



4-8 April, 2022, Athens, Greece

1st DEDS Winter School | Ethical and Legal Aspects of Data

# Professionalism & Ethics Code of Conduct

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What is a profession?  
What does it mean to act  
professionally?

"I know I'm a good professional. I know that no one's harder on me than myself and that's never going to change, under any circumstances."

Cristiano Ronaldo



"A professional is someone who can do his best work even when he doesn't feel like it."

Alistair Cooke



## What is a profession?

Profession is a vocation that requires a high level of education and practical experience in the field.

## What does it mean to act professionally?

Professionals have an obligation to ensure their actions are for the good of those who depend on them.

"A profession is a **group of individuals** in the same occupation, **voluntarily organized** to earn a living by **openly serving a certain moral ideal** in a morally permissible way, beyond what law, market, and morality would otherwise require."

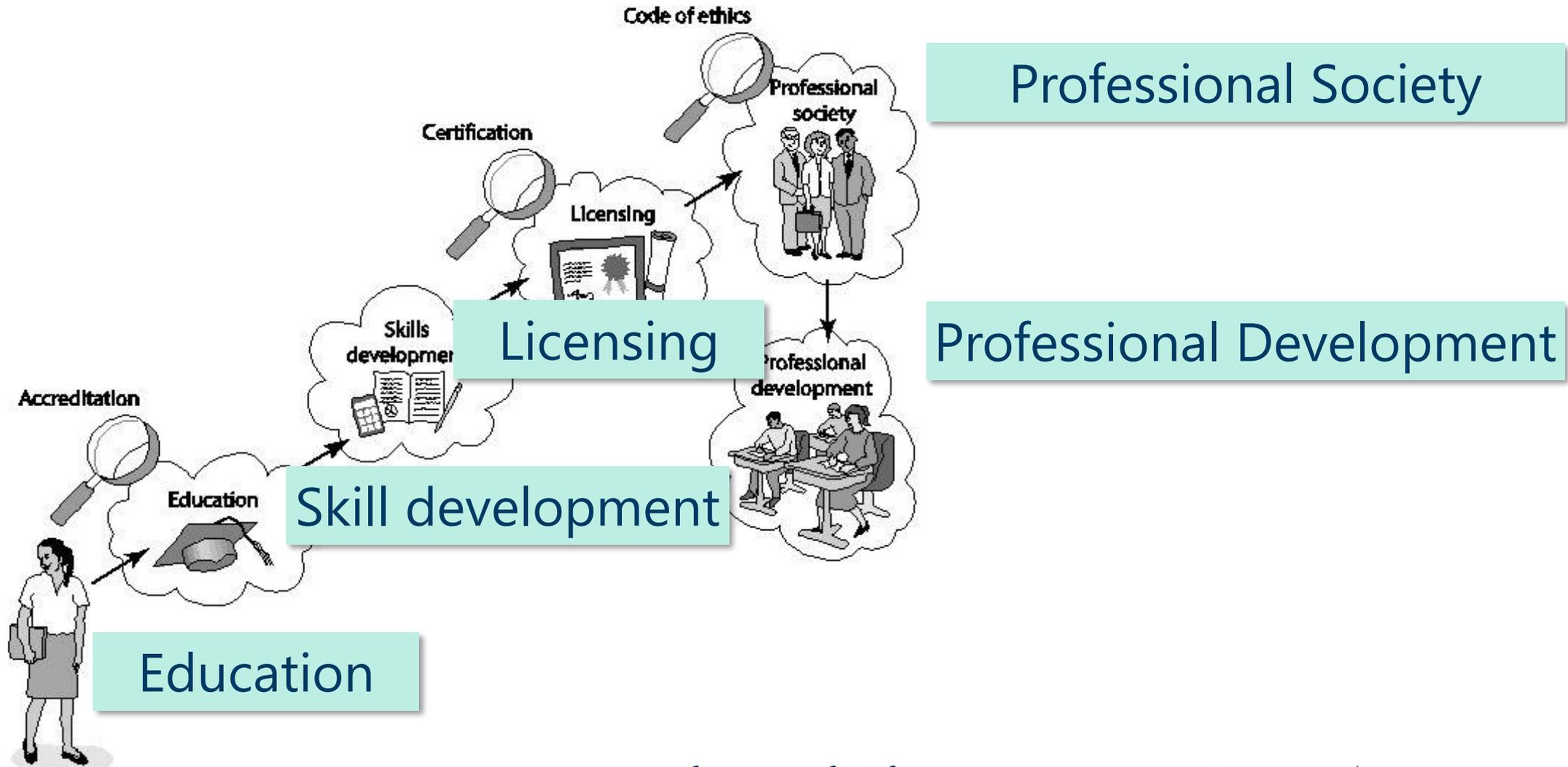
*Profession, Code and Ethics.* Michael Davis. Ashgate Publishing Company, 2002

Fully developed professions have a **well-organized infrastructures** to support existing members of the profession and to **certify new ones**

At the heart over every mature profession is certification and licensing

- Certification and licensing determine who will be allowed to practice the profession.

