

CS475/575 Computing, Ethics, and Society

Spring 2021

Jeanna Matthews

jnm@clarkson.edu



Course Description

This course focuses on the increasing ubiquitous nature of computing, its impact on society and the ethical issues related to the design, implementation and deployment of computing technologies. We will examine case studies of the impact of computing technology on society and reflect on issues such as privacy, equality, justice, security, accountability, transparency, safety, accessibility and reliability.

Students enrolled in CS575 will become familiar with venues where computer science research regarding fairness, accountability, transparency and ethics is published and the types of topics and themes commonly covered in this literature today. They will gain skills in reading research literature and apply this to some pieces of recently published work.

Delivery Method: Hybrid

Prerequisites: CS 141.

Instructional Materials

We will be using a wide variety of materials including films, research papers, news reports and other.

Technology

Clarkson University is working on a more comprehensive policy regarding visual and audio recordings of instructional activities. In the meantime, for this course, recordings may be captured of classroom activities whether they are held in person or remotely using Zoom or other video conferencing platforms. This is especially important during the COVID-19 crisis as students may need to attend from home or from a quarantine situation depending on their personal level of both exposure and medical risk. At Clarkson, we have been and are committed to helping students attend class remotely as necessary throughout 2020 and as long as the COVID-19 crisis persists. These visual and audio recordings are being captured to support learning for enrolled students and any other use/reuse of these materials requires the permission of the instructor and any students captured in a personally identifiable way. If you have concerns about the way in which you are being captured in a visual or audio recording, we

encourage you to discuss these concerns with the instructor as there may be options to mitigate your concerns (e.g. choosing a seat outside the camera lens or submitting questions in office hours or through online forums). If you wish to take additional visual or audio recordings (e.g. audio recordings for accessibility purposes, screenshots of Zoom meetings, etc.), you should request explicit permission from the instructor and other participants. Visual and audio recordings of group events by their nature involve the rights, needs, and concerns of many individuals. We expect all participants in this course to capture and use recordings of all individuals with respect.

A few additional technology related links from Clarkson:

- Minimum Computer Specifications:
<https://confluence.clarkson.edu/display/OITKB/Minimum+Computer+Specifications>
- Software Accessibility Policies:
<https://confluence.clarkson.edu/display/OITKB/Accessibility+Statements>
- Software Privacy Policies:
<https://confluence.clarkson.edu/display/OITKB/Privacy+Policies>

Course Objectives

- Expose students to critical analysis of the impact of computing technologies on individuals and on society
- Expose students to different codes of professional ethics
- Challenge students to think critically about the type of computing technologies they want to build as professionals
- Challenge students to envision ways to control the negative aspects of technology while retaining its benefits

Course Outcomes

- Students will critically examine the impact of major platforms and algorithms on society and on their own lives.
- Students will understand the role of professional ethics in computing as well as in other fields.
- Students will be familiar with how technology is governed differently around the world and compare different visions of how technology could and should be governed.
- Students will appreciate the types of data collected by major platforms and how that data is used for advertising, automated decision making, predictive analytics and to shift public opinion.
- Students will understand the impact of different definitions of fairness and the ways in which competing definitions of fairness can be incompatible.
- Students will consider the disparate impact of technology of different groups of people.
- Students will examine major platforms and algorithms critically through the lens privacy, equality, justice, security, accountability, transparency, safety, accessibility and reliability.
- Students will examine case studies of major platforms and algorithms and their impact on society.

