

Course: CS 4001 Computing, Society, & Professionalism

Instructor: Munmun De Choudhury (munmund@gatech.edu)

Location: U A Whitaker Biomedical Engr 1232

Time: Tuesday and Thursday 3:00-4:15pm

Office Hours: Friday 11am-12noon

Teaching Assistant: Stevie Chancellor (schancellor3@gatech.edu)

Course Website: http://www.munmund.net/CS4001_Spring2018.html

Learning Objectives

In this class, you will learn about:

- *Ethics:* What do “right” and “wrong” mean anyway? How is “ethical” different from “legal”? We’ll learn about several philosophical approaches to ethics including utilitarianism, Kantianism, social contract theory, and virtue ethics. The goal is for students to be able to address ethical dilemmas with reasoned arguments, grounded in a combination of these ethical theories.
- *Professional Ethics:* What special responsibilities do we have as computing professionals? What do the Software Engineering Code of Ethics and ACM Code of Ethics say, and how can we use these in our daily practice?
- *Computing and Society:* In what ways does computer technology impact society? We will talk about a host of issues including privacy, intellectual property, and freedom of speech, the impacts of the pervasiveness of artificial intelligence, algorithmic bias, corporation and governmental surveillance and so on.
- *Argumentation:* How do you construct a well-reasoned argument? Whatever you go on to do in your professional career, your success will arguably depend more on your oral and written communication skills than on your technical skills. This class is one of your precious opportunities to work to improve those skills.

Assignments and Grading

- Class Attendance and Participation - 15%
- [Surprise] In-Class Quizzes (5 in all) - 5%
- [Individual] Homeworks (4 in all) - 20%
- [Group] Term Paper - 25% (Proposal, Proposal Presentation, Outline, Full Paper, Full Paper Presentation)
- Midterm (in-class) - 15%
- Final Exam (take-home) - 20%

Class Attendance. Class attendance is required. Please remember to sign the attendance sheet each class. Please do not sign the attendance sheet if you are more than 15 minutes late to class. If you need to miss class for a legitimate reason, send email to the instructor and TA before class. You may miss up to two classes without it affecting your grade.

Reference Format. Please use APA format for all references. APA format is described in Appendix 2 of the Writing Arguments textbook, and also here.

ESL. If English is not your first language, you may request to not be graded on your writing for a particular individual assignment, including the term paper. This means you won't be penalized for bad writing, but you also won't get credit for good writing. To take advantage of this option, you must mark "ESL" (English as a Second Language) on the first page of your assignment/paper.

Late Policy. Students need to submit all of their materials on or before the deadline to qualify for 100% credit. A 24 hour delay will result in 25% penalty; 48 hour late submissions will incur 50% penalty. Materials submitted past 48 hours will not be accepted, and will entered a zero grade.

Honor Code. This class abides by the Georgia Tech Honor Code. All assigned work is expected to be individual, except where explicitly written otherwise.

Required Texts

- Ethics for the Information Age, Seventh Edition (preferred; Sixth is also okay), by Michael Quinn
- Writing Arguments: A Rhetoric with Readings, 9th Edition by John D. Ramage, John C. Bean, and June Johnson (Abbreviation: WA)
- Visual & Statistical Thinking: Displays of Evidence for Decision Making by Edward R. Tufte. Graphics Press, 1997. (Only Chapter 2 needed)
- Articles available online.
- The GT Library's Web Localizer is useful for research you need to do for this class. You may also need it to access some assigned readings.

Class Schedule *

* Topics to be covered and the corresponding readings are subject to change. Please always check the online schedule.

9-Jan	Welcome and Overview	
11-Jan	Case Study: Therac-25	"Medical Devices: The Therac-25" by Nancy Leveson
		Radiation Offers New Cures, and Ways to Do Harm(New York Times, January 23, 2010)
16-Jan	Reading Arguments	Writing Arguments 1 & 2
18-Jan	Utilitarianism	Quinn 2.1-2.3, 2.7-2.8
23-Jan	Homework 1 Discussion	Homework 1 Due
25-Jan	Deontology & Social Contract Theory	Quinn 2.6, 2.9
30-Jan	Stakeholder Analysis & Virtue Ethics	In a Different Voice by Carol Gilligan, pp. 25-39
		Virtue Ethics, Stanford Encyclopedia of Philosophy
		Quinn 2.10-2.11
1-Feb	Professional Ethics	Quinn Chapter 9
		Using the New ACM Code of Ethics in Decision Making by Anderson et al.
6-Feb	Ethical Challenges of Technologies for Social Good (Guest Lecture)	Ethical Research Protocols for Social Media Health Research
		Internet Searches for Suicide Following the Release of 13 Reasons Why by Ayers et al.
		Popular Science Commentary / Article: Samaritans suicide prevention app: what we've learnt?
		Popular Science Commentary / Article: Facebook rolls out AI to detect suicidal posts before they're reported

