**Chapter 1 Summary: Unwrapping the Gift:**

**I. The Ubiquity of Computers and the Rapid Pace of Change:**

1. Telephones, automobiles, airplanes, radio, household electrical appliances, and many other marvels we take for granted were invented in the late 19th and early 20th centuries. They led to profound changes in how we work and play, how we get information, how we interact with our neighbors, and how we organize our family lives. Although fast paces when compared to earlier rates of innovation, the changes were gradual compared to those in the computer age.
2. Our generation is characterized by the ubiquity of computers, the rapid pace of change that accompanies them, and their myriad applications and impacts on daily life.
3. Problems and controversies accompany the conveniences and wonders of new computer technologies and applications.
4. Online commerce brought identity theft and a variety of scams. Cell phones increase the risk of car accidents…
5. Social-networking sites were neighborhood pizza places, bars and 2ahwes. The way you use computer systems and tools, personally and professionally, will change substantially in two years, five years, and in ten, and almost unrecognizable over the course of your career.
6. Services and social phenomena, along with computer and communications technology have deeply changed the ways we interact with other people.

**II. Amateur Creative Works: Blogs and Video Sharing:**

1. Blogs:
   1. Blogs began as online journals with frequent, sometimes daily, comments on a few topics of interest to the blogger.
   2. Mainstream media scorned new blogs, arguing that bloggers are not trained journalists. They are unreliable (the mainstream media said). They are not objective. Competition from bloggers encourages mainstream journalists to do a better job.
   3. Bloggers demonstrated their influence by digging up information before the mainstream media did and by pushing stories the mainstream media did not publish.
2. Video sites and popular culture:
   1. A lot of videos on such sites are junk, although some are truly creative and entertaining. Only a few hundred people watched a video of a U.S Senator debating his opponent during an election campaign, but 80,000 watched a video of him sleeping during a meeting.
   2. People would go to these sites mostly for fun and relaxation.

**III. Connections:**

The Web and cell phones keep us connected all day virtually everywhere.

1. E-mail, the Web, and empowerment:
   1. E-mail arrives quickly without any interruption. The sender does not have the frustration of getting busy signals, nor does he or she have to consider the time-zone differences when sending messages to other countries.
   2. The Web gives us access to information and to audiences almost unimaginable a generation ago. The Web empowers ordinary people to make better decisions. It empowers us to do things that we used to rely on experts to do for us.
   3. The Web has become a huge library, a huge shopping mall, an entertainment center and global community forum.
2. Cell Phones:
   1. We were used to being out of touch when away from home or office. We planned ahead and arranged our activities so that we did not need a phone when a phone was not available.
   2. Within a short time. Millions of people started carrying cell phones and discovering new uses for them (mobile apps!! :D).
   3. In many areas of life, people take more risk when technology increases safety.
   4. Cell phones are sometimes considered rudeness. Some people use them in inappropriate places.
   5. Cameras in cell phones obviously have many valuable uses, but the fact that so many people carry them affects our privacy in public and nonpublic places. KK.
3. Social networking:
   1. Older People do not understand the appeal of social-networking sites, or worry about safety and privacy, these sites are wildly popular with young people. These sites provide new ways for people to express their personalities. People use them to keep in touch with friends, to find others with similar tastes and interests, and to find dates, jobs, and political allies.
4. More connections: Such as *Telemedicine, Distance Learning, and Global Connectivity.*

**IV: Collaborative Efforts among Strangers:**

1. Wikipedia, the free, online collaborative encyclopedia, is an excellent example of collaborative projects among large numbers of strangers worldwide that produce extremely valuable products for the public.
2. The Open Directory Project, the directory of the Web organized by topic areas.
3. The number of large online collaborative projects is likely to increase significantly.

**V: E-COMMERCE! And Free Stuff:**

1. Some of the benefits of e-commerce are fairly obvious. We can consider more products and sellers, some far away, in less time and without burning gasoline to get there. Auction sites gave people access to customers they could not have found efficiently before. Shopping on the Web brought down the prices of a variety of product.
2. Growth of commerce on the Web required solutions to several problems. One was trust. People were reluctant to give their credit card numbers on the Web to companies they had not dealt with or even heard of before. PayPal was established to be a secure intermediary to handle payments.
3. Free Stuff:
   1. Libraries provided free access to books, newspapers, and journals for generations, and radio and television provided free news and entertainment before the invention of computers and the Internet.
   2. Free e-mail programs and e-mail accounts, browsers, filters, firewall, encryption software, software to manipulate photos, software for viewing documents and videos, home inventory software, anti-spam software, antivirus software, antispyware software, and software for many other specialized purposes.
   3. Phone service via Skype is free. There are free dating services on the Web.
   4. We pay for libraries with taxes. Advertisers pay for broadcasting radio and television programs. On the Web, advertising pays for many free sites, but far from all. Wikipedia carries no advertising, donations pay for its hardware and bandwidth.

**VI: Artificial Intelligence, Robotics, and Motion:**

Artificial intelligence (AI) is a branch of computer science that develops theories and techniques for making computers perform tasks that we normally (or used to) think of as requiring human intelligence.