Topical Outline

- The Role of Technology in Our Lives – necessity or luxury? Pros and cons?
 - Individual and Societal Impacts
- Professional Codes of Ethics
- Principles for Accountability and Transparency
- Disparate Impact
- Definitions of Fairness
- Interactions Between Humans and Computing Systems
- Privacy Protections – What Has Worked/Not Worked? What will work into the future?
- Different Visions of the Future/ Different Visions for Role of Governments and Companies and Rights of Citizens
- Case Studies such as Automated Decision Making Systems, Media Manipulation, The Future of Work, Anonymity, Censorship/Free Speech, Domestic Violence, Facial Recognition, Criminal Justice

Tentative Grading Policy

- 40% Class participation, reactions, and other homework
- 10% Group Book Presentation Project
- 10% Critical Analysis Project
- 10% Inspiring Possibility Project
- 25% Final Project
- 5% Final Individual Reaction

Course Policies

Attendance Requirements

Attendance is required at all synchronous class sessions including any scheduled lectures, labs, tests, and examinations whether in person or using systems like Zoom. Students are expected to watch any asynchronous material posted within 3 days of posting. If you are unable to attend please contact the instructor to make alternative arrangements ahead of time if possible or if the case of unforeseen events as soon as you are able. We will do our best to make alternative arrangements for students as appropriate.

Late Policy

If you complete an assignment late, you may submit it with a written note explaining the circumstances. I will grade your work, but the score will be recorded as a zero. I will however keep a special folder with the explanatory notes you have written and possibly the score that would have been assigned if the work was submitted on time. At the end of the semester, before assigning final grades, I will read through all the notes in the folder one more time and consider reinstating or dropping the score for that assignment if it was an isolated incident and if it would indeed have changed the final grade.

Academic Integrity

All work you submit must be your own individual work unless explicitly indicated. In particular, work taken from books, the Internet, other students or any other source may not be submitted as your own. You are always better to err on the side of acknowledging sources and collaborations!!!

It is also an academic integrity violation for you to give your work to others. This includes sharing materials privately as well as making assignments available in Github or other public repositories.

Additional information about rights, obligations and procedures related to academic integrity can be found in Section IV of Clarkson's official regulations.

Etiquette Expectations & Learner Interaction

Educational institutions promote the advance of knowledge through positive and constructive debate--both inside and outside the classroom. Please visit and follow: [Netiquette and Electronic Learner Interaction Guidelines](#).

Institutional Policies

Institutional Policies & Regulations

Academic Integrity

Students are expected to abide by the standards of academic honesty as described in the [Clarkson Regulations](#). The work or words of others must be properly cited. Please refer to Clarkson Library's [Guide to Plagiarism](#) and [Citing Sources](#).

Students with Disabilities Policy

Clarkson University welcomes inquiries and applications from individuals who have disabilities. Information relating to disabling conditions is not a determining factor in admission decisions. The University strives to make all facilities and programs accessible to students with disabilities by providing appropriate academic adjustments and other appropriate modifications (accommodations), as necessary. Timely notification of any need for accommodations due to a disability is encouraged so that the Office of Accommodative Services (OAS) may provide for students in an efficient manner.

For more information or other appropriate campus referrals, contact:

Director of Accommodative Services
Clarkson University
PO Box 5645
Potsdam, NY 13699-5635
Phone: 315-268-7643
Fax: 315-268-2400
Email: oas@clarkson.edu
[Office of AccessABILITY Services Website](#)

Reaching Me/Instructor Role/Instructor Participation

During this course, as your instructor, you can expect me to

- Deliver lecture material (may be delivered in person, via synchronous Zoom sessions or via posted video)
- Coordinate class discussions
- Hold some synchronous meetings in Zoom (even if the class is not meeting physically)
- Create and explain assignments, answer your questions about assignments
- Write tests and other assessments
- Respond to questions on Piazza (Piazza is the best place to start for most questions)
- Respond to your emails for more individual questions not appropriate for Piazza. Sometimes emails do get lost, caught in spam filters, etc. If don't hear back within 24 hours, please mention it to me directly in person or in our synchronous Zoom sessions.

- Be available to speak with you by phone or Zoom (office hours and/or by appointment).

Some Tentative Dates

These dates are subject to change. Consult the class web page and Moodle for updates.

- Final Project and Final Individual Reaction: May 5
- Group Book Presentation Project: Feb 15
- Critical Analysis Project: March 5
- Inspiring Possibility Project: April 5