# The Professional Issues in IT

Professional Code of Conduct

*

Need

Software company writing the first stage of a more efficient accounting system that will be used by the government, which will save taxpayers a considerable amount of money every year.

Work divided…

developing the reports
internal processing
user inter-face

Manager agrees with the final system.

However, once it is installed, UI is too hard for the staff.
upper-level management does not want to invest any more in it.

Old, original, more expensive system is used.

Professional Code of Conduct

Codes of Ethics – Common Objectives:

Different domains and groups of people formulate different codes of ethics, but they all have among them the following objectives:

Disciplinary:

By instilling discipline, the group or profession ensures professionalism and integrity of its members.

Advisory:

The codes are usually a good source of tips to members and offer advice and guidance in areas where there are fuzzy moral issues.

Educational:

Ethical codes are good educational tools for members of the domain, especially the new ones who have to learn the do's and don'ts of the new profession. These codes are also a good source of renewal for the older members needing to refresh and polish their possibly waning morals.

Professional Code of Conduct
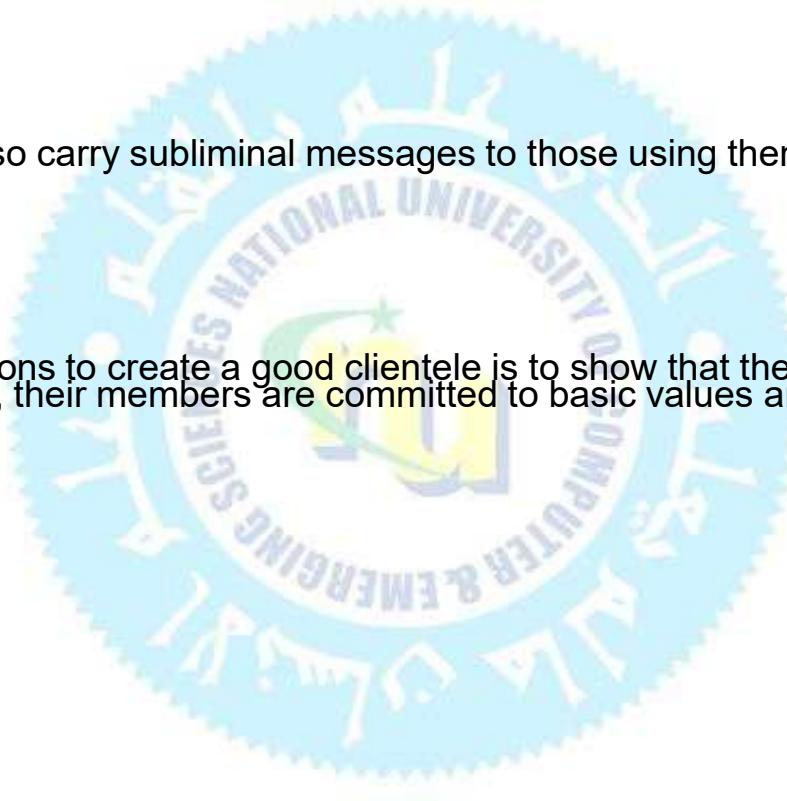
Codes of Ethics – Common Objectives:

Inspirational:

The codes should also carry subliminal messages to those using them to inspire them to be "good."

Publicity:

One way for professions to create a good clientele is to show that they have a strong code of ethics and, therefore, their members are committed to basic values and are responsible.

Professional Code of Conduct

The Making of an Ethical Professional:
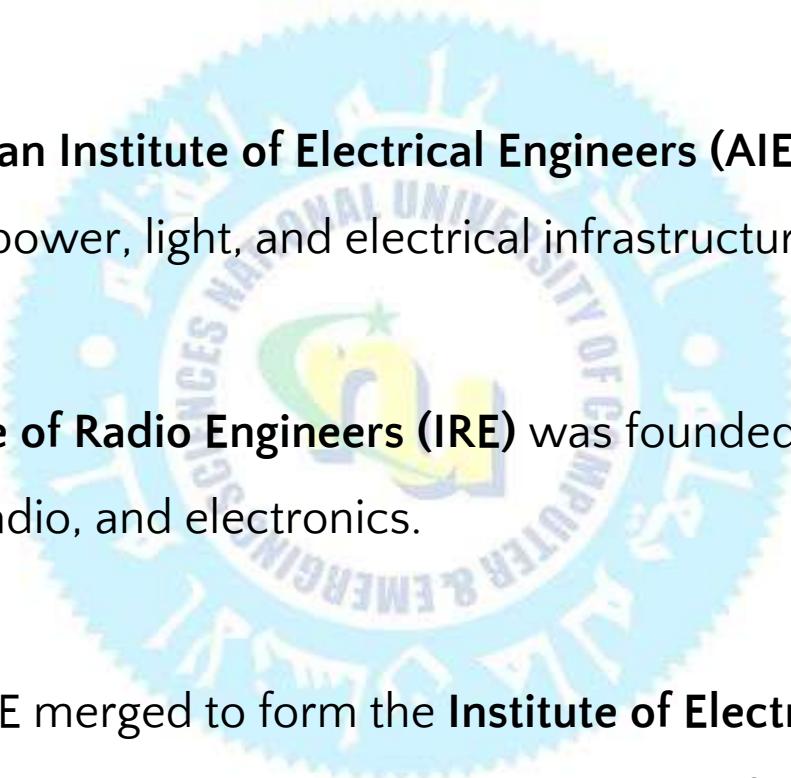
- **Formal Education**
- **Licensing Authorities**

  - Formal or Legal Permission
  - Testing the competence and set of rules to be followed
  - Sanctioning / Re-calling the license and Validity and Renewal

- **Professional Codes of Conduct**
  - Primary purpose – promote public image of the profession
  - Areas addressed:
    - Moral and legal standards, Professional–client relationship, Client advocacy, Professional–public relationship
    - Confidentiality, Assessment, Competence
    - Certified professional credentials for those professions that use certification

- **Applying Codes of Conduct:** Enforcement, Hearing Procedures, Sanctions, Appeals

IEEE Code of Ethics & Professional Conduct

Origin of IEEE:

▪**1884:** The **American Institute of Electrical Engineers (AIEE)** was founded in New York. Focused on power, light, and electrical infrastructure.

▪**1912:** The **Institute of Radio Engineers (IRE)** was founded, specializing in wireless communication, radio, and electronics.

