CS 312: Computing, AI, Ethics, and Society

Instructor: Dr. Kristin Williams
Teaching Assistant (TA): Elizabeth Nemeti-Chipkes

Class: 4:00-5:15pm Mondays and Wednesdays in N304
Pre-requisite: CS 224 or Graduate Standing
Office Hours: After class, or by appointment

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TA Office Hours: TBD

E-mail policy: I typically respond within 24-48 hours during the M-F work week. This means that if you send an e-mail to me on Friday at 7pm, you might not receive a response until Monday (Tuesday at the latest). For immediate help with questions, I encourage you to cultivate a network of your peers that you can share helpful information with.

Description:
Computing's innovations bring an era of exciting new technologies to society like social networks, microblogging, the internet of things, and autonomous vehicles. At the same time, society is growing increasingly concerned that these new capabilities bring a host of unwelcome side effects. Recent concerns include election interference, surveillance capitalism, and killer robots. How can we critically assess whether a technology causes more harm than good? This course will cover topics on the social and ethical issues new computing technology confronts. The first part of the class will cover common philosophical approaches to ethical questions such as utilitarianism, deontology, and virtue ethics. The second part will consider the implications of ethical and political theories for thinking about the end user, the programmer, system design, and the development context. This will include examining differences between individual decision-making verses collective decision making and the role of political and social theories in characterizing how computing technologies are designed and created. The last part of the course will consider salient issues and case studies that pose pressing challenges for today's computing era.

Learning Objectives:
Students will be able to characterize ethical questions raised by a new technology.
Students will be able to explain common ethics approaches and use these approaches' rationale and arguments to characterize an issue.
Students will be able to make a reasoned argument for/against a particular technology design using common ethical frameworks' reasoning.

Texts:
Weckert, John, ed. *Computer ethics*. Routledge, 2017.

Grading and Assignment Weight:

Attendance + Participation	15%

Weekly Assignments	25%
Midterm Paper	25%
Final Paper	35%

Communication and Help Seeking:
One of the most important skills you can learn is knowing when and how to ask for help. You are expected to participate in class and reach out if you have questions. Please don't hesitate to visit your instructor or TA during office hours to ask for clarifications on any material you do not fully understand. Your peer group is also an important resource for this class. Use this class to meet and learn from your peers. If your situation changes regarding health, housing, or in any other regard with respect to your ability to participate in class, please contact the appropriate Emory student support organization first and then me as soon as feasible.

Assignments:

Midterm Paper. At the midterm, you will turn in a 4 page paper developing a topic in depth that was raised in the first half of the semester. It should draw from some of the papers that we read in class, but should also supplement those arguments with related research you uncover as relevant.

Final Paper. At the end of the term, you will turn in a 10 page paper developing a topic in depth that you independently come up with. It should draw from some of the papers that we read in class, but should also supplement those arguments with related research you uncover as relevant.

Peer Review. Throughout the course I will assign you a partner or to a group to review each other's writing. You may be asked to write an analysis of one of your peer's papers or simply to discuss the ideas in their paper with them. These assignments will be folded into the course as the schedule allows.

Late Policy:
All assignments are due at midnight (11:59:59pm) on the due date. You have 3 late days that you may use throughout the term without penalty. Otherwise, late work will be penalized 10% for every day that passes after the deadline. Any assignment turned in >3 days late (including weekend days) will not be reviewed and will be given a zero automatically. All other deviances from this policy must either be accompanied by an explicit request from the Office of Undergraduate Education (http://college.emory.edu/oue/resources-a-z.html), or received my permission at least 5 days before the due date. If you think that you have extenuating circumstances that will impact your midterm or final assignments, you should try and secure my permission further in advance if possible and notify me as soon as you can so that we can discuss a plan for addressing the conflict. Foreseeable circumstances like conference travel, or an expensive and conflicting plane flight home for the holidays will not be grounds for turning assignments in late.

Honor Code:
The honor code upholds community expectations and standards of academic integrity. Please you're yourself aware of the university's honor code: http://catalog.college.emory.edu/academic/policies-regulations/honor-code.html. While I encourage you to learn from your peers, it is your job to engage with and advance the course material. You cannot do this if you plagiarize, cheat, or otherwise steal the

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work of others. Suspected violations of the honor code will be reported to the Honor Council and follow the University's established procedures.

ChatGPT/AI Writing Assistant Policy:
You may not use ChatGPT/OpenAI/other AI writing assistant in any of your assignments. You are expected to develop writing skills as part of this course, and use of such a tool in this class will be considered a violation of the honor code and handled accordingly.

