Digital Footprints

A digital footprint – sometimes called a digital shadow or an electronic footprint – refers to the trail of data you leave when using the internet. Our digital footprint can be created and used with or without our knowledge. It includes websites we visit, emails we send, and any information we submit online, etc.

There are two kinds of digital footprints we leave behind.

Active digital footprints:- which includes data that we intentionally submit online. This would include emails we write, or responses or posts we make on different websites or mobile Apps, etc.

Passive digital footprints:- The digital data trail we leave online unintentionally is called passive digital footprints. This includes the data generated when we visit a website, use a mobile App, browse Internet, etc.

Digital Society and Netizen:

A society in which everything runs on digital technology where paperless and electronic means are the norm.

Net Etiquettes:

Netiquette thus describes the rules of conduct for respectful and appropriate communication on the internet. should be ethical, respectful and responsible while surfing the Internet.

- ➢ Be Ethical
- ➢ Be Respectful
- ➢ Be Responsible

Communication Etiquettes :

Communication etiquette refers to the accepted ways of communicating with others.

- ➢ Be Precise
- ➢ Be Polite
- ➢ Be Credible

Social Media Etiquettes:

Be Secure

- ➢ Choose password wisely
- ➢ Know who you befriend
- ➢ Beware of fake information

Be Reliable:

Think before uploading: Hence we need to be cautious while uploading or sending sensitive or confidential files which have a bearing on our privacy.

Intellectual Property Right (IPR): Intellectual property rights (IPR) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period of time.

Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, logos, names and images etc. Intellectual Property is legally protected through copyrights, patents, trademarks, etc.

Copyright:

Copyright grants legal rights to creators for their original works like writing, photograph, audio recordings, video, sculptures, architectural works, computer software, and other creative works like literary and artistic work. Copyrights are automatically granted to creators and authors. Right to distribute copies of the work to the public, and right to publicly display or perform the work. It prevents others from copying, using or selling the work.

Patent :

A patent is usually granted for inventions. Unlike copyright, the inventor needs to apply (file) for patenting the invention. When a patent is granted, the owner gets an exclusive right to prevent others from using, selling, or distributing the protected invention. Patent gives full control to the patentee to decide whether or how the invention can be used by others. Thus it encourages inventors to share their scientific or technological findings with others. A patent protects an invention for 20 years, after which it can be freely used.

Trademark

Trademark includes any visual symbol, word, name, design, slogan, label, etc., that distinguishes the brand or commercial enterprise, from other brands or commercial enterprises. For example, no company other than Nike can use the Nike brand to sell shoes or clothes. It also prevents others from using a confusingly similar mark, including words or phrases. For example, confusing brands like "Nikke" cannot be used. However, it may be possible to apply for the Nike trademark for unrelated goods like notebooks.

Licensing

Licensing and copyrights are two sides of the same coin. A license is a type of contract or a permission agreement between the creator of an original work permitting someone to use their work, generally for some price; whereas copyright is the legal rights of the creator for the protection of original work of different types. Licensing is the legal term used to describe the terms under which people are allowed to use the copyrighted material.

Violation of IPR

➢ Plagiarism
➢ Copyright Infringement
➢ Trademark Infringement

Plagiarism

Presenting someone else's idea or work as one's own idea or work is called plagiarism. If we copy some contents from Internet, but do not mention the source or the original creator, then it is considered as an act of plagiarism.

Copyright Infringement:

When we use other person's work without obtaining their permission to use or we have not paid for it, if it is being sold. Suppose we download an image from the Internet and use it in our project.

Trademark Infringement:

Trademark Infringement means unauthorized use of other's trademark on products and services. An owner of a trademark may commence legal proceedings against someone who infringes its registered trademark.

Public Access and Open Source Software:

Open source software is code that is designed to be publicly accessible. Open source software is software with source code that anyone can inspect, modify, and enhance. The GNU General Public License (GPL) and the Creative Commons (CC) are two popular categories of public licenses.

Free and open source software (FOSS) has a large community of users and developers who are contributing continuously towards adding new features or improving the existing features. For example, Linux operating systems like Ubuntu and Fedora come under FOSS. Some of the popular FOSS tools are office packages, like Libre Office, browser like Mozilla Firefox, etc.

Cyber Crime:

Cybercrime is criminal activity that either targets or uses a computer, a computer network or a networked device. A cybercriminal may spread viruses and other malwares in order to steal private and confidential data for blackmailing and extortion Similarly, malware is a software designed to specifically gain unauthorized access to computer systems. Eg hacking, ransomware attacks, denial-of-service, phishing, email fraud, banking fraud and identity theft

- ➤ Hacking
- ➤ Phishing and Fraud Emails
- ➤ Identity Theft

Indian Information Technology Act (IT Act)

The Information Technology Act, 2000 was enacted by the Indian Parliament in 2000. It is the primary law in India for matters related to cybercrime and e-commerce.

E-waste: Hazards and Management

E-waste or Electronic waste includes electric or electronic gadgets and devices that are no longer in use. Hence, discarded computers, laptops, mobile phones, televisions, tablets, music systems, speakers, printers, scanners etc. constitute e-waste when they are near or end of their useful life. Therefore, it is very important that e-waste is disposed of in such a manner that it causes minimum damage to the environment and society.

Impact of e-waste on environment:

When e-waste is carelessly thrown or dumped in landfills or dumping grounds, certain elements or metals used in production of electronic products cause air, water and soil pollution. This is because when these products come in contact with air and moisture, they tend to leach. As a result, the harmful chemicals seep into the soil, causing soil pollution. Further, when these chemicals reach and contaminate the natural ground water, it causes water pollution as the water becomes unfit for humans, animals and even for agricultural use. When dust particles loaded with heavy metals enters the atmosphere, it causes air pollution as well.

Impact of e-waste on human:

If e-waste is not disposed of in proper manner, it can be extremely harmful to humans, plants, animals and the environment as discussed below

➢ One of the most widely used metals in electronic devices (such as monitors and batteries) is lead. When lead enters the human body through contaminated food, water, air or soil, it causes lead poisoning which affects the kidneys, brain and central nervous system. Children are particularly vulnerable to lead poisoning.

➢ When e-waste such as electronic circuit boards are burnt for disposal, the elements contained in them create a harmful chemical called beryllium which causes skin diseases, allergies and an increased risk of lung cancer. Burning of insulated wires to extract copper can cause neurological disorders.

➢ Some of the electronic devices contain mercury which causes respiratory disorders and brain damage

➢ The cadmium found in semiconductors and resistors can damage kidneys, liver and bones.

➢ None of the electronic devices are manufactured without using plastics. When this plastic reacts

Management of e-waste:

E-waste management is the efficient disposal of e-waste. Although we cannot completely destroy e-waste, still certain steps and measures have to be taken to reduce harm to the humans and environment. Some of the feasible methods of e-waste management are reduce, reuse and recycle.

➢ Reduce
➢ Reuse
➢ Recycle