▪**1963:** AIEE and IRE merged to form the **Institute of Electrical and Electronics Engineers (IEEE),** now the world's largest technical professional society.
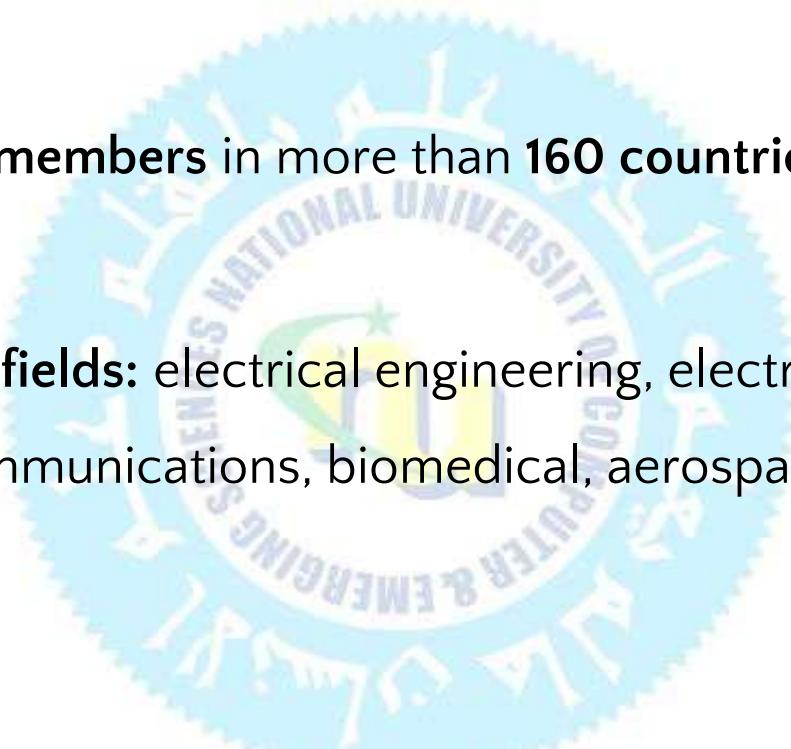
IEEE Code of Ethics & Professional Conduct

IEEE Today:

- Over **420,000 members** in more than **160 countries**.

- **Covers diverse fields:** electrical engineering, electronics, computing, AI, robotics, telecommunications, biomedical, aerospace, energy, IoT, and more.

- **Mission:** "Advancing technology for humanity."

IEEE Code of Ethics & Professional Conduct

IEEE Timeline:

- **1912–1960s:** Informal standards of conduct existed in AIEE and IRE.

- **1974:** IEEE adopted its **first formal Code of Ethics,** focusing on honesty, competence, and public welfare.

- **1990s:** Code **expanded** to include environmental responsibility, conflicts of interest, and respect for colleagues.

- **2019–2020:** Code was revised and streamlined into **10 concise points**, approved in June 2020.

IEEE Code of Ethics

We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members, and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:

I. **To uphold the highest standards of integrity, responsible behavior, and ethical conduct in professional activities.**

1. to hold paramount, the safety, health, and welfare of the public, to strive to comply with ethical design and sustainable development practices, to protect the privacy of others, and to disclose promptly factors that might endanger the public or the environment;

2. to improve the understanding by individuals and society of the capabilities and societal implications of conventional and emerging technologies, including intelligent systems;

3. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;

4. to avoid unlawful conduct in professional activities, and to reject bribery in all its forms;

5. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, to be honest, and realistic in stating claims or estimates based on available data, and to credit properly the contributions of others;

6. to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;

II. **To treat all persons fairly and with respect, to avoid harassment or discrimination, and to avoid injuring others.**

7. to treat all persons fairly and with respect, and to not engage in discrimination based on characteristics such as race, religion, gender, disability, age, national origin, sexual orientation, gender identity, or gender expression;

8. to not engage in harassment of any kind, including sexual harassment or bullying behavior;

9. to avoid injuring others, their property, reputation, or employment by false or malicious actions, rumors, or any other verbal or physical abuses;

III. **To strive to ensure this code is upheld by colleagues and co-workers.**

10. to support colleagues and co-workers in following this code of ethics, to strive to ensure the code is upheld, and to not retaliate against individuals reporting a violation.

Adopted by the
IEEE Board of Directors
June 2020

IEEE
Advancing Technology for Humanity

IEEE Code of Ethics & Professional Conduct

IEEE Code of Ethics – Summarized

· I. Integrity & Responsibility
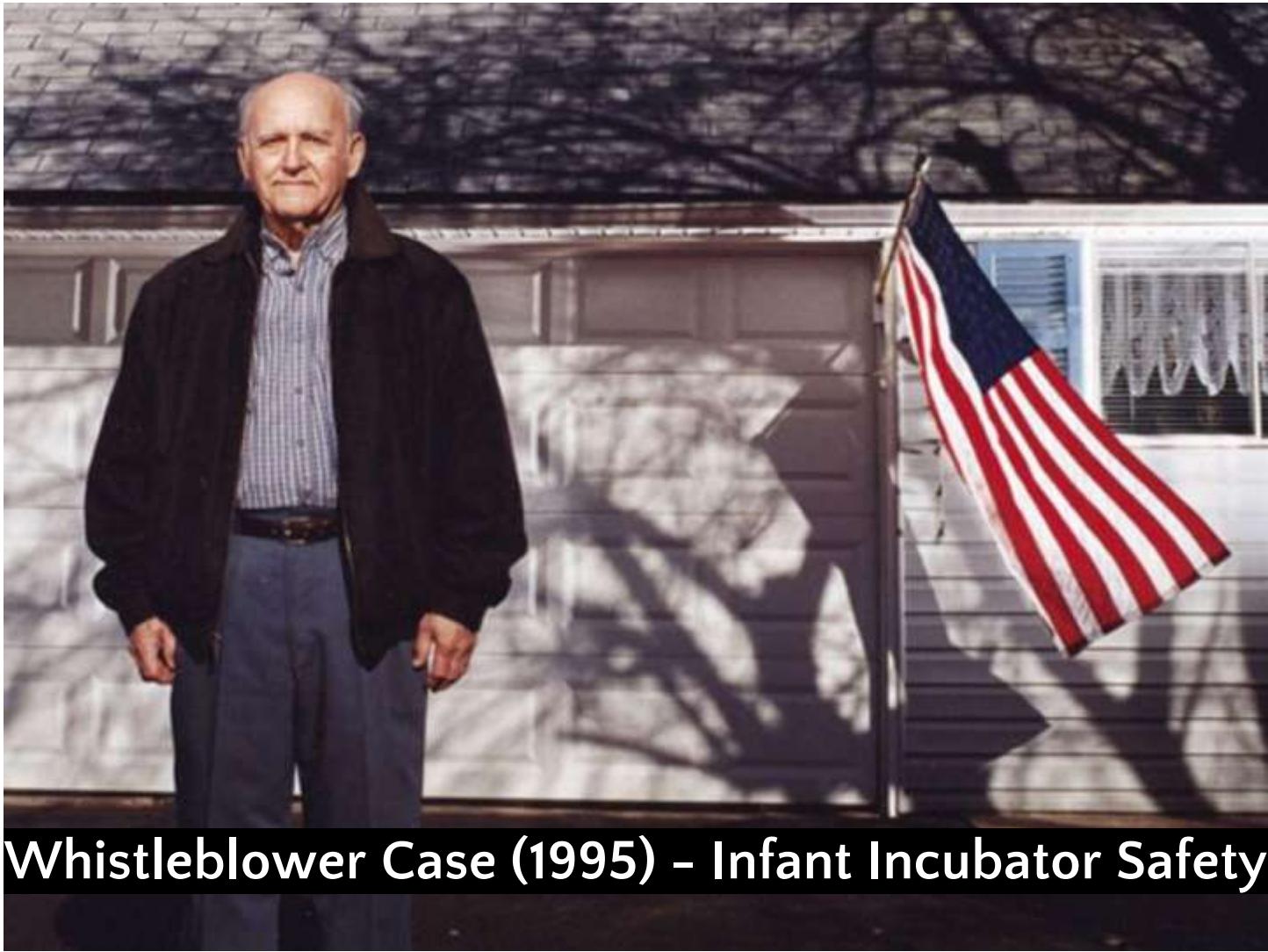
1. Prioritize safety, health, and privacy
2. Improve public understanding of technology
3. Avoid and disclose conflicts of interest
4. Reject bribery and unlawful practices
5. Be honest, fair, and give credit
6. Stay competent and improve skills

