

Professional Ethics in Computing

What are Professional Ethics?

- Professional ethics are a code of conduct that govern how members of a profession deal with each other and with third parties.

Why should we have a Professional Code of Ethics?

- A Professional Code of Ethics serves several functions:
 - Symbolises the professionalism of the group.
 - Defines and promotes a standard for external relations with clients and employers.
 - Protects the group's interests.
 - Codifies members' rights.
 - Expresses ideals to aspire to.
 - Offers guidelines in “gray areas”.

Why have a Professional Code of Ethics in Computing?

- Software has the potential to do good or cause harm, or to enable or influence others to do good or cause harm.
- We have pride in our work and want the work that we do to be given recognition and respect.
- We want to protect our livelihood.

Some Examples

- ACM Code of Ethics and Professional Conduct.
 - <http://www.acm.org/constitution/code.html>
- British Computer Society Code of Conduct
 - <http://www1.bcs.org.uk/DocsRepository/03200/3224/default.htm>
- IEEE-CS/ACM Software Engineering Code of Ethics and Professional Practice
 - <http://www.computer.org/tab/seprof/code.htm>

Characteristics of a Code of Ethics

- They are not simple ethical algorithms that generate ethical decisions.
- Sometimes elements of the code may be intension with each other or other sources.
 - Requires the software engineer to use ethical judgement to act in the spirit of the code of ethics.
- A good code of ethics will enunciate fundamental principles that require thought rather than blind allegiance.

Joint IEEE-CS/ACM Code of Ethics and Professional Practice

- Built on 8 principles
 - Public Interest
 - Client and Employer
 - Product
 - Judgement
 - Management
 - Profession
 - Colleagues
 - Self
- The principle of Public Interest is central to the code.

Public Interest

- Software engineers shall act consistently with the public interest.
 - Approve software only if they have a well-founded belief that it is safe, meets standards, passes tests and does not diminish quality of life, privacy or harm the environment.
 - Disclose any actual or potential danger to the user.
 - Be fair and avoid deception in all statements concerning software.

Client and Employer

- Software engineers shall act in a manner that is in the best interests of their client and employer, consistent with the public interest.
 - Be honest about any limitation of their experience and education.
 - Keep private any confidential information consistent with the public interest and the law.
 - Not knowingly use software that is obtained or retained either illegally or unethically.

Product

- Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.
 - Strive for high quality, acceptable cost, and a reasonable schedule, ensuring significant tradeoffs are clear.
 - Ensure adequate testing, debugging, and review of software and related documents on which they work.
 - Treat all forms of software maintenance with the same professionalism as new development.

Judgement

- Software engineers shall maintain integrity and independence in their professional judgment.
 - Not engage in deceptive financial practices.
 - Disclose to all concerned parties those conflicts of interest that cannot reasonably be avoided or escaped.

Management

- Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.
 - Ensure that software engineers are informed of standards before being held to them.
 - Offer fair and just remuneration.
 - Not punish anyone for expressing ethical concerns about a project.

Profession

- Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.
 - Promote public knowledge of software engineering.
 - Be accurate in stating the characteristics of software on which they work.
 - Take responsibility for detecting, correcting, and reporting errors in software and associated documents on which they work.

Colleagues

- Software engineers shall be fair to and supportive of their colleagues.
 - Credit fully the work of others and refrain from taking undue credit.
 - Give a fair hearing to the opinions, concerns, or complaints of a colleague.
 - In situations outside of their own areas of competence, call upon the opinions of other professionals who have competence in that area.

Self

- Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.
 - Further their knowledge
 - Improve their ability to create safe, reliable, and useful quality software
 - Improve their ability to produce accurate, informative, and well-written documentation.

Problems with codes of conduct

- They don't cover every case (nor should they).
- Can a list of rules define a behaviour that everyone considers right?
- Little penalty for non-compliance
 - Requires a Personal Code of Ethics that is broadly in line with the Professional Code.