SOFTWARE ENGINEERING ETHICS

“Action indeed is the sole medium of expression for ethics.” – Jane Addams
THE QUESTION WE ALL NEED TO ANSWER...

Am I right? ... Am I wrong?

David Byrne
Once in a Lifetime

https://ori.hhs.gov/thelab
CASE STUDY: KATE’S BLOG

Kate is a journalism major who maintains a popular blog focusing on campus life. Kate attends a private birthday party in someone’s apartment for her friend Jerry, a college student active in the House Targaryen* on campus. Someone gives Jerry a House Lannister T-shirt as a gag gift, and Jerry puts it on. Kate uses her cell phone to get a picture of Jerry wearing the T-shirt when he is looking the other way. She posts the photo on her blog without asking him permission. In the blog she identifies Jerry and explains the context in which the photo was taken.

*Dr. Paone does not watch GoT
The story is read by many people both on and off campus. The next day, Jerry confronts Kate, yells at her for posting the photo, and demands that she remove it from her Web site. Kate complies with Jerry’s request by removing the photo, and the two of them remain friends. As a result of the incident, Jerry becomes more popular on campus, and the number of people who read Kate’s blog increases.
Case Study: Final

- Was it wrong for Kate to post the picture of Jerry on her blog without first getting his permission?
Case Study 2: E-Days

- Every year for E-Days, James, a member of MAC, collects attendance information of the students that attend various events. This information includes the student’s name, CWID, major, and class year.
Case Study 2: Continued

- Rebecca attended E-Days all four years she was at Mines. When she is leaving the graduation lunch for Chemical Engineering, she is given a sheet with a summary of all the E-Days events she attended as a student. Rebecca feels that her privacy has been violated by MAC for tracking her registration over time.
Case Study 2: Final

- Was it wrong for MAC to summarize all of the registration information without explicitly telling Rebecca this service would be provided?
CASE STUDY 3: GOOGLE

- GMail receives emails for transactions of every purchase sent to a user’s email address. The transactions contain information including store name/location, item list, and prices.
On a user’s account page, there is a link to Purchases. This page contains a summary of all transactions that were sent to the user’s email address. Many people* feel this is an invasion of privacy for Google to read their emails and provide this service to highlight purchase trends.

*https://www.engadget.com/2019/05/17/gmail-purchase-tracking-privacy/
https://www.wired.com/story/google-purchases-gmail-adobe-roundup/
https://www.slashgear.com/google-purchases-is-a-creepy-list-of-your-online-shopping-history-17577109/
[All accessed 19 May 2019]
1. Is it wrong for Google to summarize this information without explicitly telling Gmail users? *Note: Google has said they will not use this information to serve relevant ads to users.*

2. Is it wrong for Google to force people to opt-out of this service, instead of opt-in?
WORKPLACE ETHICS

- ACM Code of Ethics and Professional Conduct
  - [https://www.acm.org/code-of-ethics](https://www.acm.org/code-of-ethics)

- IEEE Software Engineering Code of Ethics
  - [https://www.computer.org/education/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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Google Code of Conduct

- What happens when your personal ethics conflict with company ethics?
ETHICS IN ACTION: PARAPHRASE (WEEK 3)

- 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 (WEEK 4)

- Second group presentation on (1) Status Update (2) Quality Assurance Plan (3) 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*