· II. Respect & Fairness

7. Treat all people fairly and equally
8. No harassment, bullying, or intimidation
9. Avoid harming others or reputation

· III. Support & Accountability

10. Support colleagues, uphold ethics together

Whistleblower Case (1995) – Infant Incubator Safety

Code 1 – Public Safety, Health, Welfare, Privacy
Code 3 – Avoid Conflicts of Interest
Code 5 – Honesty & Credit
Code 6 – Competence & Limitations
Code 9 – Avoid Harm
Code 10 – Assist Colleagues & Uphold Ethics

Whistleblower Case
Infant Incubator Safety

CSIT HONORS VIRGINIA EDGERTON
Presents 1979 Award for Outstanding Service
in the Public Interest

Virginia Edgerton receiving the 1979 CSIT Award from Steve Unger, Acting Chairman of CSIT at ELECTRO/'79 in New York, April 24, 1979.

CSIT HONORS VIRGINIA EDGERTON
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Code 1 – Public Safety, Health, Welfare, Privacy
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Code 6 – Competence & Limitations
Code 9 – Avoid Harm
Code 10 – Assist Colleagues & Uphold Ethics

Virginia Edgerton receiving the 1979 CSIT Award from Steve Unger, Acting Chairman of CSIT at ELECTRO/'79 in New York, April 24, 1979.

ACM Code of Ethics & Professional Conduct

ACM Timeline:

· **1947:** Founded in New York as the **Association for Computing Machinery (ACM)** — the world's first and largest scientific and educational computing society.

· **1973:** ACM issued its **first Code of Professional Conduct,** one of the earliest in the computing field.

· **1992:** ACM released a **revised Code of Ethics** focusing on responsibility to the public, professional competence, and fairness.

· **2018:** ACM published the current, **expanded Code of Ethics and Professional Conduct**, structured into 4 sections.

ACM Code of Ethics & Professional Conduct

Contents / Coverage:
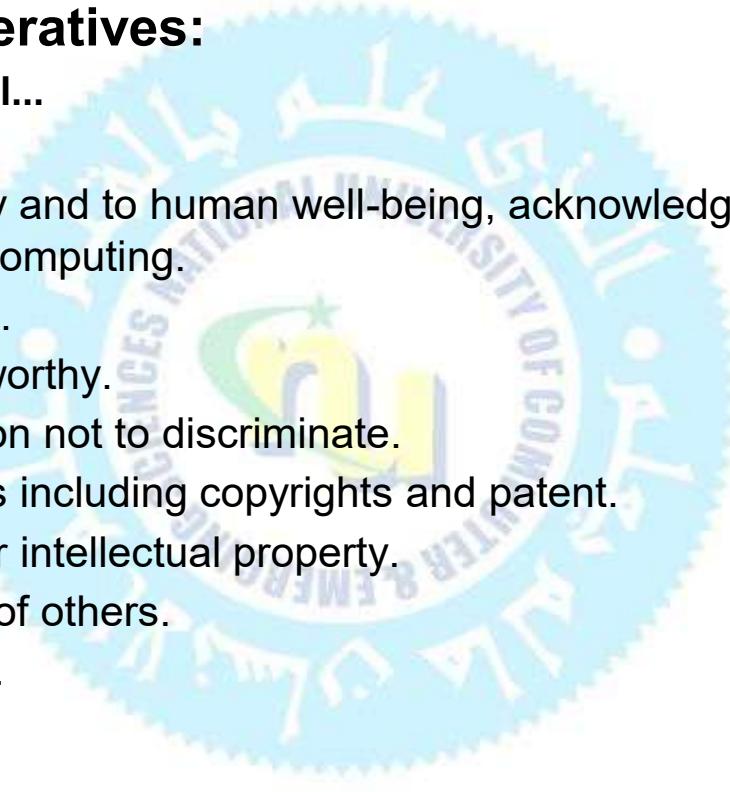
1. General Moral Imperatives