Sensitive Topics Policy:
This class discusses contentious issues around computing, AI, ethics, and society. You are likely not to agree with some of the views held by the authors of the papers we read, your classmates, your TA, or your instructor. This class does not purport to ensure the class reaches agreement on these issues or to ensure that class members all hold the same views (a topic covered the day we read 'What is Computer Ethics?'). So, you will need to cultivate tolerance for views that you do not agree with in order to participate in many of the class's activities such as joining in class discussions. This class asks that you engage respectfully and tolerantly with others especially when they hold views that you do not agree with. This class does not control the nature of materials that lead to such contentious issues. So the class will not make an effort to sanitize materials that may be central to class exposure and discussion of course content. For example, the course will not filter out training and classification data used by AI models that led to public outcry against Biased classification. The course covers such content and will not be censoring such content from the course material.

Electronic Device Policy:
This class consists largely of debate and discussion that is grounded in evidence, and this requires your participation. You may bring a digital copy of the course material to supplement your class participation with evidence from the text. Or, you may use an electronic device to take notes. However, the use of electronic devices is heavily discouraged and may at times, be prohibited. You cannot effectively engage in class and learn if you are multitasking. Electronic devices make it all too easy to multitask, and I reserve the right to prohibit their use in class if I suspect that they are interfering with the classroom environment.

Regrade Policy:
Please reflect carefully as to whether you should come to me with a request to change your grade or regrade your assignment, and do not treat regrade requests as your default mode of remedying disappointing marks. Feedback nurtures your intellectual growth even if you do not always agree with it. First, stretch yourself to understand why your work was evaluated the way that it was. If you have questions that you would like clarified, reach out with questions. You can request a re-grade of an assignment within three days of releasing the grade by sending an email to the course staff. The request should contain a written explanation of why you think that the grade is incorrect. We will look over your work again upon request. If we spot errors in grading, we will fix the error. This may end up assigning a lower score than the original if we find additional errors.

Accommodations:
The Department of Accessibility Services (DAS) works with students who have disabilities to provide reasonable accommodations. It is your responsibility to request accommodations. In order to receive

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consideration for reasonable accommodations, you must register with the DAS at https://accessibility.emory.edu/. Accommodations cannot be retroactively applied, so you need to contact DAS as early as possible and contact me as early as possible in the semester to discuss the plan for implementation of your accommodations.

Health Considerations:
At the very first sign of not feeling well, *stay at home* and reach out for a health consultation. Please contact health services: https://studenthealth.emory.edu/. As you know, COVID-19 has been an ongoing concern for the past couple of years. Please make sure you are following and staying up to date with the university's policy. If you think you are showing signs of COVID-19 or have been in contact with someone who tested positive for COVID-19, make sure you follow the university's guidelines to protect both yourself and others: https://www.emory.edu/forward/covid-19/what-do-I-do/index.html.

Schedule:

Week	Date	Topic	Readings
1	8/23	Welcome	Listen to Radiolab's Morality - https://radiolab.org/episodes/91508-morality; Visit Moral Machine - https://www.moralmachine.net/
2	8/28	Formulating an Issue - The Trolley Problem	Awad, Edmond, et al. "The moral machine experiment." Nature 563.7729 (2018): 59-64. Jaques, Abby Everett. "Why the moral machine is a monster." University of Miami School of Law 10 (2019): 1-10.
	8/30	The Problem of Intention	Foot, P. 1967, "The Problem of Abortion and the Doctrine of Double Effect", Oxford Review, 5: 5–15; reprinted Virtues and Vices and Other Essays in Moral Philosophy, second edition, Oxford: Oxford University Press, 2002 (first edition 1978). doi:10.1093/0199252866.001.0001. pp. 19–32.
3	9/4		Labor Day
	9/6	Case Study - Technology gone wrong	Leveson, Nancy. "Medical Devices: The Therac-25." Appendix of: Safeware: System Safety and Computers (1995).
4	9/11	Responsibility + Grand Challenges	Winner, Langdon. "Do artifacts have politics?." Computer Ethics. Routledge, 2017. 177-192. Johnson, Deborah G. "Do Engineers have Social Responsibilities?." Computer Ethics. Routledge, 2017. 259-272.

