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ETHICAL ISSUES IN COMPUTER

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Ethical Issues in Computer

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Abstract – Computers and the Internet are nowadays common to the human tool-belt. It is of utmost importance that those using these technologies understand the social implications of the uses and abuses. This paper takes a brief look at why Computer Ethics are needed, what are Components of Computer Ethics, what should be Computer Ethical Code of Conduct for Usage and suggests ways of improving the knowledge of Computer Ethics of those who work with these technologies.

Keywords – Computer Ethics, Need For Computer Ethics, Components of Computer Ethics, Computer Ethical Code of Conduct, Computer Ethics Awareness.

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1. INTRODUCTION

1.1 WHAT IS ETHICS?

Ethics is a branch of philosophy dealing with values relating to human conduct, with respect to the rightness and wrongness of certain actions and to the goodness and badness of the motives and ends of such actions.

Ethics may apply to various areas such as Computer Ethics, Medical Ethics, Business Ethics, etc.

1.2 WHAT IS COMPUTER ETHICS?

Computer Ethics is a part of practical philosophy which deals with how computing professionals should make decisions regarding professional and social conduct.

Computer Ethics include how computers and internet are to be utilized in right manner. What all things are not to be done using Computers or Internet and what are their result if done comes under Computer Ethics.

1.3 NEED FOR COMPUTER ETHICS

Computers and the Internet represent many people, governments, and organizations. Each of these entities have different goals in regard to ethical and moral policy. They each desire to maximize the benefits they can derive from the Internet and computer technology, whether it be for financial profit or personal entertainment. In a goal driven environment it is often easy to lose sight of common goals and interests of society in front of individual goals and interest. Today, profit has taken over moral values. So, people should understand that what is right and what is wrong while working with computer. Each technical area presents new ethical challenges that need to be seriously considered. Through good cooperation and a common desire to achieve a healthier computing environment a general ethical policy can be established. And this ethical policy determines what should be done and what should not be done using computers. Hence, computer ethics are needed.

2. AREAS WHERE COMPUTER ARE USED

Computer has become crucial part of today's day-to-day life. It is being used in almost all areas. It is being used for both personal and professional purposes Some of major areas where Computers are used are:

2.1 EDUCATION

- Computers are used in schools for teaching.
- Computers are used for mathematical calculations.
- Computers are used for knowledge gathering.

2.2 BANK

- Computers are used for storing information about differnt account holders.
- Computers help in keeping record of the cash.
- Computers help in providing facilities like fund tranfer, balance inquiry, etc.

2.3 ENTERTAINMENT

- Computers are used for playing games, listening music and watching movies.
- Computers are used for making cartoon or animation movies.
- Computers are used for making drawings.

2.4 RAILWAY STATIONS AND AIRPORT

- Computers help in giving information about ticket reservation and bookings.
- Computers help in giving information about the arrival and departure timings of trains and aeroplanes.
- Computers help in keeping records of all the passengers.

2.5 CYBER CAFE

- Computers are used to type and print documents, letters, etc.
- Computers help in sending e-mails.
- Computers help in tracking information about client systems.

2.6 HOSPITALS

- Computers help in keeping records of all the patients in a hospital.
- Computers help doctors in controlling operation theatre machines.
- Computer help in doing a number of medical tests.

2.7 DEFENSE

- Computers help in keeping records of criminals.
- Computers help in establishing communication links between the soldiers and their commanders through satellites.
- Computers help in constructing weapons and controlling their functions.

2.8 BUSINESS

- Computers help in accounting purposes.
- Computers help in sending business e-mails.
- Computers help in video conferencing for business meetings.

2.9 SOCIAL NETWORKING SITES

- Computers help in storing information about users of social networking sites.
- Computers help in communicating between users of social networking sites.
- Computers help in viewing or share images or videos in social networking sites.

2.10 DESIGNING

- Computers help in designing magazines, newspapers, books, advertisement.
- Computers help in designing buildings, houses.
- Computers help in designing machinery, electronic devices, etc.

3. ESSENTIAL COMPONENTS OF COMPUTER ETHICS

- Honesty : People should be honest with respect to their moral values. And should not conduct any action against their moral values using computers.
- Respect : People should respect other people. They should not use computers to spread misinformation regaurding other people.
- Confidentiality : People should not use computers to spy on other people's work. They should understand and respect Confidentiality of other people's work.
- Professionalism : People should not use conduct any action that is unprofessional such as harming or damaging other people's work.
- Responsibility : People should understand their responsibility towards society. And they should not use computers in such a way that it will have negative impact on society.
- Communication : People should be courteous while communicating with other people using computer.
- Obeying the law : People should understand and respect government rules and policies. And they should not get involved in computer related illegal activities.