1. More Specific Professional Responsibilities

1. Organizational Leadership Imperatives

1. Compliance with the Code

ACM Code of Ethics & Professional Conduct

1. General Moral Imperatives:

As an ACM member I will...
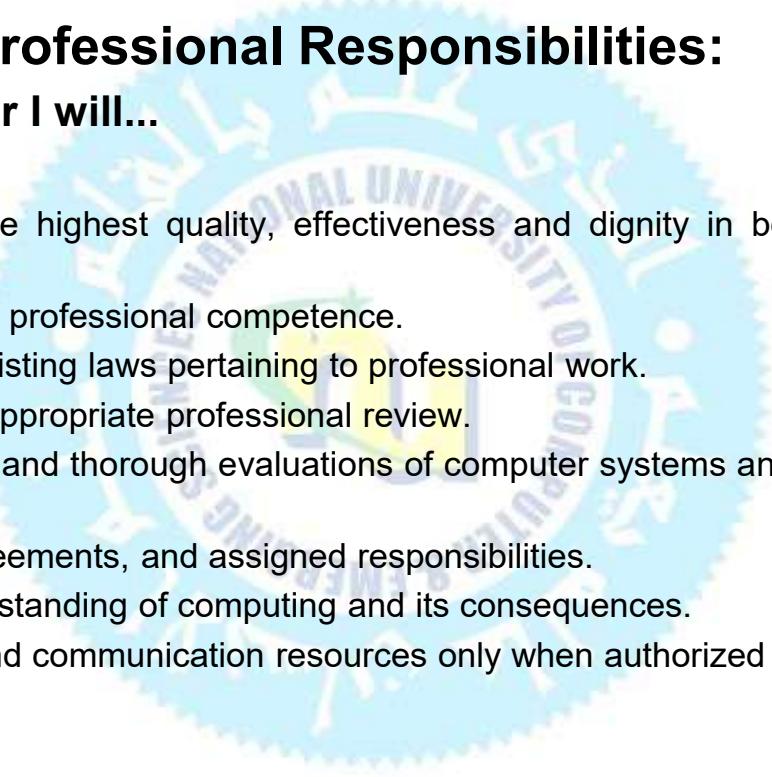
1.1 Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing.

1.2 Avoid harm to others.

1.3 Be honest and trustworthy.

1.4 Be fair and take action not to discriminate.

1.5 Honor property rights including copyrights and patent.

1.6 Give proper credit for intellectual property.

1.7 Respect the privacy of others.

1.8 Honor confidentiality.

ACM Code of Ethics & Professional Conduct

2. More Specific Professional Responsibilities:

As an ACM member I will...

2.1 Strive to achieve the highest quality, effectiveness and dignity in both the process and products of professional work.

2.2 Acquire and maintain professional competence.

2.3 Know and respect existing laws pertaining to professional work.

2.4 Accept and provide appropriate professional review.

2.5 Give comprehensive and thorough evaluations of computer systems and their impacts, including analysis of possible risks.

2.6 Honor contracts, agreements, and assigned responsibilities.

2.7 Improve public understanding of computing and its consequences.

2.8 Access computing and communication resources only when authorized to do so.

ACM Code of Ethics & Professional Conduct

3. Organizational Leadership Imperatives:

As an ACM member and an organizational leader, I will...

3.1 Articulate social responsibilities of members of an organizational unit and encourage full acceptance of those responsibilities.

3.2 Manage personnel and resources to design and build information systems that enhance the quality of working life.

3.3 Acknowledge and support proper and authorized uses of an organization's computing and communication resources.

3.4 Ensure that users and those who will be affected by a system have their needs clearly articulated during the assessment and design of requirements; later the system must be validated to meet requirements.

3.5 Articulate and support policies that protect the dignity of users and others affected by a computing system.

3.6 Create opportunities for members of the organization to learn the principles and limitations of computer systems.
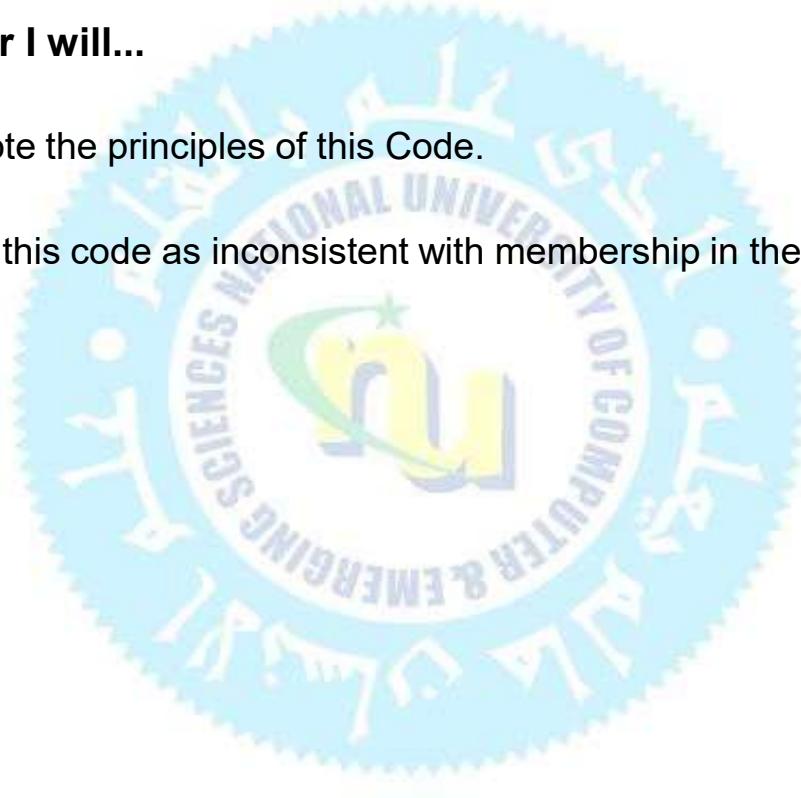
ACM Code of Ethics & Professional Conduct

4. Compliance with the Code:

As an ACM member I will...

4.1 Uphold and promote the principles of this Code.

4.2 Treat violations of this code as inconsistent with membership in the ACM.

3D-based Video Recognition Acceleration by Leveraging Temporal Locality

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Abstract

Recent years have seen an explosion of domain-specific accelerator for Convolutional Neural Networks (CNN). Most of the prior CNN accelerators target neural networks on image recognition, such as AlexNet, VGG, GoogleNet, ResNet, etc. In this paper, we take a different route and study the acceleration of 3D CNN, which are more computational-intensive than 2D CNN and exhibits more opportunities. After our characterization on representative 3D CNNs, we leverage differential convolution across the temporal dimension, which operates on the temporal delta of imaps for each layer and process the computation bit-serially using only the effectual bits of the temporal delta. To further leverage the spatial locality and temporal locality, and make the architecture general to all CNNs, we propose a control mechanism to dynamically switch across spatial delta dataflow and temporal delta dataflow. We call our design temporal-spatial value aware accelerator (TSVA). Evaluation on a set of representation NN networks shows that TSVA can achieve an average of 4.24× speedup and 1.42× energy efficiency. While we target 3D CNN for video recognition, TSVA could also benefit other general CNNs for continuous batch processing.