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	9/13	Unique Questions in Computer Ethics	Maner, Walter. "Unique ethical problems in information technology." Science and Engineering Ethics 2.2 (1996): 137-154. Weckert I.6 - Moor, James H. "What is computer ethics?." Metaphilosophy 16.4 (1985): 266-275.
	9/18	Autonomy	Mazmanian, Melissa, Wanda J. Orlikowski, and JoAnne Yates. "The autonomy paradox: The implications of mobile email devices for knowledge professionals." Organization science 24.5 (2013): 1337-1357.
	9/20	Control	Chetty, M., Sung, J. Y., & Grinter, R. E. (2007). How smart homes learn: The evolution of the networked home and household. In UbiComp 2007: Ubiquitous Computing: 9th International Conference, UbiComp 2007, Innsbruck, Austria, September 16-19, 2007. Proceedings 9 (pp. 127-144). Springer Berlin Heidelberg.
	9/25	Agency	Coyle, D., Moore, J., Kristensson, P. O., Fletcher, P., & Blackwell, A. (2012, May). I did that! Measuring users' experience of agency in their own actions. In *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 2025-2034).
	9/27	Sociotechnical Gap	Ackerman, M. S. (2000). The intellectual challenge of CSCW: the gap between social requirements and technical feasibility. *Human–Computer Interaction*, *15*(2-3), 179-203.
	10/2	Values + Abstraction	Andrew D. Selbst, Danah Boyd, Sorelle A. Friedler, Suresh Venkatasubramanian, and Janet Vertesi. 2019. Fairness and Abstraction in Sociotechnical Systems. In Proceedings of the Conference on Fairness, Accountability, and Transparency (FAT* '19). Association for Computing Machinery, New York, NY, USA, 59–68. https://doi.org/10.1145/3287560.3287598
	10/4	Speech + Networked Communication	Quinn 3.2, 3.6-3.9 Baase + Henry 3.1-3.3
	10/9		Fall Break
	10/11	Speech + Networked Communication	Stephen Prochaska, Kayla Duskin, Zarine Kharazian, Carly Minow, Stephanie Blucker, Sylvie Venuto, Jevin D. West, and Kate Starbird. 2023. Mobilizing Manufactured Reality: How Participatory Disinformation Shaped Deep Stories to Catalyze Action during the 2020 U.S. Presidential Election. Proc. ACM Hum.-Comput. Interact. 7, CSCW1, Article 140 (April 2023), 39 pages. https://doi.org/10.1145/3579616

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	10/16	Content Moderation	Weckert II.12: Weckert, John. "What is so bad about Internet content regulation?." Ethics and Information Technology 2.2 (2000): 105-111.
	10/18	Content Moderation	Seering, Joseph, Robert Kraut, and Laura Dabbish. "Shaping pro and anti-social behavior on twitch through moderation and example-setting." Proceedings of the 2017 ACM conference on computer supported cooperative work and social computing. 2017.
	10/23	Intellectual Property	Weckert II.11: Tavani, Herman T. "Balancing intellectual property rights and the intellectual commons: A lockean analysis." Computer Ethics. Routledge, 2017. 85-94.
	10/25	Intellectual Property	Fiesler, Casey, Cliff Lampe, and Amy S. Bruckman. "Reality and perception of copyright terms of service for online content creation." Proceedings of the 19th ACM conference on computer-supported cooperative work & social computing. 2016.
	10/30	Privacy	Weckert V.29: Van den Hoven, Jeroen. "Privacy and the varieties of informational wrongdoing." Computer Ethics. Routledge, 2017. 317-330.
	11/1	Privacy	Weckert V.30: Nissenbaum, Helen. "Protecting privacy in an information age: The problem of privacy in public." Computer Ethics. Routledge, 2017 331-368.
	11/6	Privacy	Ch. 4, 'Technological Benevolence' in Benjamin, Ruha. Race after Technology. Polity Press, 2019
	11/8	Sustainability	Jensen, R. H., Strengers, Y., Kjeldskov, J., Nicholls, L., & Skov, M. B. (2018, April). Designing the desirable smart home: A study of household experiences and energy consumption impacts. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (pp. 1-14).
	11/13	Sustainability	Pirson, T., Golard, L., & Bol, D. (2023). Evaluating the (ir)relevance of IoT solutions with respect to environmental limits based on LCA and backcasting studies. Ninth Computing within Limits 2023. LIMITS. https://doi.org/10.21428/bf6fb269.6af396ff
	11/15	Sustainability	Rob Comber and Chiara Rossitto. 2023. Regulating Responsibility: Environmental Sustainability, Law, and the Platformisation of Waste Management. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 237, 1–19.

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	11/20	Sustainability	Denise J. Wilkins, Ruzanna Chitchyan, and Mark Levine. 2020. Peer-to-Peer Energy Markets: Understanding the Values of Collective and Community Trading. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20). Association for Computing Machinery, New York, NY, USA, 1–14.
	11/22		Thanksgiving Break
	11/27	Bias	Weckert III.20: Friedman, Batya, and Helen Nissenbaum. "Bias in computer systems." Computer Ethics. Routledge, 2017. 215-232.
	11/29	Agency Revisited	Weckert IV.22: Friedman, Batya, and Peter H. Kahn Jr. "Human agency and responsible computing: Implications for computer system design." Computer Ethics. Routledge, 241-248.
	12/4	Autonomy Revisited	Weckert VI.34: Kuflik, Arthur. "Computers in control: Rational transfer of authority or irresponsible abdication of autonomy?." Ethics and Information Technology 1.3 (1999): 173-184.

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