

Unit-6

Ethics in Cyber security & Cyber Law

- Privacy
- Intellectual Property
- Professional Ethics
- Freedom of Speech
- Fair User and Ethical Hacking
- Trademarks
- Internet Fraud
- Electronic Evidence

Privacy

- Privacy is a word describing the condition of being free from being observed. Digital privacy is the lack of personal identification in the digital world and the internet.
- It refers to the protection of an individual's information that is used or created while using the Internet on a computer or personal device.
- Digital privacy is often used on behalf of individual and consumer privacy rights in e-services for the business practices of many e-marketers, businesses, and companies to collect and use such information and data.
- Digital privacy has increasingly become a topic of interest as information and data shared over the social web: social-media users are now considered unpaid 'digital labors', as one pays for 'free' e-services through the loss of their privacy.
- For example, between 2005 and 2011, the change in levels of disclosure for different profile items on Facebook show that, over the years, people want to keep more information private.
- However, observing the seven-year span, Facebook gained a profit of \$100 billion through the collection and sharing of their users' data to the third-party advertisers.

Intellectual Property

- Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce.
- It is a category of property that includes intangible creations of the human intellect.
- To protect the intellectual property, we have the intellectual property law.
- The main purpose of intellectual property law is to encourage the creation of a wide variety of intellectual goods.

Types of Intellectual Property

Patents

- A patent is a property right for an inventor that's typically granted by a government agency.
- The patent allows the inventor exclusive rights to the invention, which could be a design, process, an improvement, or physical invention such as a machine.
- Technology and software companies often have patents for their designs.
- For example, the patent for the personal computer was filed in 1980 by Steve Jobs and three other colleagues at Apple Inc.

Copyrights

- Copyright provides authors and creators of original material the exclusive right to use, copy, or duplicate their material.
- Authors of books have their works copyrighted as do musical artists.
- A copyright also states that the original creators can grant anyone authorization through a licensing agreement to use the work.

Trademarks

- A trademark is a symbol or phrase that is recognizable and represents a product that legally separates it from other products.
- A trademark is exclusively assigned to a company, meaning the company owns the trademark so that no others may use or copy it.
- A trademark is often associated with a company's brand. For example, the logo and brand name of "Coca Cola," is owned by the Coca-Cola Company (KO).

Trade Secrets

- A trade secret is a company's process or practice that is not public information, which provides an economic benefit or advantage to the company or holder of the trade secret.
- Trade secrets must be actively protected by the company and are typically the result of a company's research and development.
- Examples of trade secrets could be a design, pattern, recipe, formula, or proprietary process.
- Trade secrets are used to create a business model that differentiates the company's offerings to its customers by providing a competitive advantage.

Professional Ethics

- Professional ethics are principles that govern the behavior of a person or group in a business environment.
- Like values, professional ethics provide rules on how a person should act towards other people and institutions in such an environment.
- Ethical principles underpin all professional codes of conduct. Ethical principles may differ depending on the profession; for example, professional ethics that relate to medical practitioners will differ from those that relate to lawyers or real estate agents.
- However, there are some universal ethical principles that apply across all professions, including:
 - honesty
 - trustworthiness
 - loyalty
 - respect for others
 - adherence to the law
 - doing good and avoiding harm to others
 - accountability.

Freedom of Speech

- Freedom of Speech is the right to express information, ideas, and opinions free of government restrictions.
- The power or right to express one's opinions without censorship, restraint, or legal penalty.

When freedom of speech can be restricted

- In certain circumstances free speech and freedom of expression can be restricted.
- Governments have an obligation to prohibit hate speech and incitement.
- And restrictions can also be justified if they protect specific public interest or the rights and reputations of others.

Any restrictions on freedom of speech and freedom of expression must be set out in laws that must in turn be clear and concise so everyone can understand them.

Fair User and Ethical Hacking

- Ethical hacking involves an authorized attempt to gain unauthorized access to a computer system, application, or data.
- Ethical hacking is used to identify potential data breaches and threats in a network unlike malicious hacking, this process is planned, approved, and more importantly, legal.
- Ethical hacking is performed by Security expert/professionals known as ethical hacker (white hat hacker)
- Ethical hackers aim to investigate the system or network for weak points that malicious hackers can exploit or destroy.

- By doing so, they can improve the security of the system.

Key concepts of ethical hacking

Hacking experts follow four key protocol concepts:

- **Stay legal.** Obtain proper approval before accessing and performing a security assessment.
- **Define the scope.** Determine the scope of the assessment so that the ethical hacker's work remains legal and within the organization's approved boundaries.
- **Report vulnerabilities.** Notify the organization of all vulnerabilities discovered during the assessment. Provide remediation advice for resolving these vulnerabilities.
- **Respect data sensitivity.** Depending on the data sensitivity, ethical hackers may have to agree to a non-disclosure agreement, in addition to other terms and conditions required by the assessed organization.

Trademarks

- A trademark is an easily recognizable symbol, phrase, or word that denotes a specific product.
- A trademark exclusively identifies a product as belonging to a specific company and recognizes the company's ownership of the brand.
- Trademarks are generally considered a form of intellectual property and may or may not be registered.
- It legally differentiates a product or service from all others of its kind and recognizes the source company's ownership of the brand.
- A trademark may be located on a package, a label, a voucher, or on the product itself.
- For the sake of corporate identity, trademarks are often displayed on company buildings. It is legally recognized as a type of intellectual property.

Using the trademark symbols TM, SM, and ®

- The symbols "TM" is used for goods, "SM" for services even if you haven't filed an application to register your trademark.
- Once we trademark with, we can use an ® with the trademark.

Internet Fraud

- Internet fraud is the use of Internet services or software with Internet access to defraud victims or to otherwise take advantage of them.
- Internet fraud can also involve incorrect information for the purpose of tricking victims out of money.
- Internet fraud is not considered a single, distinctive crime but covers a range of illegal and illicit actions that are committed in cyberspace.

- Several kinds of internet fraud include Data Breach, Denial of Service, malware, ransomware, phishing etc.

How to protect ourselves from the internet fraud?

- **Learn about the types of internet fraud.**
The more you know about various fraud schemes, the better you can protect yourself from them.
- **Use common sense.**
If something sounds too good to be true, it's probably a fraud.
- **Keep your personal information secure.**
Do not give out any information regarding your savings, checking, credit, or other financial accounts.
- **Guard your Social Security number especially carefully.**
- **Deal only with legitimate, reputable companies and individuals.**
- **Obtain and verify addresses and phone numbers.**
- **Be sure to use an up-to-date major browser and avoid insecure websites.**

Electronic Evidence

- Electronic evidence is any electronically stored information (ESI) or transmitted in a digital form that may be used as evidence in a lawsuit or trial.
- Electronic evidence includes any documents, emails, or other files that are electronically stored. Additionally, electronic evidence includes records stored by network or Internet service providers.
- The use of digital evidence has increased in the past few decades as courts have allowed the use of following things as electronic evidence
 - Emails
 - Digital photographs
 - ATM transaction logs
 - Word processing documents
 - Instant messages history
 - Accounting files
 - Spreadsheets
 - Internet browser history
 - Databases
 - Contents in a computer memory
 - Computer backups & printouts
 - GPS Tracks
 - Digital video

- Audio files

Assignment: Trademark vs Patent vs Copyright