CSC 300: Computer and Society (Winter 2023)

LEC0101: Tuesday 1-3 pm (Lecture) – ES 1050
LEC5101: Tuesday 6-8 pm (Lecture) – BA 1170

Tutorials: Dependent on your section, details available over Quercus

Piazza Discussion Board: https://piazza.com/utoronto.ca/winter2023/csc300

Instructor

Prof. Robert Soden
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Overview

'Computer and Society' introduces a wide range of interconnections between computers and society. In this course, students will learn the basic values that drive today's computer industry and how those often strengthen or differ from many moral values held by different communities in our world. This course will introduce the students to various theories from philosophy and social sciences to develop a deep understanding of the ethical tensions around the relationship between computers and society. This class is designed to help the students gain this knowledge along with strengthening their writing, debating, and designing capabilities to make them the next-generation computer scientists who are ethical, responsible, and caring.

Learning Objectives

By the end of this course students should be able to:
- Define and explain key concepts & terms in the course (ethics, privacy, equity, etc.).
- Develop a critical perspective on the recent evolution of computer and software technology and its impact on society.
- Develop a deeper understanding of the ethical tensions around emerging computing practices.
- Critically think and develop methods to produce ethical applications of computing technologies.
- Develop writing skills that are necessary to articulate an argument in a scholarly discussion.

Recommended Texts (Optional)
- Code 2.0, by Lawrence Lessig [Download]
- The Age of Surveillance Capitalism, Shoshana Zuboff
- Algorithms of Oppression, Safiya Noble

Evaluation Scheme

Topic	Percentage	Description
Reading Responses	48%	...er each module, the students are required to submit an assignment ...ed on that module. There are four modules in this course. So, the ...dents will be submitting four assignments. ● There will be 4 assignments in total ● Each response will be graded on a scale from 1 to 12 ● Detailed rubrics will be provided with the questions. ● The grade of each week's reading response is expected to be published over Quercus within 10 days from the submission deadline. There might be a delay for unavoidable circumstances.
Tutorial Participation	18%	...dents will be graded based on their performance in the Tutorials. ...e tutorials will include activities that are directly related to the ...ss lecture (hence, attending the class lectures is important). While ...ferent tutorials will have different activities, the evaluation will be ...ed on the student's understanding of the subject matter and ...ticipation in the tutorial. ● There will be 11 tutorials in total ● Each tutorial will be graded in scale from 1 to 2 ● The best 9 grades will be counted for the final grading ● Detailed rubrics will be provided during the tutorial by the TAs ● The grade of each tutorial is expected to be published over Quercus within 5 days of the tutorial. There might be a delay for unavoidable circumstances.
Final Assessment	34%	○ Timed online tests to be completed within a fixed time window ○ Students may start the test any time within a 12-hour window. Once they start writing they have 2 hours to complete. ○ The Test will take place on Quercus ○ The details of the Final Assessment questions and grading rubrics will be provided in the class at least 1 month before the exam.

Detailed Deadlines:

Date	Topic	Comment
	Module 1: Basic Concepts	
Jan 10	**Introduction**	No Tutorial
Jan 17	**Theories of Ethics** Before the Class: ● Watch: Philosophy of Ethics and Morality - Introduction to Ethics (Moral Philosophy) - What is Ethics? (Links to an external site.) ● Video companion: Cheatsheet.pdf Download Cheatsheet.pdf ● Read: Why ethics and law are not the same thing (Links to an external site.) (pdf Download pdf) After the Class: ● Read: Perspective Algorithmic injustice: a relational ethics approach (Links to an external site.) ● Optional reading: Lafollette, Hugh, (Ed.). 2020. (Links to an external site.)*Ethics in Practice: An Anthology.* 5th ed. Hoboken, NJ: Wiley Blackwell. Pp. 31-52, 62-71 (Links to an external site.)	Tutorial 1: ● Review: Concepts of Normative Ethics (Deontology, Consequentialism, Virtue Ethics) ● Main Discussion: Introduction to Relational Ethics and ethical universalism/subjectivism ● Activity: Discuss the binary ethical concepts of rational/relational and universal/subjective in groups.

Jan 24	**Politics of Technology**
	
	Before the Class:
	
	    ● Watch: Why we need to understand the politics inherent in technology | Evan Barba | TEDxTysonsSalon (Links to an external site.)
	    ● Read: The Politics of 'Platforms' by Tarleton Gillespie — A Summary (Links to an external site.)
	