1. Introduction

The end of Moore's law [1], and Dennard scaling [2], and
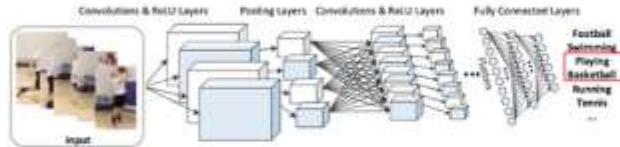

Figure 1. A real 3D CNN Model for video action recognition.

dimensional convolution neural networks (3D-CNN) have demonstrated their outstanding classification performance in video recognition.

Video-based 3D CNN inferences the activity based on a sequence of frames extracted directly from the video. It involves the identification of different actions across video clips (i.e. a sequence of frames) where the action may or may not be performed throughout the entire duration of the video [21]. It has been tough for the following reasons: (1) High computational cost. For instance, a simple 2D convolution network for image classification for 101 classes has just ~5M parameters, whereas the same architecture inflated to a 3D structure results in ~33M parameters [21]. It also takes 3 to 4 days to train a 3D convolutional neural network on UCF101 datasets [27] and about two months on Sports-1M [7]. (2) Capturing long context action involves capturing spatiotem-

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Principle 1.2 — Avoid harm (to the profession/public).
Principle 1.3 — Be honest and trustworthy
Principle 1.7 — Honor confidentiality
Principle 2.3 — Know and respect existing rules pertaining to professional work
Principle 2.4 — Accept and provide appropriate professional review

ACM Code of Ethics Violation Exemplars

	Cases of Code of Ethics Violations	Sanctions / Remediation
1	**The Respondent, a senior scholar, was found to have engaged in discriminatory behavior over many years.**	The respondent was barred from speaking at ACM events and identifying themself as affiliated with ACM when speaking publicly.
2	**The Respondent, a senior scholar, was found to have led collusion rings, manipulating the review process for submitted conference papers.**	In addition to sanctions leveled by the Pubs Board, COPE requested that Council strip the respondent of their ACM lifetime membership, which Council did. COPE also barred the respondent from participating in any way in any ACM event or activity as well as publishing in any ACM journal or presenting at any ACM conference for a period of fifteen years.
3	**The Respondent, a senior scholar, was found to have engaged in unwanted and uninvited comments on a student's appearance and unwanted and uninvited physical contact.**	The respondent was barred from attending any ACM conferences for two years and stripped of an honor ACM had bestowed on the respondent.
4	**The Respondent, a lab manager, was found to have engaged in unprofessional management of their lab in ways that were inconsistent with the Code.**	The respondent agreed to remediation through better professional incorporation of ethical behavior in their lab.

Professional Code of Conduct

SOFTWARE ENGINEERING CODE OF ETHICS AND PROFESSIONAL PRACTICE (VERSION 5.2)

- In the **early 1990s**, ACM and IEEE Computer Society formed **a Joint Task Force** on Software Engineering Ethics and Professional Practices.

- **Goal:** Define ethical duties specific to **software engineering**, beyond general computing ethics.

- **Motivation:** Rising concerns about software failures, safety, and professional accountability. Recognized as the **standard code** for software engineers worldwide.

- Used in **university curricula**, professional training, licensing discussions, and organizational codes.

- Provides a detailed, software-specific framework complementing the broader **IEEE and ACM Codes of Ethics.**

Professional Code of Conduct

SOFTWARE ENGINEERING CODE OF ETHICS AND PROFESSIONAL PRACTICE (VERSION 5.2)

SECEPP Timeline

▪ **1994:** Task force established by ACM & IEEE-CS.

▪ **1997:** Draft 3 circulated for public review; Draft 4 submitted (Dec 16).

▪ **Sept 1998:** Draft 5 passed IEEE technical review and legal review.

▪ **Nov–Dec 1998:** Version 5.2 formally approved by ACM and IEEE-CS.

▪ **1999:** Published as the official Software Engineering Code of Ethics and Professional Practice.

SE Code of Ethics & Professional Practice

Commitment:

– Software Engineers shall commit themselves to making the analysis, specification, design, development, testing and maintenance of software a beneficial and respected profession.

– In accordance with their commitment to the health, safety and welfare of the public, software engineers shall adhere to the Eight Principles.

– "Public Interest" is central to the SE Code.

– **8 clear principles:** Public, Client & Employer, Product, Judgment, Management, Profession, Colleagues, Self.

SE Code of Ethics & Professional Practice

Eight Principles:

1. PUBLIC

Software engineers shall act consistently with the public interest.

2. 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.

3. PRODUCT

Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.

4. JUDGMENT

Software engineers shall maintain integrity and independence in their professional judgment.

5. MANAGEMENT

Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.

6. PROFESSION

Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.

7. COLLEAGUES

Software engineers shall be fair to and supportive of their colleagues.

8. 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.

Professional Code of Conduct

1-Public:

Software engineers shall act consistently with the public interest.

In particular, software engineers shall, as appropriate:
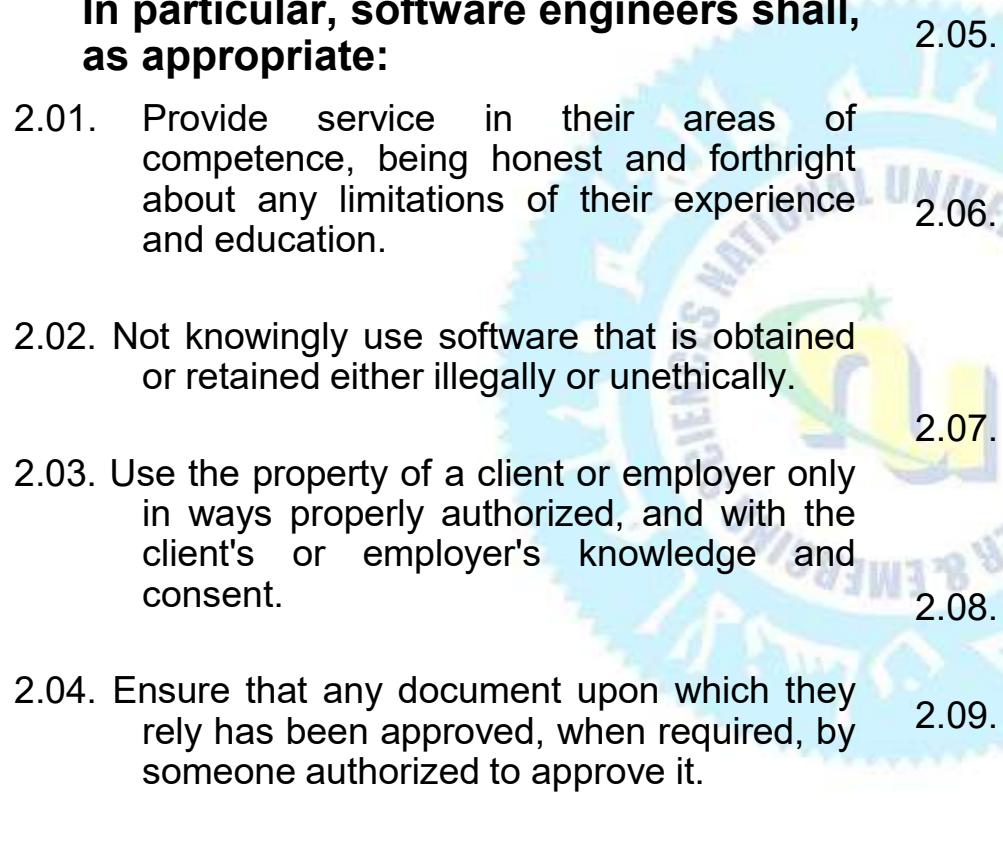
1.01. Accept full responsibility for their own work.

