweet etc. buttons that we use to share content with our friends also serve as tracking tools for certain websites. These social website cookies are used in browsers when logging in or creating an account and they have the ability to identify you across different sites. This invasion into internet privacy can be seen when your shopping behaviors or interests are tracked. “Other websites allow companies to place within ads, cookies and beacons which can track you and gather information about what you are doing on a page. These tools are mainly used online but mostly in websites dedicated to children, which raises a huge concern over the safety of children”.

II. DATA PROTECTION

The process of data protection is the safeguarding of the important collection data from the corruption and also the loss, and provides capabilities for purposes to restore the data. The Data protection will also assure that the data is not corrupted, but instead is accessible to you and only you while abiding by relevant law. It should be available when needed.⁶

The scope of data protection includes immutability, preservation, and deletion/destruction; which are all parts of ensuring data availability and usability. Traditional data protection also includes the backup and the restore copies, the proper security measures, and privacy (encryption). There are many ways to ensure that your data is constantly safe, such as security procedures and identification.

Principle of the process of data protection

- Data protection is crucial to ensure that data is always accessible and secure, following various policies and procedures.
- Storage technologies can protect your data by making use of disk, tapes, or the cloud backup in order to safely store copies of the data and then use it in case of data loss.
- Additional data protection has been introduced in the form of tools like cloning, mirroring, replication, and snapshots. These data protection tools are better than traditional backup because the recovery process is near-instantaneous.⁷

Latest Trends in Data Protection

Some of the latest trends in the data protection are described below,

- **Hyper-Convergence:** With hyper-converged systems, vendors are introducing stand-alone backup and recovery devices that integrate computer, networking and storage infrastructure. These new devices are replacing traditional data center gear, and are providing cloud-like capabilities on-premises.
- **Ransom ware Protection:** There are many types of malwares, and ransomware encrypts the data on your device. Traditional backup methods protect from these types of encryptions. However, new models have the ability to overtake backup systems as well, making it more difficult to restore old data. New backup solutions will not be affected by cyber-attacks. By isolating the backups from the corporate network and encrypting data at rest, new backup solutions can prevent ransomware from infecting backups.⁸
- **Disaster Recovery as a Service:** “Disaster recovery as a service is a cloud-based solution that allows an organization to create a remote copy of their data and use it to restore operations in case of disaster. Instantly provide more reliable data with a DRaaS solution. They continuously replicate data from the local data center to provide a low recovery time objective (RTO), meaning they can spring into action within minutes or seconds”. “Instantly provide more reliable data with a DRaaS solution. They continuously replicate data from the local data center to provide a low recovery

time objective (RTO), meaning they can spring into action within minutes or seconds”.

- **Copy Data Management (CDM):** CDM solutions help companies streamline their data protection by reducing the number of backups they store. This reduces overhead and maintenance, while also lowering storage costs. These solutions create automation and centralized management, which cuts processes development down and increases productivity.⁹
- **Audit of Sensitive Data:** “Before adopting data protection controls, you must first audit your data infrastructure”. Use the following formula to identify what your company is using and needs, and then create a plan for storage. “Data should be classified into sensitivity levels, and should also be assessed to assess which data protection measures exist in the organization, how effective they are, and what can be done to extend those measures. It is crucial to know that often the biggest potential is in leveraging existing data protection systems that are relying around or are not used consistently throughout the organization”.
- **Assessing Internal and External Risks:** These security teams should assess the risks that may arise in their organization. This team should also design data protection programs around these internal and external risks. Internal risks to IT security include issues with network configuration, the use of a strong password, or username and password authentication. A growing threat is compromised accounts of employees who have been attacked by malware. “External risks arise from social engineering strategies, such as phishing, malware distribution, and attacks on corporate infrastructure, like SQL injection or distributed denial of service (DDoS)”.

Data Protection Policy

The organization has identified the most relevant threats, and they have created a data protection policy to deal with them. Every data category has a different tolerance for risk, and protection measures must be applied accordingly.¹⁰

Companies need to weigh the risks of data leakage with their data protection policies. Use historical information to understand what applications or accounts need access to sensitive data.