	After the Class:
	
	    ● Read: Brey, Philip. "Artifacts as social agents." Inside the politics of technology: Agency and normativity in the co-production of technology and society (2005): 61-84 (Links to an external site.)
		Tutorial 2:
		
		    ● Review: Concepts of politics of technology
		    ● Main Discussion: How to answer Assignment #1 effectively
		    ● Activity: Discuss the political and ethical aspects of the following scenario in groups:
		
		You have a startup that develops facial recognition and your clients are electronic wallet companies that want to verify the IDs of users in developing countries. One of your partners wants to close a deal with your country's border and immigration agency, which is interested in purchasing the data that your startup will collect. What are the ethical and political implications of this?

	Assignment 1 due: Jan 30, 11:59 pm	
	Module 2: Data, Privacy, and Surveillance	

| Jan 31 | **Politics of Data**

Before the Class:

- What it means to be Black in Brazil (Links to an external site.)
- The problem with sex testing in sports (Links to an external site.)

After the Class:

- Excavating AI (Links to an external site.) (pdf Download pdf)
- Bowker, G.C. and Star, S.L., 2000. *Sorting things out: Classification and its consequences.* MIT press. Chapters 3 & 4 (Links to an external site.)
- Optional: Miceli, M., Schuessler, M. and Yang, T., 2020. Between subjectivity and imposition: Power dynamics in data annotation for computer vision. *Proceedings of the ACM on Human-Computer Interaction, 4*(CSCW2), pp.1-25. | Tutorial 3:

- Review: Data collection, classification, and infrastructures
- Activity: Discuss the following examples in groups (See: Tutorial #4 (Links to an external site.)) |

| Feb 7 | **Privacy**
 <u>Before the Class:</u>

 • Facebook Listening to Users Isn't Just a Privacy Scandal (Links to an external site.) (pdf Download pdf)
 • Glenn Greenwald: Why privacy matters (Links to an external site.)
 • Podcast: Platform Capitalism (Links to an external site.) (optional)

 <u>After the Class:</u>

 • Nissenbaum, Helen. "Privacy as contextual integrity." Wash. L. Rev. 79 (2004): 119 Download Nissenbaum, Helen. "Privacy as contextual integrity." Wash. L. Rev. 79 (2004): 119
 • The limits of transparency: Data brokers and commodification.pdf | <u>Tutorial 4:</u>

 • Review: Definitions of privacy
 • Activity: Watch the following video Safe and Sorry – Terrorism & Mass Surveillance (Links to an external site.)
 • Discuss in groups to what extent we should sacrifice privacy for security |

Feb 14	**Surveillance** Before the Class: - [An Introduction to Michel Foucault's Discipline and Punish - A Macat Sociology Analysis (Links to an external site.)](#) - [Harvard professor says surveillance capitalism is undermining democracy (Links to an external site.)](#) After the Class: - [Browne, Simone. 2015. *Dark Matters: On the Surveillance of Blackness* (Links to an external site.). Duke University. Chapter 1 (Links to an external site.)](#). - [Zuboff, Shoshana. 2015. "Big other: surveillance capitalism and the prospects of an information civilization." Journal of Information Technology 30(1): 75-89](#)	Tutorial 5: - Review: Benthian and Foucauldian Surveillance, and Surveillance Capitalism - Discussion: How to answer Assignment #2 effectively
	Assignment 2 due: Feb 27, 11:59 pm	
Feb 21	--BREAK--	
	Module 3: Behind the Tech	

| Feb 28 | **Extraction, Emissions, and Computing**
Before the class:

- [Anatomy of an AI System (Links to an external site.)](#)
- [This man worked undercover in a Chinese iPhone factory (Links to an external site.)](#)
- [Special report : Inside the Congo cobalt mines that exploit children (Links to an external site.)](#)

After the Class:

- Taffel, Sy. "Escaping attention: Digital media hardware, materiality and ecological cost." Culture Machine 13 (2012)
- Hogan, Mél. "Big data ecologies." Ephemera 18.3 (2018): 631 | Tutorial 6:

- Review: Extraction and Manufacturing
- Activity: Choose one of the devices that you own and try to find out where its parts come from. Where were they assembled? Where did the raw materials come from? Was it easy to find information about their origins? |

| Mar 7 | **Repair, Recycle, and Electronic Waste**

Before the class:

- [Do You Have a Right To Repair Your Phone? The Fight Between Big Tech and Consumers (Links to an external site.)](#)
- [How Can We Fix The Massive E-Waste Problem? (Links to an external site.)](#)

After the Class:

- Jackson, Steven J. "Rethinking Repair." Media technologies: Essays on communication, materiality, and society (2014): 221-39
- Jackson, Steven J., Alex Pompe, and Gabriel Krieshok. "Repair worlds: maintenance, repair, and ICT for development in rural Namibia." Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work.
- Aich, Nirupam, et al. "The Hidden Risks of E-Waste: Perspectives from Environmental Engineering, Epidemiology, Environmental Health, and Human–Computer Interaction." Transforming Global Health. Springer, Cham, 2020. 161-178 | Tutorial 7:

- Review: Right to repair, E-Waste, Recycle
- Activity: Choose one of the devices you own and think of creative repurposing solutions. Reflect in groups: what have you done with your discarded electronics? |

Mar 14	**Copyright and Intellectual Properties**
	
	Before the class:
	
	    ● IP-rimer: A Basic Explanation of Intellectual Property (Links to an external site.)
	    ● Optional: Intellectual Property - Crash Course (Links to an external site.)
	