4. ETHICAL CODE OF CONDUCT FOR USAGE

4.1 DO NOT USE A COMPUTER IN WAYS THAT MAY HARM OTHER PEOPLE.

- It is unethical to use a computer to harm another user.
- It includes harming or corrupting other users' data or files.
- It is wrong to use a computer to steal someone's personal information.
- Manipulating or destroying files of other users is ethically wrong.
- It is unethical to write programs, which on execution lead to stealing, copying or gaining unauthorized access to other users' data.
- Being involved in practices like hacking, spamming or phishing does not conform to computer ethics.
- Viruses are programs meant to harm useful computer programs or interfere with the normal functioning of a computer. Malicious software can disrupt the functioning of computers in more ways than one. It may overload computer memory through excessive consumption of computer resources, thus slowing its functioning. It may cause a computer to function wrongly or even stop working. Using malicious software to attack a computer is unethical.
- Stealing sensitive information or leaking confidential information is as good as robbery. It is wrong to acquire information that is meant to be confidential. For example, breaking into a bank account to collect information about the account or account holder is wrong. Illegal electronic transfer of funds is a type of crimal offense.
- All those activities which affect person's piracy is unethical. It is wrong to read someone else's email messages or files. Snooping around in another person's files or reading someone else's personal messages is the invasion of his privacy. There are exceptions to this. For example, spying is necessary and cannot be called unethical when it is done against illegitimate use of computers. For example, intelligence agencies working on cyber-crime cases need to spy on the internet activity of suspects to track them down.

4.2 DO NOT CONTRIBUTE TO THE SPREAD OF MISINFORMATION USING COMPUTER TECHNOLOGY

- Spread of information has become viral today, because of the Internet.
- This also means that false news or rumours can spread speedily through social networking sites or emails. For example, some people make fake profile of other people on social networking sites only to spread misinformation about them.
- Being involved in the circulation of incorrect information is unethical.
- Mails and pop-ups are commonly used to spread the wrong information or give false alerts with the only intent of selling products.
- Mails from untrusted sources advertising certain products or spreading some hard-to-believe information, are common.
- Many frauds happens due to ignorance of people about this misinformation's. For example, Many fraud online shopping website advertises the products at very cheap rate. And then people pay online for that product but they do not receive that product. And as these fraud product sellers are not present locally as they can be operating their website from anywhere in the world. To reach them is difficult task.
- Direct or indirect involvement in the circulation of false information is ethically wrong.

4.3 REFRAIN FROM COPYING SOFTWARE OR BUYING PIRATED COPIES. PAY FOR SOFTWARE AND OTHER STUFFS UNLESS IT IS FREE

- Like any other artistic or literary work, software is copyrighted.
- A piece of code is the original work of the individual who created it.
- It is copyrighted in his name.
- In case of a developer writing software for the organization he works for, the organization holds the copyright for it.

- Copyright holds true unless its creators announce it is not.
- Obtaining illegal copies of copyrighted software is unethical.
- Copying any person's or organisation work and propagating them in one's own name is unethical. This applies to any creative work, program or design. Establishing ownership on a work which is not yours is ethically wrong.
- Piracy is not only limited to copying software.
- It also involves downloading copyrighted songs, videos and movies unless it is provided by creator.
- Piracy is not only unethical but also illegal.

4.4 BEFORE DEVELOPING A SOFTWARE, ANTICIPATE THE SOCIAL IMPACTS IT CAN HAVE.

- Looking at the social consequences that a program can have, describes a broader perspective of looking at technology.
- Software like video games and animations or educational software can have a social impact on their users.
- Suppose, when working on animation films or designing video games, it is the programmer's responsibility to understand his target audience or users and the effect it may have on them.
- For example, a computer game for kids should not have content that can influence them negatively. Like if a game is about fighting against terrorist may influence the kid to become counter terrorist in future. And likewise if a game is about becoming a gangster than it may influence the kid to do participate in illegal activities. Therefore, it is very crucial point to anticipate impacts software can have before developing it.