1.02. Moderate the interests of the software engineer, the employer, the client and the users with the public good.

1.03. Approve software only if they have a well-founded belief that it is safe, meets specifications, passes appropriate tests, and does not diminish quality of life, diminish privacy or harm the environment. The ultimate effect of the work should be to the public good.

1.04. Disclose to appropriate persons or authorities any actual or potential danger to the user, the public, or the environment, that they reasonably believe to be associated with software or related documents.

1.05. Cooperate in efforts to address matters of grave public concern caused by software, its installation, maintenance, support or documentation.

1.06. Be fair and avoid deception in all statements, particularly public ones, concerning software or related documents, methods and tools.

1.07. Consider issues of physical disabilities, allocation of resources, economic disadvantage and other factors that can diminish access to the benefits of software.

1.08. Be encouraged to volunteer professional skills to good causes and to contribute to public education concerning the discipline.

Professional Code of Conduct

2. 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.
In particular, software engineers shall, as appropriate:
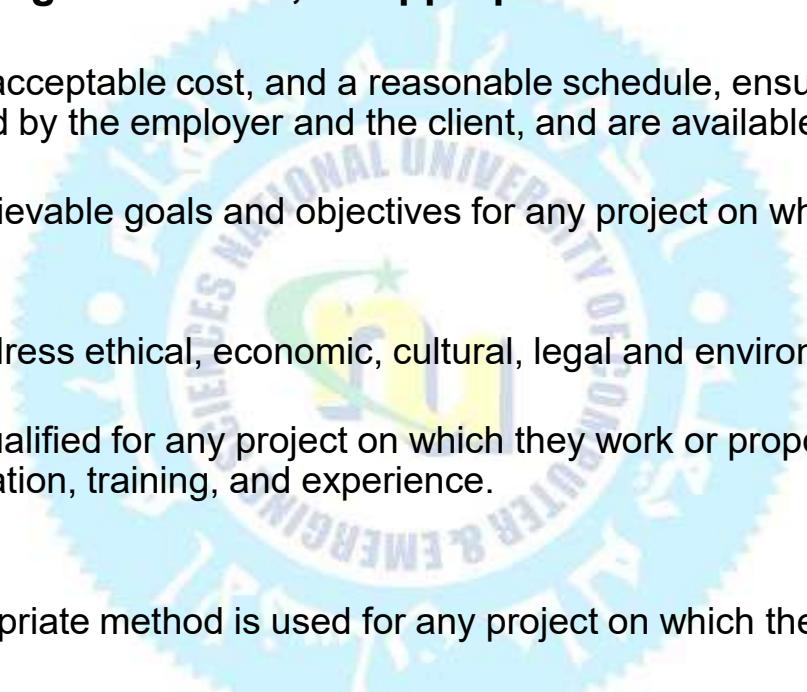
2.01. Provide service in their areas of competence, being honest and forthright about any limitations of their experience and education.

2.02. Not knowingly use software that is obtained or retained either illegally or unethically.

2.03. Use the property of a client or employer only in ways properly authorized, and with the client's or employer's knowledge and consent.

2.04. Ensure that any document upon which they rely has been approved, when required, by someone authorized to approve it.

2.05. Keep private any confidential information gained in their professional work, where such confidentiality is consistent with the public interest and consistent with the law.

2.06. Identify, document, collect evidence and report to the client or the employer promptly if, in their opinion, a project is likely to fail, to prove too expensive, to violate intellectual property law, or otherwise to be problematic.

2.07. Identify, document, and report significant issues of social concern, of which they are aware, in software or related documents, to the employer or the client.

2.08. Accept no outside work detrimental to the work they perform for their primary employer.

2.09. Promote no interest adverse to their employer or client, unless a higher ethical concern is being compromised; in that case, inform the employer or another appropriate authority of the ethical concern.

3. Product:

Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.
In particular, software engineers shall, as appropriate:

3.01. Strive for high quality, acceptable cost, and a reasonable schedule, ensuring significant tradeoffs are clear to and accepted by the employer and the client, and are available for consideration by the user and the public.

3.02. Ensure proper and achievable goals and objectives for any project on which they work or propose.

3.03. Identify, define and address ethical, economic, cultural, legal and environmental issues related to work projects.

3.04. Ensure that they are qualified for any project on which they work or propose to work, by an appropriate combination of education, training, and experience.

3.05. Ensure that an appropriate method is used for any project on which they work or propose to work.

3.06. Work to follow professional standards, when available, that are most appropriate for the task at hand, departing from these only when ethically or technically justified.

3.07. Strive to fully understand the specifications for software on which they work.

3. Product:

Software engineers shall ensure that their products and related modifications meet the

highest professional standards possible.

In particular, software engineers shall, as appropriate:

3.08. Ensure that specifications for software on which they work have been well documented, satisfy the users' requirements and have the appropriate approvals.

3.09. Ensure realistic quantitative estimates of cost, scheduling, personnel, quality and outcomes on any project on which they work or propose to work and provide an uncertainty assessment of these estimates.

3.10. Ensure adequate testing, debugging, and review of software and related documents on which they work.

3.11. Ensure adequate documentation, including significant problems discovered and solutions adopted, for any project on which they work.

3.12. Work to develop software and related documents that respect the privacy of those who will be affected by that software.

3.13. Be careful to use only accurate data derived by ethical and lawful means, and use it only in ways properly authorized.

