# Reflective activity - Ethics in Computing

As identified in a survey of Information Technology (IT) literature conducted by Stahl, Timmermans and Mittelstadt, 2016 it can be stated, that the main ethical issues in IT are privacy, professionalism, autonomy, agency as well as many other with privacy being the most common issue in all literature analyzed and professionalism being the 2nd most common issue. To provide guidelines for ethical behavior many organizations such as the British Computing Society (BCS) and the Institution of Engineering and Technology (IET) have published code of conducts for their members, which they can follow to ensure that their demeanor is ethically correct, especially in times where legal guidance is not available or insufficient. (Stahl, Timmermans and Mittelstadt, 2016)

Privacy as an ethical issue, that affects software engineers daily. Relevant means to maintain privacy of clients and users are therefore necessary to have.

An action to take to ensure privacy is to implement automated privacy policies within software. These automated policies provide rules for e.g., the sharing of private health data between doctors that need to have access to it. Since a doctor assesses a lot of medical information per day and does not have the time to deal with privacy issues individually an application automatically taking care of it according to a policy once implemented and accepted by hospital staff is therefore essential in modern times, since it will ensure in most cases that information is for example correctly labelled as confidential, public or strictly confidential (Mizani, 2007)

Another element to implement is a code of conduct that prevents the disclosure of data. To achieve this a code of conduct should mention, that the data of clients and users is honored. It should also contain quality as a core element itself, since then developers strive to meet this element by coding applications that have an ideal balance between usability, performance, and security, that fits the client best. Informed Consent should also be an integral element of the corporate code of conduct, since users should be aware which data is collected and processed prior, they provide it. Other elements such as accountability, partnering etc. should complete your code of conduct. (Mack, 2004)

Since the analysis of meta data can identify facts, that can create ethical questions, it is of the essence to implement a way to ethically mine the data collected. To do so it is recommended to follow ten data mining principles. You should for example provide the user with a privacy policy that clearly outlines how you intend to respect their right to privacy in detail. This privacy policy then must be followed by the development team to ensure that data mining processes are created, that follow the consent given by the user. This is very important to not negatively affect your business by losing customer trust, which might lead to customers leaving from your business. (Cary, Wen and Mahatanankoon, 2003)

Another core issue in ethics software developers must consider is professionalism. Whilst it is established by Weckert and Lucas, 2013 that Information and communications technology (ICT) is not a profession, it is nonetheless key that people working in ICT have to have ethics, since their work, the development of applications tools and programs has direct influence to their users. An incorrect coded application for the treatment of patients for example could kill patients by e.g., mixing up medication prescriptions. To prevent this software developers should be aware of the fact, that they have to maintain professionalism while they are coding (Weckert and Lucas, 2013).

Nowadays a pledge at the end of many IT studies contains elements, that make the student reflect on their role in their future professional career and their responsibility for society. This reflection also helps software developers to maintain their professionalism in their work life. (Albrecht *et al.*, 2012)

It also very important for software developers that they do not post private information from clients and customers online. Similar like a doctor should not reveal personal information about their patients, which for example medical students in a survey conducted unfortunately sometimes do. To support software developers in not posting information that should not be posted in social media, chatrooms, forums and other relevant places within the internet, it is recommended to have a guideline for software developers that clearly outlines which information can be shared, which information can not be shared and what to consider when sharing certain type of information. (Mostaghimi and Crotty, 2011)

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There are many actions a software engineer can take to address the most common ethical issued in IT such as privacy and professionalism for example. A software engineer can for example implement automated privacy policies, develop ethical data mining tools, and follow his / her or the organization`s code of conduct. A software engineer can also remind himself of the pledge he / she once gave at the beginning of their professional career. To constantly address ethical issues is important since information technology is a fast-changing environment and sometimes law is not yet created or still imperfect. To nonetheless avoid legal consequences, it is therefore key to work according to an ethical code of conduct to avoid future prosecution once laws get adapted. Additionally, it can also be stated that following ethical guidelines will create more safe and secure applications, sometimes even life sustaining applications, which is a great benefit to society. Not following ethics is also very likely to have an impact to the reputation of all IT professionals in general, which should be avoided.

References


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