4.5 IN USING COMPUTERS FOR COMMUNICATION, BE RESPECTFUL AND COURTEOUS WITH THE FELLOW MEMBERS.

- The communication etiquette we follow in the real world applies to communication over computers as well.
- While communicating over the Internet, one should treat others with respect.
- One should not intrude others' private space, use abusive language, make false statements or pass irresponsible remarks about others.
- One should be courteous while communicating over the web and should respect others' time and resources. Also, one should be considerate with a novice computer user.

4.6 DO NOT USE COMPUTERS FOR VIEWING/SPREADING EXPLICIT/DEFAMING MATERIALS.

- There are many explicit content materials available on Internet like Pornographic Videos.
- Viewing/Spreading these are immoral to society. And are considered unethical.
- One should also not spread any sort of image or video which can damage other person's reputation and respect. But there are exceptions to this. For example, it is not unethical if any person spread video which shows any Government Officer or Minister taking bribe.
- If a person is using computer to damage the reputation of other person it comes under act of cyber-bullying. It is illegal as it may affect the person who is being bullied psychologically. And may lead to some serious damage.

5. COMPUTER ETHICS AWARENESS RESOURCES

This section identifies current resources available to people or philosophers interested in learning more about the range of issues considered by computer ethicists. Current resources are discussed in terms of three categories: conferences and associations, journals and periodicals, and textbooks.

5.1 CONFERENCES AND ASSOCIATIONS

A number of international conferences and symposia, many of which are affiliated with and sponsored by one or more professional associations, will be of interest to philosophers eager to learn more about computer ethics. Several such conferences are held either annually or at regularly scheduled intervals as part of an ongoing series. Although there are now several conference series worthy of consideration, Some of particular interest are :

Table Showing Details of Conferences Related to Computer Ethics (Herman, 2013)

Conference	Interval in which it is held	For more details visit
Computer Ethics: Philosophical Enquiry (CEPE)	18 Months	http://www.dartmouth.edu/~phil/
International Conference on the Social and Ethical Impacts of Information and Communications Technologies (ETHICOMP)	18 Months	http://www.ccsr.cse.dmu.ac.uk/conferences/ccsrconf/
International Symposium on Technology and Society (ISTAS) conducted by IEEE SSIT	1 Year	http://www.ieeessit.org/conferences.asp

5.2 JOURNALS

Although several journals and periodicals include articles on, and in some cases devote entire issues to, concerns associated with computer ethics, I believe that the following publications described in this section are particularly useful.

Table Showing Details of Journals Related to Computer Ethics (Herman, 2013)

Journals	Interval in which Journal is published	For more details visit
Ethics and Information Technology published by Kluwer Academic Publishers in the Netherlands	4 Months	www.wkap.nl/journalhome.htm/1388-1957
EEE Technology and Society Magazine published by IEEE-SSIT	4 Months	http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=44
The Information Society: An International Journal published by Taylor and Francis	4 Months	http://www.tandfonline.com/loi/utis20#.U0ma_CgufpU

Each of the above journals and periodicals regularly includes reviews of recent books on or related to computer ethics. Each also includes relevant information and news items about its affiliated professional association, as well as announcements of upcoming computer ethics conferences and events.

5.3 TEXTBOOKS

There are several computer ethics textbooks available to those interested in learning or teaching a course or course component on computer ethics. Although people can now choose from a wide range of computer ethics textbooks, many of which are also authored by non-philosophers (e.g., computer scientists and social scientists).

Philosophers will likely find Deborah Johnson's Computer Ethics (Pearson Education) to be at the top of their list.

Another popular textbooks are Computer Ethics and Professional Responsibilty by Terrell Ward Bynum and Simon Rogerson (Wiley) and Computer Ethics : A Global Perspective by Stamatellos (Jones and Bartlett Learning).

6. CONCLUSION

Computer Ethics is very sensitive topic and it is of utmost importance to have knowledge about it. People should understand cultural, social, legal and ethical issues related to computing. They should hold to highest possible ethical standards. They should use their internal sense of ethics. They should not make the wrong ethical choice because of focusing on short-term self-interest.

People should understand that Ethical behaviour is way of life, best learned through experience. Moreover, living ethically requires strong and sincere motivation.

Many of unethical activities are also criminal offense. And it may lead to trouble. In June 2013, six people in UK and twelve in USA were arrested by FBI for cyber credit card data fraud. (cyber-crime-stories-of, 2012) So, people should understand the difference between ethical and unethical. Otherwise, they could suffer harsh consequences.

At last, I would like to highlight the point that, it would be much better to concentrate on making sure computer technology improves human life over how it can make people rich. Use of computer technology to improve quality of life and health should be given more priority over using it for becoming rich.

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