CSC 300: Computers and Society (Fall 2024)

LEC0101: Tuesday 12-2 pm (Lecture)
LEC2101: Tuesday 4-6 pm (Lecture)

Zoom Link for the Lectures: https://utoronto.zoom.us/j/81609069505

Passcode: 990998

Tutorials: Dependent on your section, details available over Quercus

Instructors

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Overview

'Computers 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	60%	After each module, the students are required to submit an assignment based on that module. There are four modules in this course. So, the students will be submitting four assignments. ● There will be 4 assignments in total ● Each response will be graded on a scale from 1 to 15 ● 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 due to unavoidable circumstances.
Tutorial Participation	18%	Students will be graded based on their performance in the Tutorials. The tutorials will include activities that are directly related to the class lecture (hence, attending the class lectures is important). While different tutorials will have different activities, the evaluation will be based on the student's understanding of the subject matter and participation in the tutorial. ● There will be 11 tutorials in total ● Each tutorial will be graded on a 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 due to unavoidable circumstances.
Final Assessment	22%	● Two hours long online exam ● Combination of MCQ and short answer questions ● Exact details will be provided in class about 1 month before the assessment.

Detailed Deadlines:

Date	Topic	Comment
	Module 1: Basic Concepts	
Sep 3	**Introduction**	No Tutorial
Sept 10	**Theories of Ethics** Before Class: - Watch: Philosophy of Ethics and Morality - Introduction to Ethics (Moral Philosophy) - What is Ethics? - Video companion: Cheatsheet.pdf - Read: Are regulatory changes keeping pace with automation After Class: - Read: Perspective Algorithmic injustice: a relational ethics approach - Optional reading: Lafollette, Hugh, (Ed.). 2020. *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, Relational Ethics) - Main Discussion: Applying ethical frameworks to a case study: Medically Assisted Dying - Activity: Ethics of data breach in a health tech company

Sept 17	**Politics of Technology**
	
	Before Class:
	
	    ● Watch: [Why we need to understand the politics inherent in technology | Evan Barba | TEDxTysonsSalon](#)
	    ● Read: [The Politics of 'Platforms' by Tarleton Gillespie — A Summary](#)
	
	After 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](#)
	
	Optional:
	
	    ● Langdon Winner, "Do Artifacts Have Politics": https://faculty.cc.gatech.edu/~beki/cs4001/Winner.pdf
	    ● Pinch and Bijker, "The Social Construction of Facts and Artefacts", https://www.jstor.org/stable/285355#metadata_info_tab_contents
	    ● NYTimes profile of Bruno Latour: https://www.nytimes.com/2018/10/25/magazine/bruno-latour-post-truth-philosopher-science.html
		Tutorial 2:
		
		    ● Review: Concepts of politics of technology (Technological Realism, Social Constructivism, Hybrid Constructivism, Differentiated Constructivism)
		    ● Main Discussion: How to answer Assignment #1 effectively
		    ● Activity: Politics of ChatGPT

	Assignment 1 due: Sept 23, 11:59 pm	
	Module 2: Data, Privacy, and Surveillance	

| Sept 24 | **Politics of Data**

Before Class:

- What it means to be Black in Brazil
- The problem with sex testing in sports
- Weapons of Math Destruction (Chapter 3)

After Class:

- Excavating AI
- Bowker, G.C. and Star, S.L., 2000. *Sorting things out: Classification and its consequences*. MIT press. Chapters 3 & 4

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
- Think, pair share: Share examples of data misrepresentation
- Activity: Politics of imagenet annotation |

| Oct 1 | **Privacy**
Before Class:

- Facebook Listening to Users Isn't Just a Privacy Scandal
- Glenn Greenwald: Why privacy matters
- Podcast: Platform Capitalism (optional)

After Class:

- 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 | Tutorial 4:

- Review: Definitions of privacy
- Discussion: How Amazon Ring and Alexa violate Privacy by Design
- Activity: Fusion technology and privacy. |

Oct 8	**Surveillance** Before Class: • [An Introduction to Michel Foucault's Discipline and Punish - A Macat Sociology Analysis](#) • [Harvard professor says surveillance capitalism is undermining democracy](#) After Class: • [Browne, Simone. 2015. *Dark Matters: On the Surveillance of Blackness* (Links to an external site.). Duke University. Chapter 1](#) • [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: Asymmetric Information, Panopticon, Synopticon, Banopticon • Discussion: Google and Asymmetric Information • Acitvity: Surveillance and Information Asymmetry in Tim Horton's Application
	Assignment 2 due: Oct 14, 11:59 pm	
	Module 3: Behind the Tech	

| Oct 15 | **Extraction, Emissions, and Computing**
Before the class:

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

• [AI's excessive water consumption threatens to drown out its environmental contributions](#)

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: Primary, secondary, and tertiary impact of your computer use. |

| Oct 22 | **Repair, Recycle, and Electronic Waste**

Before the class:

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

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? |
| Oct 29 | **No Class: Fall Reading Week** | |

Nov 5	**AI Ethics** Before the class: [AI Is Dangerous, but Not for the Reasons You Think | Sasha Luccioni | TED](#) [Ethics of AI in Global South](#) After the class: https://link.springer.com/article/10.1007/s13347-020-00405-8 [Lai, V., Chen, C., Smith-Renner, A., Liao, Q. V., & Tan, C. (2023, June). Towards a Science of Human-AI Decision Making: An Overview of Design Space in Empirical Human-Subject Studies. In Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (pp. 1369-1385)](#)	Tutorial 8: ● Review: Annotation and AI Ethics ● Discussion: A2 and A3 feedback ● Activity: Power dynamics in data annotation for a traffic management algorithm in Toronto
	Assignment 3 due: Nov 11, 11:59 pm	
	Module 4: Computing, Diversity, and Equity	

| Nov 12 | **Gender, Sexuality, and Computing**

Before Class:

- [Why Are There So Few Women in Computer Science?](#)
- [A Brief History of Women in Computing](#)
- [The next frontier in gender rights is inside databases.](#)

After 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. Data feminism. MIT press. Introduction & Chapter 4](#) | Tutorial 9:

- Review: Gender & sexuality, women in computing, feminist HCI

- Discussion: Examining technology with feminist HCI principles
- Activity: Analyze Facebook's approach to gender identity using feminist HCI principles. |

Nov 19	**Race, Intersectionality, and Computing**	Tutorial 10:
	Before Class:	● Review: Race, intersectionality, and HCI
	● Race & Ethnicity: Crash Course Sociology #34 ● Rise of the racist robots – how AI is learning all our worst impulses	● Discuss: Analyze technology using critical race theory ● Activity: Use critical HCI and examine a blog post by Google about building a more equitable camera and imaging products for people of color.
	After Class:	
	● Gray, K.L., 2012. Intersecting oppressions and online communities: Examining the experiences of women of color in Xbox Live. Information, Communication & Society, 15 ● Benjamin, R. 2019. Race after technology: Abolitionist tools for the new jim code. Social Forces. Introduction and Chapter 1 ● (Optional) Birhane, A., 2021. The Impossibility of Automating Ambiguity.	

| Nov 26 | **Computing and International Development**

<u>Before Class:</u>

   ● [TEDxTokyo - Kentaro Toyama - 05/15/10 - (English)](#)
   ● [OLPC's $100 laptop was going to change the world — then it all went wrong](#)

<u>After Class:</u>

   ● 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 | <u>Tutorial 11:</u>

   ● Review: Development theories, colonization, postcolonialism
   ● Discussion: Tactics of post-colonial computing
   ● Activity: AI for social good |
| | Assignment 4 due: Nov 30, 11:59 pm | |

Teaching Assistants:

Name	Email	Section
Mohammad Rashidujjaman Rifat	rifat@cs.toronto.edu	Lead TA
Taneea Agrawaal	taneea@cs.toronto.edu	TBA
Alaa Hamid	al.hamid@mail.utoronto.ca	TBA
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Yanez Fernando	reyna.wu@mail.utoronto.ca	TBA
TBA		TBA
TBA		TBA

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

TA office hours take place on Mondays at 4pm and Fridays at 9am via Zoom. Please see the Office Hours schedule here:

Mondays at 4-5PM: https://utoronto.zoom.us/j/83324836975, Meeting ID: 833 2483 6975, Passcode: 557006

Thursdays at 9-10AM: https://utoronto.zoom.us/j/88196090576, Meeting ID: 881 9609 0576, Passcode: 109979

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 Lead TA, Rifat (rifat@cs.toronto.edu) Please start the title of your email [CSC300] to ask the questions.

If your problem cannot be solved by the TAs and Rifat, please feel free to send an email to Prof. Ahmed ishtiaque@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 be recorded. The recording should be posted on Zoom within 24 hours of the Lecture.

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.

Turnitinl:
Normally, students will be required to submit their course essays to the *Turnitin* 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 *Turnitin* 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 Shreyasha Paudel (shreyasha.paudel@mail.utoronto.ca) with the 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 Quercus 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 Ananya Bhattacharjee (ananya@cs.toronto.edu)

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/