# Characteristics of a profession



*A Mature Profession of Software Engineering. Gary Ford, Norman E. Gibbs. Technical Report, Carnegie Mellon University, 1996.*

# Characteristics of a profession

Code of Ethics

Certification

Professional Society

Licensing

Licensing

Professional Development

Skills development

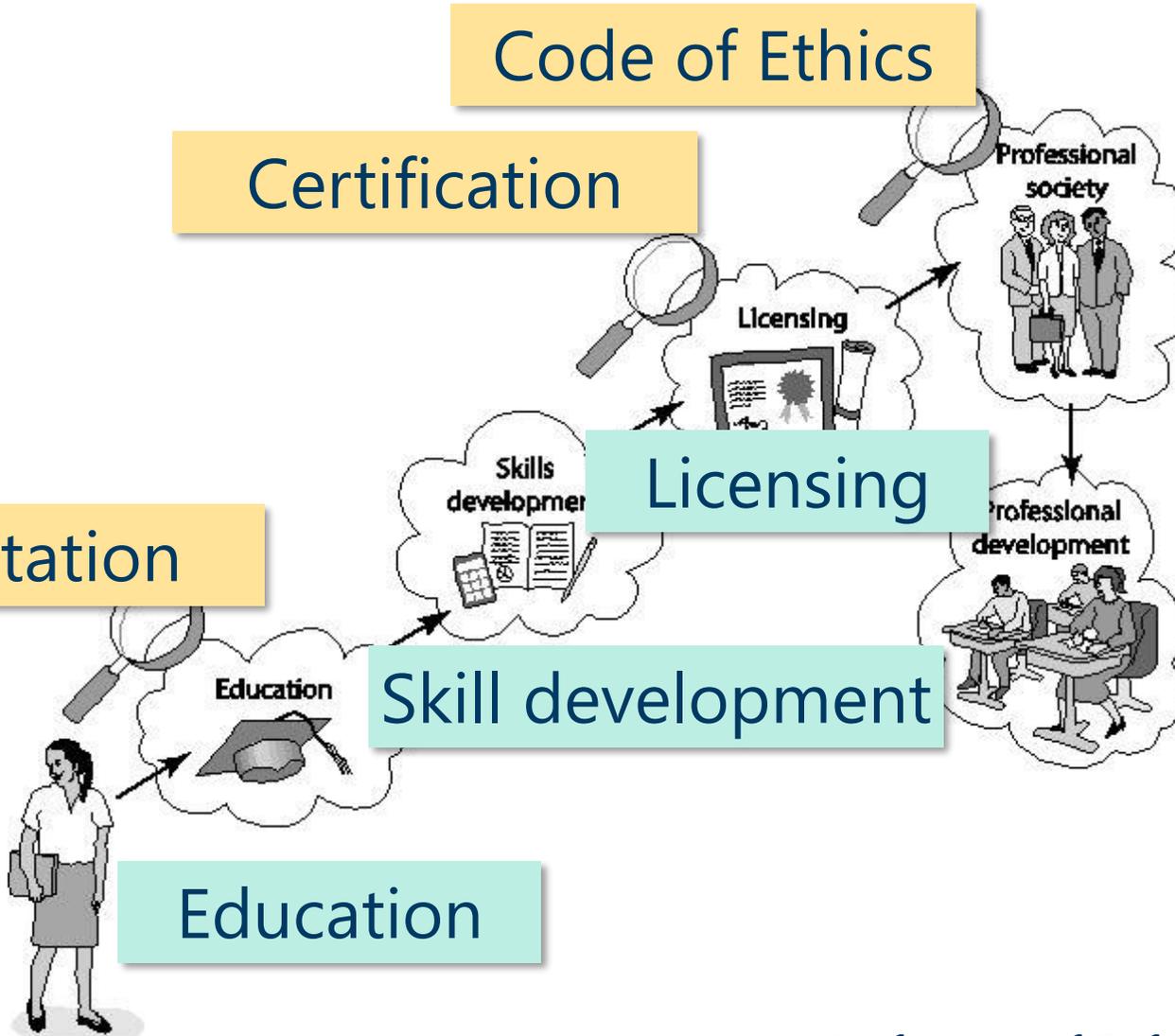
Skill development

Professional development

Accreditation

Education

Education



*A Mature Profession of Software Engineering. Gary Ford, Norman E. Gibbs. Technical Report, Carnegie Mellon University, 1996.*

- Institute of Electrical Electronic Engineers (IEEE) – 420,000 IEEE members in over 160 countries
- Association for Computing Machinery (ACM) – 100,000 members
- **In 1993** IEEE-CS and ACM set up a joint steering committee to explore the **establishment of software engineering profession**
  - Survey of practitioner to understand the knowledge and skills required by software engineers
  - Developed accreditation criteria for undergraduate programs in software engineering
  - Develop a code of ethics for software engineers.