1. Robotics:
   1. Robots are mechanical devices that perform tasks traditionally done by humans or tasks that we think of as human-like activities.
   2. They work faster and more accurately than people can.
   3. Robotic devices now are generally controlled by computer software and include aspects of AI.
   4. Its main goals is reduction of human error.
2. Motion sensing and control:
   1. Tiny motion-sensing and gravity-sensing devices collect status date.
   2. Software, sometimes quite complex, using Ai techniques, interprets the data and determines the necessary motions, then sends signals to motors.
   3. These devices, accelerometers a.k.a mems, help robots and Segway’s motorized scooter stay upright.
   4. They provide image stabilization in digital cameras. (Lumia ^\_^)
   5. They detect when a car has crashed or when someone has dropped a laptop.
   6. The system deploys an airbag or triggers a lock on the disk drive to reduce damage.

**VII: Tools for Disabled People:**

1. One of the most heartwarming applications of computer technology is the restoration of abilities, productivity, and independence to people with physical disabilities.
2. Some computer-based devices assist disabled people in using ordinary computer applications that other people use.
3. Some enable disabled people to control household and workplace appliances that most of us operate by hand.
4. Some improve mobility.

**VIII: An Introduction to some Issues and Themes:**

**ISSUES:**

1. Unemployment: Automation of the most common teller functions led to a decline in employment for bank-tellers.
2. Alienation and customer service: Automation of teller functions removed the human contact between the customer and a live teller.
3. Crime: People are robber after withdrawing cash at the ATMs. Thieves steal millions of doulars (Haraty) with stolen and counterfeit ATM cards.
4. Loss of privacy: Online account information is at risk from hackers.
5. Errors: An error in the computer program that operated the ATMs for a large New York bank caused accounts to be debited twice the amount of the actual withdrawal.
6. Freedom of speech: How much freedom of speech we have in cyberspace. Porn/dangerous material…
7. Intellectual property: People copy billions of doulars’ worth of music, movies, and software illegally each year. Storage in digital form has made intellectual property easy to copy without permission of the copyright owner.
8. Evaluating and controlling technology: Computers can become a dehumanizing tool that can reduce the quality of life.
9. Professional ethics: People who design or program computer systems must make decisions or set policies about the use of computer systems.

**THEMES:**

1. Adapting to new technology: Changes in technology usually require adaptive changes in the law, social institutions, business policies, and personal skills, attitudes, and behavior.
2. Varied sources of solutions to problems: Solutions for problems that result from new technology come from more or improved technology, the market, management policies, education and public awareness, volunteer efforts, and law.
3. Global reach of the net: The ease of communication with distant countries has profound social, economic, and political effects, some beneficial, some not.
4. Trade-offs and controversy: Increasing privacy and security often means reducing convenience. Protecting privacy makes law enforcement more difficult. Unpleasant, offensive, or inaccurate information accompanies our access to the Web’s vast amounts of useful information.
5. Differences between personal choices, business policies, and law: The criteria for making personal choices, for making policies for business and organizations, and for writing laws are fundamentally different.

**IX: ETHICS:**

* We see how a new technology can create new risks and problems, and how social and legal institutions continually adapt.
* People make decisions about what technologies and products to develop and how to use them.
* People make decisions about when a product is safe to release.
* People make decisions about access to, and use of, personal information.
* People make laws and set rules and standards.
* Ethics is the study of what it means to “do the right thing”.
* Ethical theory assumes that people are rational and make free choices.
* Ethical rules are rules to follow in our interactions with other people and in our actions that affect other people.
* Most ethical theories attempt to achieve the same goal: To enhance human dignity, peace, happiness, and well-being.
* We could view ethical rules as fundamental and universal, like laws of science.
* To provide a framework in which to interact with other people in a peaceful, productive way.

1- Deontological theory:

* 1. Deontologists tend to emphasize duty and absolute rules, to be followed whether they lead to good or ill consequences in particular cases.
  2. The principle of universality. We should follow rules of behavior that we can universally apply to everyone. This principle is so fundamental to ethical theory that we already accepted it in our explanation of ethics.
  3. Deontologists argue that logic or reason determines rules of ethical behavior, that actions are intrinsically good because they follow from logic.

2- Utilitarian Theory:

1. Utilitarianism is to increase happiness, or “utility”.
2. An act is right if it tends to increase aggregate utility and wrong if it tends to decrease it.

3- Natural Rights Theory:

1. They come from nature, or can be derived from the nature of humanity.
2. Fundamental rights of others, including the rights to live, liberty, and property.

**“We cannot solve ethical problems by applying a formula or an algorithm, one must never treat people as merely means to ends, but rather as ends in themselves.” – Faisal Abu-Khzam.**

**X: Some Important Distinctions:**

A number of important distinctions affect our ethical judgments.

Right, wrong, and okay: It is misleading to divide all acts into two categories, ethically right and ethically wrong. Rather, it is better to think of acts as either ethically obligatory, ethically prohibited, or ethically acceptable.

Negative and positive rights, or liberties and claim rights: Rights are usually called negative and positive rights, but the terms liberties and claim rights are more descriptive of the distinction.

Negative rights, or liberties, are rights to act without interference. The only obligation they impose on others is not to prevent you from acting. They include the right to life (in the sense that no one may kill you), the right to be free from assault, the right to use your property, the right to use your labor, skills, and mind, to create goods and services and to trade with other people in voluntary exchanges. The rights to “life, liberty, and the pursuit of happiness”.

Claim rights, or positive rights, impose an obligation on some people to provide certain things for others. A positive right to a job means that someone must hire you regardless of whether they voluntarily choose to, or that it is right, or obligatory.

Wrong vs. harm: Carelessly and needlessly causing harm is wrong, but it is important to remember that harm alone is not sufficient criterion to determine that an act is unethical.

Laws and ethics: Commercial law, copyright law…