- **Security Strategy:** The correct security strategy for data protection. Protect your sensitive data from threat actors. Make sure you don't unintentionally reduce employee productivity. Many companies are introducing a “bring your own device” policy that is causing employees to have trouble accessing data from the stores or where they work.
- **Compliance Strategy:** Data protection strategies need to take into account that there are many regulations affecting their organization and the different parts of it.

Related Research Work in Field of Data Protection

P. A. Indhumini Ranathunga and A. P. R. Wickramarachchi, 2022 report that data-driven businesses must protect their data with specialized solutions as the volume and complexity increase proportionately. “As the use of personal data affects privacy and security, many countries have passed legislation to protect its citizens’ information. GDPR is one of them, designed for EU data processing companies. GDPR does not directly apply to Sri Lanka but applies to firms that deal with European Union counterparts — Sri Lankan firms must comply with GDPR or risk being shut out of the European market. There has been little research about how to best implement GDPR guidelines, but it was found that the current resources available for Sri Lankan companies are not enough. To fix this problem, a new data governance model with multiple steps was developed which would provide secured data handling”. This study allows companies to create a data governance model that ensures they are compliant with GDPR principles.¹¹

M. Joshi, et al. 2021 highlighted that if a company is going to use an outside service to store their data, they must think about their security. The company should understand their security challenges before outsourcing the data in the cloud so that there are no repercussions later on.¹² **Dr. Chhatwal, 2020** discussed how protecting privileged communications is of high importance for the legal teams, such as the attorney-client letters, litigation strategies and other information that should not be disclosed. To protect against leaks and breaches, information is often reviewed before it's disclosed to make sure it can't be used against them. This review process is typically time-consuming and expensive. To reduce the number of documents that need to be reviewed for privileged information, data about client and outside counsel workflows was collected and put into an algorithm that assessed the probability of privileged information as a document is read. Keyword searches are a popular way of targeting privileged information. This search relies on keywords and is often effective but at the same time it can also return irrelevant pages, where you're unlikely to find privileged information. Machine learning is being used in legal teams to target privileged information as keywords are not always providing outcomes. Keyword searching has many disadvantages, so this alternative can provide the

policies they need while excluding unneeded ones. The authors use machine learning and convolutional neural networks to identify privileged documents. Their approach combines keyword searching with CNN.¹³

III. DATA PRIVACY

“Data privacy is the ability for a person to determine how their personal data is shared. Besides wanting to exclude people from a conversation, many people want to control or prevent certain types of personal data collection”.

“As Internet usage has increased over the years, so has the importance of data privacy. Websites, applications, and social media platforms often need to collect and store personal data”. Data protection laws aim to protect your right to privacy in many jurisdictions. People are more willing to engage with organizations when they produce quality content and care about their personal data.¹⁴

Personal data can be used if the owner of the data doesn't want that to happen, if it is also kept safe, or if the people can then control how their information is then being used. Criminals also can use metadata to identify the user for annoyances.

Entities may sell information about the user without their consent, which can then result in the unwanted marketing or sort of advertising. The ability to express oneself is restricted when people's actions are being monitored, specifically in repressive governments. The repercussions of unfair data gathering can be completely detrimental. They can harm individuals, as well as businesses with legal consequences and fines.¹⁵

A person's right to privacy is important, and many people believe it should be a human right. It's not just how other people infringe on your privacy that matters, but your own right. Websites often track user behavior and store cookies to store your activities. While most countries require website creators to warn users, there is still a level of uncertainty involved. Individuals may also not be aware of the point that how their data is then being used on other online services, and they may not also have control over the fact that, what happens to their own personal data.