## BCS Code of Conduct

<http://www.bcs.org/category/6030>

## IET Rules of Conduct

<http://www.theiet.org/membership/career/ethics/rules/index.cfm>

## ACM Code of Ethics

<http://www.acm.org/about/code-of-ethics>

## ACM/IEEE Software Code of Ethics and Professional Practice

<http://www.computer.org/cms/Computer.org/Publications/code-of-ethics.pdf>

- Principles
- Rules
- Ideals
- Requirements
- Permissions
- Prohibitions

“ACM is opposed to the licensing of software engineers at this time because ACM believes that it is **premature** and would not be effective in addressing the problems of software quality and reliability.”

May 1999, ACM Council passed a resolution



## 1. **GENERAL ETHICAL PRINCIPLES**

- 1.1 Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing.
- 1.2 Avoid harm.
- 1.3 **Be honest and trustworthy**
- 1.4 Be fair and take action not to discriminate
- 1.5 Respect the work required to produce new ideas, inventions, creative works, and computing artifacts
- 1.6 **Respect privacy.**
- 1.7 **Honor confidentiality.**

## 2. **PROFESSIONAL RESPONSIBILITIES**

- 2.1 Strive to achieve high quality in both the processes and products of professional work.
- 2.2 Maintain high standards of professional competence, conduct, and ethical practice.
- 2.3 Know and respect existing rules 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 **Perform work only in areas of competence.**
- 2.7 **Foster public awareness and understanding of computing, related technologies, and their consequences.**
- 2.8 Access computing and communication resources only when authorized or when compelled by the public good.
- 2.9 **Design and implement systems that are robustly and usably secure.**

## 3. **PROFESSIONAL LEADERSHIP PRINCIPLES**

- 3.1 Ensure that the public good is the central concern during all professional computing work
- 3.2 Articulate, encourage acceptance of, and evaluate fulfilment of social responsibilities by members of the organization or group
- 3.3 Manage personnel and resources to enhance the quality of working life
- 3.4 Articulate, apply, and support policies and processes that reflect the principles of the Code
- 3.5 Create opportunities for members of the organization or group to grow as professionals
- 3.6 Use care when modifying or retiring systems
- 3.7 Recognize and take special care of systems that become integrated into the infrastructure of society

## 4. **COMPLIANCE WITH THE CODE**

- 4.1 Uphold, promote, and respect the principles of the Code
- 4.2 Treat violations of the Code as inconsistent with membership in the ACM.

## Fundamental Principles of Ethical Conduct

### Discipline independent rules (virtue ethics):

1. Be impartial
2. Disclose information that others ought to know
3. Respect the rights of others
4. Treat others justly
5. Take responsibility for your actions and inactions
6. Take responsibility for the actions of those you supervise
7. Maintain your integrity
8. Continually improve your abilities
9. Share your knowledge expertise and values

Dana is a Data Scientist with Start Inc hotels. She is **installing the latest custom-made tool for automated classification** of real estate properties files that her colleagues collect from the Web.

Dana is given temporary administrative privileges to access her colleagues' PCs, but she is not authorized to access email, Web history, or personal files.

Dana first tests the software and check it is working on the data already collected on the PCs. If the classifier has low classification confidence, it places files in a Dump folder for inspection.

After completing updates on Roman's PC, Dana was surprised that the **classifier filled the Dump with a large number of files**. The file crawler pulled in and attempted to classify some of the personal files and these had rather suspicious names.

Dana opened a few to check whether they are corrupted or potentially malicious. She was shocked to discover that they contained child pornography. Dana knew that a possession of such images is against the law. What should Dana do?

Should Dana report that she found illegal images on Romans' computer?

Issues:

Dana can just delete the Draft folder and walk away from the situation.

Images have been uncovered by breaking the company policy.

Images are illegal but it is not clear how they ended up on Roman's computer.

Dana could speak with Roman to find out more but if she does not report then, she may be seen as an accomplice.

General, discipline independent rules:

1. Be impartial
2. Disclose information that others ought to know
3. Respect the rights of others
4. Treat others justly
5. Take responsibility for your actions and inactions
6. Take responsibility for the actions of those you supervise
7. Maintain your integrity
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Select  
relevant  
aspects

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**Conclusion:**  
Dana should report, take responsibility for her actions, but be impartial, inform Roman and the managers of the facts.



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Thank you!

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# Exercise 2

## Professionalism in computing

ACM Code of Ethics and Professional Conduct  
<https://www.acm.org/code-of-ethics>