3.14. Maintain the integrity of data, being sensitive to outdated or flawed occurrences.

3.15 Treat all forms of software maintenance with the same professionalism as new development.

4. Judgment:

Software engineers shall maintain integrity and independence in their professional judgment.

In particular, software engineers shall, as appropriate:

4.01. Temper all technical judgments by the need to support and maintain human values.

4.02 Only endorse documents either prepared under their supervision or within their areas of competence and with which they are in agreement.

4.03. Maintain professional objectivity with respect to any software or related documents they are asked to evaluate.

4.04. Not engage in deceptive financial practices such as bribery, double billing, or other improper financial practices.

4.05. Disclose to all concerned parties those conflicts of interest that cannot reasonably be avoided or escaped.

4.06. Refuse to participate, as members or advisors, in a private, governmental or professional body concerned with software related issues, in which they, their employers or their clients have undisclosed potential conflicts of interest.

Professional Code of Conduct

5. Management:

Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance. In particular, those managing or leading software engineers shall, as appropriate:

5.01 Ensure good management for any project on which they work, including effective procedures for promotion of quality and reduction of risk.

5.02. Ensure that software engineers are informed of standards before being held to them.

5.03. Ensure that software engineers know the employer's policies and procedures for protecting passwords, files and information that is confidential to the employer or confidential to others.

5.04. Assign work only after taking into account appropriate contributions of education and experience tempered with a desire to further that education and experience.

5.05. Ensure realistic quantitative estimates of cost, scheduling, personnel, quality and outcomes on any project on which they work or propose to work, and provide an uncertainty assessment of these estimates.

5.06. Attract potential software engineers only by full and accurate description of the conditions of employment.

5.07. Offer fair and just remuneration.

5.08. Not unjustly prevent someone from taking a position for which that person is suitably qualified.

5.09. Ensure that there is a fair agreement concerning ownership of any software, processes, research, writing, or other intellectual property to which a software engineer has contributed.

5.10. Provide for due process in hearing charges of violation of an employer's policy or of this Code.

5.11. Not ask a software engineer to do anything inconsistent with this Code.

5.12. 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.

In particular, software engineers shall, as appropriate:
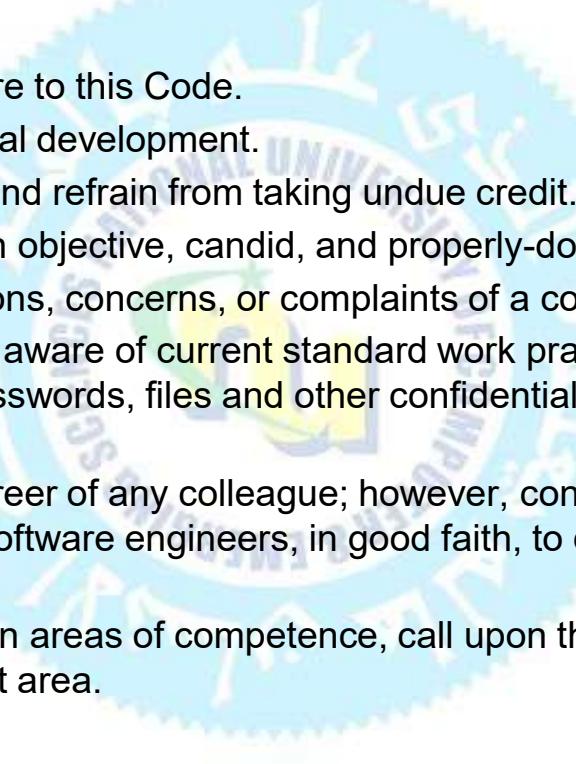
6.01. Help develop an organizational environment favorable to acting ethically.

6.02. Promote public knowledge of software engineering.

6.03. Extend software engineering knowledge by appropriate participation in professional organizations, meetings and publications.

6.04. Support, as members of a profession, other software engineers striving to follow this Code.

6.05. Not promote their own interest at the expense of the profession, client or employer.

6.06. Obey all laws governing their work, unless, in exceptional circumstances, such compliance is inconsistent with the public interest.

6.07. Be accurate in stating the characteristics of software on which they work, avoiding not only false claims but also claims that might reasonably be supposed to be speculative, vacuous, deceptive, misleading, or doubtful.

6.08. Take responsibility for detecting, correcting, and reporting errors in software and associated documents on which they work.

6.09. Ensure that clients, employers, and supervisors know of the software engineer's commitment to this Code of ethics, and the subsequent ramifications of such commitment.

6.10. Avoid associations with businesses and organizations which are in conflict with this code.

6.11. Recognize that violations of this Code are inconsistent with being a professional software engineer.

6.12. Express concerns to the people involved when significant violations of this Code are detected unless this is impossible, counter-productive, or dangerous.

6.13. Report significant violations of this Code to appropriate authorities when it is clear that consultation with people involved in these significant violations is impossible, counter-productive or dangerous.

7. Colleagues:

Software engineers shall be fair to and supportive of their colleagues.

In particular, software engineers shall, as appropriate:

7.01. Encourage colleagues to adhere to this Code.

7.02. Assist colleagues in professional development.

7.03. Credit fully the work of others and refrain from taking undue credit.

7.04. Review the work of others in an objective, candid, and properly-documented way.

7.05. Give a fair hearing to the opinions, concerns, or complaints of a colleague.

7.06. Assist colleagues in being fully aware of current standard work practices including policies and procedures for protecting passwords, files and other confidential information, and security measures in general.

7.07. Not unfairly intervene in the career of any colleague; however, concern for the employer, the client or public interest may compel software engineers, in good faith, to question the competence of a colleague.

7.08. In situations outside of their own areas of competence, call upon the opinions of other professionals who have competence in that area.

Professional Code of Conduct

8. 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.**
In particular, software engineers shall continually endeavor to:

8.01. Further their knowledge of developments in the analysis, specification, design, development, maintenance and testing of software and related documents, together with the management of the development process.

8.02. Improve their ability to create safe, reliable, and useful quality software at reasonable cost and within a reasonable time.

8.03. Improve their ability to produce accurate, informative, and well-written documentation.

8.04. Improve their understanding of the software and related documents on which they work and of the environment in which they will be used.

8.05. Improve their knowledge of relevant standards and the law governing the software and related documents on which they work.

8.06 Improve their knowledge of this Code, its interpretation, and its application to their work.

8.07 Not give unfair treatment to anyone because of any irrelevant prejudices.

8.08. Not influence others to undertake any action that involves a breach of this Code.

8.09. Recognize that personal violations of this Code are inconsistent with being a professional software engineer.

1.06: Avoid deception in public statements about the system's reliability.