Often, the terms and conditions for accessing applications are hard to understand. These terms may require users to share sensitive information. The next generation of social media platforms is making it easier than ever in order to find someone online. Also, social media posts often contain more personal information than people think about, and with that, social networks are collecting more data.¹⁶

Cyber attackers try to steal user data to use on their computer, which can be used in many purposes. For example, they may trick users into revealing personal information or compromise the company's computer with personal data. Data Privacy Protection Laws

Data privacy laws also vary from one country to another country, depending on the type of data they store. However, here are some of the most common data privacy laws:

- **California Consumer Privacy Act (CCPA):** You have the right to know how your data is being handled and who has it, and you can remove it from the system. A new privacy act was created: “California Consumer Privacy Act (CCPA) which went into effect on January 1, 2020”.
- **Health Insurance Portability and Accountability Act (HIPAA):** “The Health Insurance Portability and Accountability Act is a law that defines the way organizations should store, share, and secure patient information”. HIPAA regulations specifically affect healthcare providers and hospitals, but even businesses in similar industries with less patient information must apply these to protect security.¹⁷
- **Children's Online Privacy Protection Act (COPPA):** COPPA is a 2000 law that defines businesses' rights to collect and share information about children. If you handle data for kids under the age of 12, then you must protect their screen names and email addresses.
- **PCI-DSS:** PCI-DSS focuses on stopping card fraud and identity theft. It is a compliance standard for storing customer data. PCI-DSS, a regulation to store consumer financial data, must be followed by any organization. These include online stores as well as small organizations.
- **The Cookie Law:** Cookies store website information on your device to save you time and make you re-enter less information in the future. Cookies may also send information in the future or disclose it if the device is stolen. Websites need to get user consent before they can store a cookie on a user's device.
- **General Data Protection Regulation (GDPR):** GDPR is a law that assures the privacy of European resident data. Violating GDPR could result in a hefty fine and penalties. Under GDPR, organizations storing consumer data from the EU are required by law to offer a way to have user data removed from their system, and to specify how they are storing, sharing, and collecting that data.¹⁸

Research's highlighted Need of Data Privacy

Cybersecurity is a large, successful industry that employs many people. In 2021, Polonetsky and Sparapan predicted this would only grow in numbers. Experienced cy

bersecurity professionals know what they need to do, while privacy technology is still maturing. Privacy technology is well developed, but continuing to evolve rapidly. Many companies such as Google, Apple, LinkedIn and Amazon have had success in addressing privacy concerns. This article reviews the findings of a report on how privacy technology companies are maturing. It cites how the industry is developing and what features are being offered by the top companies.¹⁹

T.S. Reshmi and S. Daniel Madan Raja, 2019 notified that social network play a major role in how we live. Facebook, the most popular social network, currently has 2.23 billion users worldwide. People are aware of these security risks and they rely on the privacy settings available on social networks to protect their data. Data on social networks isn't actually deleted. The data's still there, and deleting it won't make any difference. You could just delete some personal info, but that wouldn't necessarily keep it from being retrieved. Methods for deleting data must be developed, and this paper talks about the risks of deleting data in this Web-based world.²⁰

J. Nicholson and I. Tasker, 2017 specified that the education market in the UK is using scope sharing. However, this approach leaves gaps and is incompatible with GDPR. Data Exchange is an ethical data integration platform that uses standards similar to "The Family Educational Rights and Privacy Act (FERPA) and the Health Insurance Portability and Accountability Act (HIPAA)". Data Exchange has a proof-of-concept solution to the third party data problem by updating permissions.²¹

IV. DATA PROTECTION AND DATA PRIVACY: HUMAN RIGHTS ISSUE

The Government of India blocked over 100 mobile apps in September 2020 to protect the public because they were a security risk. The Indian government has issued a warning about these security hazards. MEITY (Ministry of Electronics and Information Technology) also received complaints about misuse of mobile apps. To safeguard the interests of Indian cyberspace, MEITY took this drastic measure. They collected, mined and profiled data to determine any possible threats. This will help maintain the sovereignty and integrity of India's cyberspace.²²

With the MEITY decision, it is clear that India needs strong data protection laws. According to Statistic, India is the second largest online market worldwide. There are over 974 million users in 2025.