	After the Class:
	
	    ● Quinn, Michael J. "Chapter 4: Intellectual Property" in his Ethics for the Information Age 5th Ed. Pearson, 2017. Pp. 161-221 (Links to an external site.)
	    ● Vaidhyana, Siva. "Open Source as Culture/Culture as Open Source." In Open Source Annual (2005). Pp. 341-348
		Tutorial 8:
		
		    ● Review: Types of intellectual property
		    ● Activity: How to answer assignment #3 effectively

	Assignment 3 due: Mar 20, 11:59 pm	
	Module 4: Computing, Diversity, and Equity	

| Mar 21 | Gender, Sexuality, and Computing

Before the class:

   ● [Why Are There So Few Women in Computer Science? (Links to an external site.)](#)
   ● [A Brief History of Women in Computing (Links to an external site.)](#) ([pdf](#) Download pdf)
   ● [The next frontier in gender rights is inside databases. (Links to an external site.)](#) ([pdf](#) Download pdf)
   ● [torial #9 (Links to an external site.)](#)

After the Class:

   ● Costanza-Chock, S., 2018. Design justice: Towards an intersectional feminist framework for design theory and practice. Proceedings of the Design Research Society
   ● Bardzell, S., 2010, April. Feminist HCI: taking stock and outlining an agenda for design. In *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 1301-1310).
   ● (Optional) [D'ignazio, C. and Klein, L.F., 2020. (Links to an external site.)*Data feminism.* MIT press. Introduction & Chapter 4](#) | Tutorial 9:

   ● Review: Gender & sexuality, women in computing, feminist HCI
   ● Activity: Discuss the principles of feminist HCI and how they will help address the following scenario written by scholar Sasha Constanza-Schock based on their experience traveling as a nonbinary, trans*, femme-presenting person: [Tu](#) |

Mar 28	**Race, intersectionality, and computing**	Tutorial 10:
	Before the class:	● Review: Race, intersectionality, and HCI
	● Race & Ethnicity: Crash Course Sociology #34 (Links to an external site.)	● Activity: Read the following blog post from Facebook AI about their new dataset that addresses differences in skin color: Shedding light on fairness in AI with a new data set (Links to an external site.)
	● Rise of the racist robots – how AI is learning all our worst impulses (Links to an external site.)	
	After the Class:	
	● Gray, K.L., 2012. Intersecting oppressions and online communities: Examining the experiences of women of color in Xbox Live. Information, Communication & Society, 15	● Discuss: How is it different from previous approaches (think of ImageNet)? Why is self-identification important? What are the limits of using the scale to classify skin color? Is race being erased? Is this a positive or a negative choice?
	● Benjamin, R. 2019. Race after technology: Abolitionist tools for the new jim code. Social Forces. Introduction and Chapter 1 (Links to an external site.)	
	● (Optional) Birhane, A., 2021. The Impossibility of Automating Ambiguity.	

| Apr 4 | **Computing and International Development**

Before the class:

    ● TEDxTokyo - Kentaro Toyama - 05/15/10 - (English) (Links to an external site.)
    ● OLPC's $100 laptop was going to change the world — then it all went wrong (Links to an external site.)

After the Class:

    ● Philip, K., Irani, L. and Dourish, P., 2012. Postcolonial computing: A tactical survey. Science, Technology, & Human Values, 37 (1), pp.3-29
    ● Toyama, K., 2015. Geek heresy: Rescuing social change from the cult of technology. PublicAffairs. Introduction and Chapter 1
    ● (Optional) Download Milan, S. and Treré, E., 2019. Big data from the South (s): Beyond data universalism. Television & New Media, 20 Television & New Media, 20 (4), pp.319-335 | Tutorial 11:

    ● Review: Development theories, colonization, postcolonialism
    ● Discussion: How to answer Assignment #4 effectively |
| | Assignment 4 due: Apr 10, 11:59 pm | |

Teaching Assistants:

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TA Office Hours: (Details will be posted on Quercus)

TA office hours take place on Mondays at 4pm and Thursdays at 9am via Zoom. Please see the Office Hours schedule here:
https://docs.google.com/spreadsheets/d/1KMMw8rtRI4qo8euE9-wEoN60S9XDbJxh/edit#gid=427738369

You should email the TA who is scheduled for your chosen time 24 hours in advance. The Zoom link is also posted on Quercus. Feel free to use this time to ask any questions you may have about the course.