2) CLIENT & EMPLOYER — act in their best interest, consistent with the public interest
2.06, 2.07: **Identify, document, and report** likely project failures and significant social concerns to employer/client.
2.09: If higher ethical concerns are compromised, **inform appropriate authority**.

3) PRODUCT — meet the highest professional standards
3.01: Quality/risk trade-offs must be explicit and acceptable.
3.07–3.11: Fully understand specs; ensure proper specs, **adequate testing**, **debugging**, and **documentation**.
3.12–3.14: Respect privacy; use **accurate data**; **maintain data integrity** (core to disputed transaction records).

4) JUDGMENT — integrity & independence
4.01: Temper technical judgments by **human values**.
4.03: Maintain **objectivity** when evaluating software and evidence.
4.05: **Disclose conflicts** that could bias judgments.

5) MANAGEMENT — lead ethically and reduce risk
5.01: Ensure good management practices for **quality and risk reduction**.
5.10–5.12: Provide **due process**; **do not ask** engineers to act against the Code; **do not punish** those who raise ethical concerns.
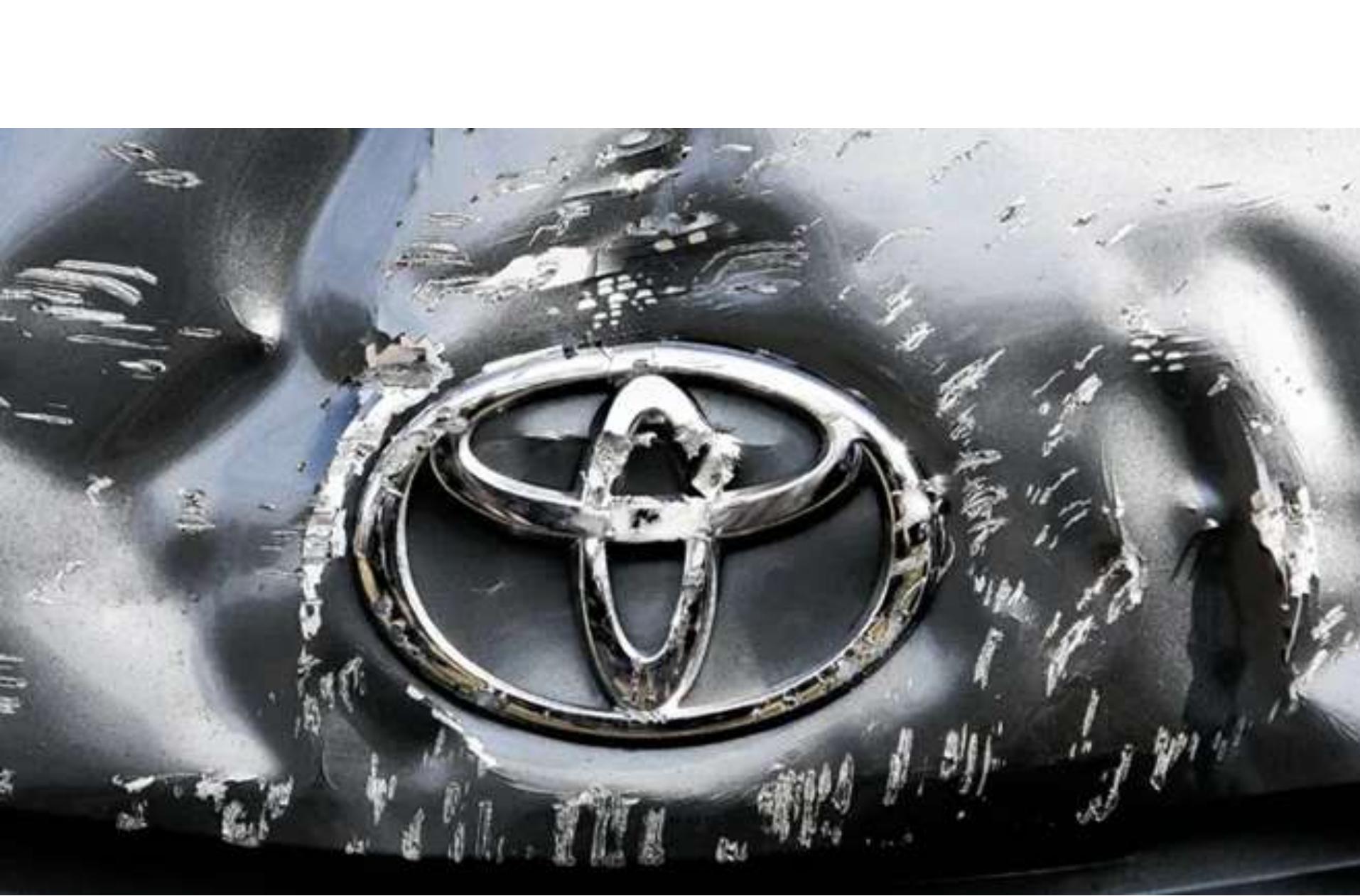
6) PROFESSION — advance integrity & reputation
6.07: Be **accurate** in stating software characteristics; avoid deceptive or speculative claims.
**6.12–6.13**: **Express concerns** and **report significant violations** when internal resolution is impossible.

7) COLLEAGUES — be fair to and supportive of colleagues
7.01: Encourage colleagues to adhere to this Code.
7.05: Give a fair hearing to colleagues' opinions or complaints.

2) CLIENT & EMPLOYER — Act in best interests, consistent with public interest
2.06–2.07: Report projects likely to fail, violate safety expectations, or create social concern.

3) PRODUCT — Meet the highest professional standards
3.01: Ensure high quality, safety, and reasonable trade-offs.
3.10–3.11: Conduct **adequate testing, debugging, and documentation**.
3.12: Respect safety and privacy of those affected.**dence**
4.01: Temper judgments with human values.
4.03: Be objective in evaluating software and related documents.

5) MANAGEMENT — Promote ethical management of development
5.01: Ensure good management and risk reduction.
5.11–5.12: Do not ask engineers to compromise ethics; do not punish those who raise concerns.

6) PROFESSION — Advance integrity & reputation
6.07: Be accurate in stating characteristics of software.

7) COLLEAGUES — Be fair to and supportive of colleagues
7.01: Encourage colleagues to adhere to this Code.
7.05: Give a fair hearing to opinions, concerns, or complaints.
7.07: Not unfairly intervene in a colleague's career.