

Professional Ethics-2

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IEEE/ACM Code of Ethics

- ACM Code of Ethics and Professional Conduct.
 - <https://www.acm.org/about/code-of-ethics>
- IEEE-CS/ACM Software Engineering Code of Ethics and Professional Practice
 - http://www.computer.org/portal/web/certification/resources/code_of_ethics

The eight principles

1. Public (consistent with public interest)
2. Product (highest professional standards)
3. Client and Employer (work in best interests)
4. Colleagues (fair and supportive to)
5. Employees (ethical approach to)
6. Profession (advance integrity + reputation)
7. Judgement (have integrity & independence)
8. Self (life long learning and ethical approach)

1. 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.

2. 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.

3. 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.

4. 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.

5. Employees

- 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.

6. 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.

7. 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.

8. Self

- Software engineers shall participate in lifelong learning and promote an ethical approach to the practice of their 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.

MORE SCENARIOS

Scenario

You are part of a team developing a sophisticated program (expert system) using artificial intelligence techniques to make sentencing decisions for convicted criminals. The system will analyse crime characteristics and recommend sentence based on similar prior cases. What are ethical issues?

Scenario

You have a small consulting business. The CyberStuff company plans to buy software to run a new collaborative content-sharing Web site. CyberStuff wants to hire you to **evaluate bids** from vendors.

Your spouse works for NetWorkx and did most of the work in **writing the bid** that NetWorkx plans to submit. You read the bid while your spouse was working on it and you think it is excellent.

Do you tell CyberStuff about your spouse's connection with NetWorkx?

Scenario

Your company is developing a free e-mail service that will include targeted advertising based on the content of the e-mail messages (similar to Google's Gmail). You are part of the team designing the system. What are your ethical responsibilities?

Scenario

Suppose you are a member of a team working on a computer-controlled crash avoidance system for automobiles. You think the system has a flaw that could endanger people. The project manager does not seem concerned and expects to announce completion of the project soon. Do you have an ethical obligation to do something?

Scenario

Three MIT students planned to present a paper at a security conference describing security vulnerabilities in Boston's transit fare system. At the request of the transit authority, a judge ordered the students to cancel the presentation and not to distribute their research. The students are debating whether they should circulate their paper on the Web. Imagine that you are one of the students.

Scenario

You are the computer system administrator for a mid-sized company. You can monitor the company network from home, and you frequently work from home. Your niece, a college student, is visiting for a week. She asks to use your computer to check her e-mail. Sure, you say. You are being a gracious host. What is the ethical problem?