Important:
Please note that the teaching team is trying their best to accommodate all the requests from all our students in this large class. We highly encourage our students to get most of their questions asked on Quercus and get the answers from there by us and other students.
- If you have more questions that you want to get answers to privately, please shoot your email to your TA and ask those questions. Please start the title of your email [CSC300] to ask the questions.
- Please also use the TA office hour times to have your questions answered by TAs. Students will be let into the Zoom room one at a time to have their questions asked and answered privately. Be sure to schedule your office hours appointment 24 hours in advance.

If your problem cannot be solved by the TAs, only then send an email to Prof. Soden (soden@cs.toronto.edu). Please start the title of your email [CSC300] to ask the questions.

Slides and Recording:

- Slides will be shared over Quercus before the lecture.
- The class will not be recorded.

Assignments:

- 8.5"×11" or A4 paper size.
- Times New Roman font.
- 11-point font size.
- Single-spaced lines of text
- 1-inch margins on all sides
- Paragraph indentation of 0.5 inches.
- References will NOT be counted toward the page or word limit. Reference format: ACM
- Titles, Subtitles, Images, etc. won't be counted toward the word limit.
- You can go over the word limit, but no more than 10% of the word limit. For example, if the word limit is 500, you can use a maximum of 550 words and no more than that. You will be penalized for using more text.

Academic Integrity:

We expect that all students will abide by the Code of Behaviour on Academic Matters. To learn more about Academic Integrity, visit: https://www.academicintegrity.utoronto.ca/ To learn more about Academic Misconduct, visit:
https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity/academic-misconduct.

Ouriginal:

Normally, students will be required to submit their course essays to the *Ouriginal* software for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the software reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the *Ouriginal* service are described on the FAS website.

Penalty for Late Submissions

Late submissions will be graded according to the following rules

- 20% reduction if submitted within 24 hours after the deadline.
- 50% reduction if submitted within 24-48 hours after the deadline.
- No submission after 48 hours after the deadline will be accepted.

However, if a student misses a deadline for an unavoidable reason, physical emergency, or other unexpected incidents of significant magnitude, they can submit their assignment at a later date. In such cases, you have to send an email to TA, Mohammad Rifat Rashidujjaman (rifat@cs.toronto.edu) with necessary documents and explanations.

Please note that there is no deadline for publishing the grades of late submissions. This depends on the availability of the teaching team.

Re-grading:

Errors in marking must be brought to the attention of the instructors using the course email address within 1 week (7 days including weekends, holidays, etc.) of the coursework being returned. All the regrading requests should be made via email to your section TA.

Discussions:

Students are encouraged to use Piazza to discuss course-related topics with the teaching team and their classmates. Students can ask questions there and other students are encouraged to answer those questions if they can. The TAs will also join the discussion where and when needed.

Sickness and Accessibility:

This course is guided by the University of Toronto's goal to create a community that is inclusive of all persons and treats all members of the community in an equitable manner. In creating such a community, the University aims to foster a climate of understanding and mutual respect for the dignity and worth of all persons. Please find details here: https://www.utoronto.ca/accessibility

If you need to talk about any accessibility issue, please contact TA Yasaman Rohanifar (yasaman.rohanifar@mail.utoronto.ca)

Additional resources for accessibility services:
- https://clockwork.studentlife.utoronto.ca/custom/misc/home.aspx
- https://studentlife.utoronto.ca/department/accessibility-services/

Additional Resources

1. For improving your writing
   - Writing at the University of Toronto
   - Dartmouth Institute of Writing and Rhetoric
2. To know more about Ethics:
   - UofT Center for Ethics
3. Recognized Study Groups (RSG) are voluntary, peer-led study groups of 3 – 6 students enrolled in the same course. They're available for all A&S courses and are now fully online. In addition to supporting students' study habits and academic success, RSGs also encourage student participants to be socially connected with their peers. Last year, over 2,000 A&S students participated in RSGs for courses spanning all streams and class sizes.
4. Meet to Complete are online drop-in study sessions held exclusively for A&S undergrads. Offered multiple times per business day and led by trained A&S student-staff, these study sessions help students to stay motivated and productive by offering daily goal-setting and the opportunity to study alongside their A&S peers.
5. UofT Library: https://onesearch.library.utoronto.ca/
6. Mental Healthcare: http://mentalhealth.utoronto.ca/