CP373: Ethics and Professional Practice in Computer Science

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1 What are ethics?

1.1 Denotological theories (non-consequentialist)

1. Emphasize dut and **absolute** rules, to be followed regardless of consequences
2. **Immanuel Kant**, a denotological philosopher
    a. *Principle of universality*: We should followed the rules of behaviour that we can apply to everyone
    b. *Rationality is the standard for what is good:*

- Kant took an extreme position on absolutism of ethical rules. Ex. it is *always* wrong to lie

1.2 Utilitarianism (consequentialist theory)

- Its guiding principle is to increase happiness, *utility*
- Consider consequences, benefits and damages and calculate change in utility
- An act is right if it tends to increase aggregate utility and wrong if it tends to decrease it

1.2.1 Consequences

1. **Difficult/impossible to determine all the consequences of an act**
    - If we can do so, do we increase what *we* believe will, or should, we contribute to the happiness of those effected, or what *they* choose themselves
    - Is a dollar worth the same to a person who worked for it and person who received it as a gift?
2. **Does not respect/recognize individual rights**

1.3 Natural Rights

- Respecting a set of fundamental rights of others, including the rights of life, liberty, poverty, etc
- Treat people as an ends rather than means

2 Privacy and Security (part 1)

2.1 What is privacy?

- Being able to do stuff without other people interfering
- 3 important aspects:
    1. Freedom from intrusion
    2. Control of personal information
    3. Freedom from surveillance

2.2 Computer/technology privacy

- Computers pose risk by providing an easy medium to copy/transmit and store large amounts of data
- Computers enable:
    - **Invisible data gathering**: collecting information without person's knowledge; this goes against "informed consent"
    - **Secondary use: data mining, direction marketing, etc**
        - *Secondary use* is the use of personal information for a purpose other than the one for which the person supplied it
        - *Computer matching* means combining and comparing information from different sources

2.3 Governments and privacy

- Databases allow the government to hold large amounts of data; how should it be managed?
- Surveillance technology can be always lurking - most of the time we do not know

2.4 New technologies and expectation of privacy

- Search and detection technologies are *non-invasive but deeply revealing*; these devices have obvious security

2.5 Business and privacy

- Businesses (big or small) are held accountable for the use of internal data and security
- They should be making sure to not misuse data and and handle any possible cases where ths could happen