

# Software Engineering Ethics

“One principal problem of educating software engineers is that they will not use a new method until they believe it works and, more importantly, that they will not believe the method will work until they see it for themselves.”

W.S. Humphrey “The Personal Software Process”

# THE QUESTION WE ALL NEED TO ANSWER...

Am I right? ... Am I wrong?

*David Byrne*  
*Once in a Lifetime*



Interactive game:

<https://ori.hhs.gov/thelab>

# CASE STUDY: PAT' S BLOG

Pat is a journalism major who maintains a popular blog focusing on campus life. Pat attends a private birthday party in someone's apartment for their friend Francis, a college student active in the Terran Party on campus. Someone gives Francis a Protoss T-shirt as a gag gift, and Francis puts it on. Pat uses their cell phone to get a picture of Francis wearing the T-shirt when they are looking the other way. Pat posts the photo on their blog without asking their permission. In the blog Pat identifies Francis and explains the context in which the photo was taken.

# Case Study continued

The story is read by many people both on and off campus. The next day, Francis confronts Pat, yells at them for posting the photo, and demands that they remove it from their Web site.

# Case Study continued

Pat complies with Francis's request by removing the photo, and the two of them remain friends. As a result of the incident, Francis becomes more popular on campus, and the number of people who read Pat's blog increases.

# Case Study: final

Was it wrong for Pat to post the picture of Francis on their blog without first getting their permission?

# Workplace Ethics

- ACM Code of Ethics and Professional Conduct
  - <https://www.acm.org/code-of-ethics>
- IEEE Software Engineering Code of Ethics
  - <https://www.computer.org/education/code-of-ethics>

# ACM Code Of Ethics and Professional Conduct

## 1. General Ethical Principles

- Contribute to society, avoid harm, be honest & fair, respect privacy & honor confidentiality.

## 2. Professional Responsibilities

- Strive to achieve high quality, maintain high standards, design & implement systems that are robust and secure.

## 3. Professional Leadership Principles

- Ensure the public good is the central concern

## 4. Compliance With The Code

- Uphold, promote, and respect the principles of the Code.



# IEEE Software Engineering Code of Ethics

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.

# Google Code of Conduct

- 21 April 2018
  - The Google Code of Conduct is one of the ways we put “Don’t be evil” into practice. It’s built around the recognition that everything we do in connection with our work at Google will be, and should be, measured against the highest possible standards of ethical business conduct.
- 4 May 2018
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<https://gizmodo.com/google-removes-nearly-all-mentions-of-dont-be-evil-from-1826153393> Accessed: 20 May 2018

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- 25 September 2020
  - [...]
  - [...]
  - [...at the very bottom...]
  - And remember... don't be evil, and if you see something that you think isn't right - speak up!

<https://www.npr.org/2021/11/29/1059821677/google-dont-be-evil-lawsuit>

Accessed: 30 Nov 2021

# Code of Conduct

What happens when your personal ethics conflict with company ethics?

# Ethics In Action: Paraphrase (Sprint 4)

During advisor meetings: an individual 5 minute review of recent case studies

- Give summary of events
- Which ACM/IEEE Ethics Principles were violated that led to the results?
- Would the outcome have been different if the software engineers acted differently?

# Ethics In Action: Presentation (Presentation Week after Sprint 4)

Second group presentation on (1) Quality Assurance Plan  
(2) Ethical Development

- Which ACM/IEEE Principles are particularly pertinent to the development of your product? Why?
- Which ACM/IEEE Principles are most in danger of being violated? What can be the negative impact if these Principles are indeed violated?
- Apply two Tests articulated by Michael Davis to your product. *See Ethics Framework slides posted on course website*