"The right to privacy is an integral part of our constitution and was affirmed by the nine-judge bench of the Supreme Court in 2017. Article 21 of the Constitution of India states that No person shall be deprived of his life or personal liberty except according to procedure established by law. This statement, called the Right to Privacy, was affirmed in 24th August 2017 by a nine-

judge bench, who declared the right to privacy as an integral part of Part III of the Constitution, also known as Fundamental Rights".

A bench of nine judges were brought to decide if privacy is a fundamental right. "In 2017, a bench of five judges in the Supreme Court was hearing the case about Aadhaar and the right to privacy. They said that they needed a nine-judge bench to first decide if privacy is a fundamental right, before deciding on the main Aadhaar case. The Attorney General argued that the nine-judge bench was necessary to decide whether privacy is a fundamental right. The Supreme Court has refused to take this into consideration in many past cases, meaning it need to be thoroughly examined".²³

India is lacking a law for individual data. Data protection provisions that are available, however, they are also contained in the mix of statutes, the rules and also the guidelines. India is lacking a law for individual data.

SPDI Rules are India's primary law for cybercrime. SPDI Rules do not cover information communicated through non-electronic methods. The IT Act, 2000 came into force in October of 2000 and there were no provisions for the protection of sensitive personal information provided in electronic form. An Act was needed to provide these provisions.

The Information Technology Act, 2008 came into force on October 27, 2009. Section 43A of the Act said IF (in accordance with any agreement entered into by him with a computer resource provider):

If a corporation is negligent in protecting sensitive data and then as a result of their negligence, the person's data is stolen or is recreated with negative consequences, the corporation can be liable for damages.

Also, Section 72A, according to which:

If someone breaks a contract to disclose information, they may face three years in jail and up to five lakh rupees in fines. If you violate the IT Act, you may have

to pay a fine of up to INR 10,000. "The act specifically states that any person violating any provision of this Act or any rules or regulations made thereunder shall be punishable with imprisonment for a term which may extend to one year and shall also be liable to such fine (a minimum of Rs. 500 for violation not involving loss of information or whose loss has been remedied in 72 hours), and in the case of second or subsequent conviction with imprisonment which may extend to two years and shall also be liable to such fine (Rs. 5,000)."

If a member of the IT Act violates your personal database, they will be sentenced to two years in prison or fined 1,00,000 rupees.²⁴

This Act will also apply if the crime hacker has ever touched a computer or network in India. The Indian Information Technology Act and Rules apply only to 'sensitive personal data and information' collected through 'computer resources', as opposed to the Indian Personal Data Protection Act, which applies to all personal data in India.

Digital currencies offer the ability to transcend international borders, which would help foster economic growth and reliability. It would also be inexpensive, easy, and fast. Digital currencies are able to help boost the trade of the country, while increasing its financial health. With the rise of debit cards and electronic transfers, the system is changing. Governments, banks, businesses, and people no longer use physical money to transfer funds. They input numbers into electronic ledgers and have third parties change the numbers. With the growing popularity of cryptocurrencies, some are fearful over potential changes. Cryptocurrencies have had billion-dollar impact that has yet to be seen.²⁵

V. CONCLUSION

"In the digital age, we typically apply the concept of data protection to our critical personal information. This can include things like social security numbers, health and medical records, financial data, bank account and credit card numbers, and even basic but sensitive information including full names, addresses and birth dates". To ensure that data is safe and secure, it is important to have access controls in place. Personal information should not have uncontrolled access to individuals who could be at risk of fraud or identity theft. Data breaches are a big problem because they make data like trade secrets public. And if a competitor gets hold of that information, they'll have an edge on you. Data protection laws protect online information, a site is where most of our lives happen. Cybersecurity concerns are growing because of the need for continual protection of the data that we store online. Data protection laws are necessary for India, as it is one of the only countries in the world without a comprehensive and modern data protection law. Data protection laws work best when they work together with international counterparts.

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