		Popular Science Commentary / Article: Facebook created an AI tool that can prevent suicide, but won't talk about how it works
8-Feb	Freedom of Speech & Networked Communications; Censorship; Cyber Harassment	Quinn 3.2, 3.5-3.8; skim the rest of the chapter
		Social Media Speech by Lata Nott
		Popular Science Commentary / Article: Hate Speech — A Threat to Freedom of Speech
		Popular Science Commentary / Article: Reddit bans 'Fat People Hate' and other subreddits under new harassment rules
13-Feb	Core, Logical Structure of an Argument	Writing Arguments Chapters 3, 4
		Homework 2 Due
15-Feb	Evidence	Writing Arguments Chapter 5
		Academic Urban Legends by Ole Bjorn Rekdal
		A postmodern Pandora's box: Anti-vaccination misinformation on the Internet by Anna Kata
20-Feb	Privacy	Quinn Chapter 5
		"Anonymized" data really isn't by Nate Anderson
		Popular Science Commentary / Article: Zuckerberg: I know that people don't want privacy
		Popular Science Commentary / Article: Don't Buy Anyone an Echo
		Popular Science Commentary / Article: How the Internet of Things will affect security & privacy
22-Feb	Privacy and the Government; The Patriot Act; Case Studies: Minority Report (2001 film), The Circle (2017 film)	Quinn Chapter 6
		EU-US Airline Passenger Data Disclosure (skim)
		Popular Science Commentary / Article: In Your Face: China's all-seeing state (watch the video)
		The Foreign Intelligence Surveillance Act
		The USA Patriot Act
		National Security Letters
		Watch before coming to class: United States of Secrets, Part One and Part Two
27-Feb	Midterm Review	
1-Mar	Guest Lecture	TBA
		Homework 3 Due

6-Mar	Discussion of Term Paper Proposals	Term Paper Proposal (In-Class) Presentations (Slide due the day before)
		Term Paper Proposals Due
8-Mar	Midterm (In-Class)	
13-Mar	Intellectual Property; Software as IP; Piracy	Quinn Chapter 4.1-4.10
15-Mar	Copyright and Remix (Guest Lecture)	TBA
20-Mar	Spring Break	
22-Mar	Spring Break	
27-Mar	Visual Argument	Visual & Statistical Thinking by Tufte
		Term Paper Outline Due
29-Mar	Computer and Network Security, Computer Reliability	Quinn Chapter 7, 8.1-8.4, 8.7-8.8
3-Apr	Power of Corporations, Big Data, and Manipulation	Social bots distort the 2016 US Presidential election online discussion by Bessi and Ferrara
		I always assumed that I wasn't really that close to [her]: Reasoning about Invisible Algorithms in News Feeds by Eslami et al.
5-Apr	Algorithmic Bias	The Relevance of Algorithms by Tarleton Gillespie
		Unequal Representation and Gender Stereotypes in Image Search Results for Occupations by Kay et al.
		Racial Discrimination in the Sharing Economy: Evidence from a Field Experiment by Edelman et al.
		Deep neural networks are more accurate than humans at detecting sexual orientation from facial images by Wang and Kosinski
		Popular Science Commentary / Article: Amazon Doesn't Consider the Race of Its Customers. Should It?
		Popular Science Commentary / Article: Troubling Study Says Artificial Intelligence Can Predict Who Will Be Criminals Based on Facial Features
		Homework 4 Due
10-Apr	AI, Robots, Automation; Case Studies: 2001 A Space Odyssey (1968 film), Ex Machina (2015 film)	Why Machine Ethics? by Allen et al.
		Rise of concerns about AI: reflections and directions by Dietterich and Horvitz
		How Technology is Destroying Jobs by Dana Rotman
		Popular Science Commentary / Piece: Driverless Cars Will Face Moral Dilemmas
		Popular Science Commentary / Piece: From Siri to sexbots: Female AI reinforces a toxic desire for passive, agreeable and easily dominated women
12-Apr	Research Ethics	Experimental evidence of massive-scale emotional contagion through social networks by Kramer et al.

		Protecting human research participants in the age of big data by Fiske and Hauser
		Beyond the Belmont Principles: Ethical Challenges, Practices, and Beliefs in the Online Data Research Community by Vitak et al.
17-Apr	Term Paper Presentations I	Slides due the day before
19-Apr	Term Paper Presentations II	Slides due the day before
		Full Term Paper Due
24-Apr	Final Exam Review	
26-Apr	Final Exam (Take home)	