

CS 001- Great Ideas in Computer Science (in progress)

NOTE: this module should be labeled as “under development.”

Course Level:

Undergraduate

Course Description:

“An introduction to the most important discoveries and intellectual paradigms in computer science, designed for students with little or no previous background. Explores problem-solving using high and low-level programming languages; presents an integrated view of computer systems, from switching circuits up through compilers and GUI design. Examines theoretical and practical limitations related to unsolvable and intractable computational problems, and the social and ethical dilemmas presented by such issues as software unreliability and invasions of privacy” ([Course description](#)).

Module Topic:

Electronic Privacy

Module Author:

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Semesters Taught:

Spring 2019

Tags:

- social networks (CS)
- privacy (phil)
- stakeholder rights and interests (phil)
- value (phil)
- moral rights (phil)
- consent (phil)

Module Overview:

In this module, we discuss the value of privacy and the responsibility technology firms have to safeguard individuals' privacy. Broadly, the module invites students to consider how individuals are wronged when their privacy is violated under different circumstances. To this end, students are asked to consider three different scenarios that highlight various ethical aspects of privacy. We begin by considering a scenario in which individuals' data privacy was violated with the goal of influencing the results of a democratic election. Students are asked to identify the precise way in which users were wronged by this privacy breach. We then consider a scenario in which user data is stored and analyzed without consent, for the benefit of its owners. This scenario raises the question whether privacy should be considered a right or a mere interest, and how it ought to be weighed against countervailing interests. Lastly, we consider a scenario in which users consent to their data being used in any way the corporation deems appropriate. This scenario raises the question whether user consent makes it morally permissible for tech corporations to use data without regard for individuals' interests. Through these discussions, the module introduces philosophical concepts, such as "interests" and "rights," to help students conceptualize the moral problems associated with privacy.

Connection to Course Technical Material:

One of the goals of the course is to present the landscape of computer science as it exists today, with reference to its past and future, and some of the great innovations that computer science has brought to today's society. The module considers the implications of large-scale data sharing both at the individual and the societal levels and prompts students to consider how our current practices can influence the way we think about privacy and what is required to protect it. More specifically, the course discusses simple encryption techniques, which provide a way to protect privacy. The module thus highlights the importance of using these (and other) techniques in thoughtful and responsible ways.

Module Goals:

1. Introduce students to the concept of electronic privacy.
2. Familiarize students with the concepts of stakeholders' rights and stakeholders' interests.
3. Discuss whether there is a moral right to privacy.
4. Train students to identify and analyze moral issues in the context of complex real-world scenarios.

Key Philosophical Questions:

1. How are individuals wronged when their data is used without their consent?
2. Is privacy only instrumentally valuable, or is it valuable for its own sake?
3. Do individuals have a moral right to electronic privacy?
4. Under what conditions is the use of personal data permissible?

Key Philosophical Concepts:

- Privacy, data privacy, and electronic privacy
- Instrumental and final value
- Stakeholder rights and interests
- Consent

Class Agenda:

1. Scenario 1: Facebook and Cambridge Analytica.
2. What is electronic privacy?
3. Scenario 2: Facebook's suicide prevention program.
4. Key philosophical concepts: instrumental and final value, stakeholder rights and interests.
5. Scenario 3: Informed consent and data use.

Sample Class Activity:

We begin by discussing the Facebook-Cambridge Analytica scandal. The Embedded EthICS fellow goes over the basic facts of the case, concluding with a short video clip of Mark Zuckerberg's statement before Congress on April 10th, 2018. Students are then asked to consider which aspects of the case are the most morally significant, and how users were wronged in this case. After a small group discussion and class-wide debrief, students are introduced to the technical meaning of electronic privacy, in order to help them conceptualize the specific way in which Facebook users were wronged by this breach.