DTSC 3030 - 400 - Cyber Ethics for Data Scientists
University of North Texas
3 Credit Hours; 15 Weeks

Instructor	Dr. Gahangir Hossain
Semester / Section	Fall 2026
Meeting Time / Location	Online
Office Hours	Tuesday : 5p – 8p
Contact	Gahangir.Hossain@unt.edu
Teaching Assistant	Esther Eze; EstherEze@my.unt.edu

Course Description

3 hours. This is a 100% online course. In a world driven by rapid technological advancements and digital interactions, understanding the ethical implications of cyber activities has become crucial. This introductory course explores the fundamental principles and frameworks of cyber ethics, setting the stage for in-depth discussions on digital rights, privacy, cybersecurity, and responsible online behavior. Students will examine the role of ethics in technology design, analyze key dilemmas faced by users and organizations, and reflect on their personal responsibilities in digital spaces.

Course Objectives

This course will introduce cyber ethics, through the development of knowledge and skills in the following areas:

- Explain and compare major ethical theories relevant to computing.
- Apply ethical reasoning to cybersecurity, privacy, AI, and data dilemmas.
- Evaluate professional responsibilities using recognized computing ethics principles.
- Analyze bias, fairness, accountability, transparency, and privacy in AI systems.
- Assess ethical dimensions of cybercrime, cyberwarfare, global governance, and sustainability.
- Develop defensible recommendations for complex technology ethics cases.

Course Learning Outcomes

Upon completion of this course, students will have: Demonstrated a clear understanding of cyber ethics and its importance in the digital landscape; Critically assessed and compared different ethical frameworks as they apply to online decision-making; Analyzed ethical issues in contemporary digital environments; Used ethical reasoning to propose solutions to hypothetical and real-world cases involving cyber dilemmas; Reflected on personal roles and responsibilities as ethical participants in digital spaces.

Course Learning Outcomes (ABET-Oriented)

- Apply major ethical theories to data-science, AI, and cybersecurity dilemmas (ABET SO 1, 4).
- Analyze stakeholder impacts, rights, harms, benefits, and competing professional obligations (SO 1, 4).
- Evaluate algorithmic bias, discrimination, transparency, accountability, and human oversight (SO 1, 2, 4).
- Assess ethical issues in cybersecurity research, vulnerability disclosure, surveillance, and dual-use technologies (SO 1, 4).
- Communicate and defend ethical analyses clearly in written and oral formats (SO 3).
- Work constructively in discussion and case-analysis activities involving diverse perspectives (SO 5).
- Locate and apply professional codes, standards, and current evidence to emerging ethical problems (SO 4, 7).

Required / Primary Text

1. Fiala, A., & MacKinnon, B. (2024). Ethics: Theory and Contemporary Issues (10th ed.). Cengage Learning. ISBN-13: 978-0-357-79853-9.
2. Selected current scholarly articles, standards, regulatory guidance, and case materials will be provided through the LMS.

Course Organization

- Unit I — Foundations of Cyber Ethics (Weeks 1–5)
- Unit II — Rights, Privacy, and Professional Ethics (Weeks 6–8)
- Unit III — AI and Data Ethics (Weeks 9–12)
- Unit IV — Cyber Society, Governance, and the Future (Weeks 13–15)

Assessment and Grading

Assessment	Number	Weight Each	Course Weight
Participation, Discussion & Attendance	Ongoing	—	10%
Homework / Case Studies	4	10%	40%
Quizzes	10	2%	20%
Ethics Final / Applied Exam	1	30%	30%

Course Schedule

Week	Topic	Book Ch.	Short Reading	Due Dates
1	Introduction to Ethics and Cyber Ethics	1	Moor (1985), "What Is Computer Ethics?"	
2	Ethical Relativism, Culture, and Global Cyberspace	3; selected concepts from 2	ACM Code of Ethics, General Ethical Principles	Discussion#1, Quiz#1
3	Egoism, Social Contract, and Technology Companies	4	ACM Code, principles on avoiding harm and respecting users	Discussion#2, Quiz#2
4	Utilitarianism and Cybersecurity Decisions	5	Menlo Report, selected Beneficence section	Discussion#3, Quiz#3
5	Deontological Ethics and Professional Duties	6	ACM Code of Ethics, Sections 1–2	Discussion#4, Quiz#4
6	Human Rights and Digital Privacy	7	Solove (2007), selected pages	Homework Assignemnt#1
7	Ethical Hacking and Cybersecurity Research	5–7 application	The Menlo Report, selected principles	Discussion#5, Quiz#5
8	Virtue Ethics and the Cybersecurity Professional	8	Selected ACM Code case/application	Discussion#6, Quiz#6
9	Equality, Bias, and Algorithmic Discrimination	13	Jobin, Ienca, & Vayena (2019)	Homework Assignemnt#2
10	Data Privacy and Contextual Integrity	7 and 13 application	Nissenbaum (2004), selected sections	Discussion#7, Quiz#7
11	Responsible and Trustworthy AI	5–8 and 13 synthesis	NIST AI RMF 1.0, trustworthy-AI characteristics	Discussion#8, Quiz#8
12	Generative AI, LLMs, and Accountability	5–8 and 13 application	NIST Generative AI Profile, selected risks	Discussion#9, Quiz#9
13	Global Justice and AI Governance	15	Jobin et al. (2019), selected principles	Homework Assignemnt#3
14	Cybercrime, Punishment, Hacktivism, and Cyberwarfare	17; selected 18	Instructor-selected cyberwarfare/ransomware case	Discussion#10, Quiz#10
15	Environmental Ethics and the Future of Cyber/AI Ethics	19; course synthesis	Short reading on AI/data-center sustainability	Homework Assignemnt#4

Course Expectations
Discussion and case analysis are central to the course. Students should support claims with ethical principles, privacy/security concepts, evidence, standards, or scholarly sources as appropriate. Graduate students may be required to provide deeper literature-supported analysis in selected assignments.
Suggested Policies
Academic Integrity: Students must submit their own work and follow university academic-integrity requirements.
Generative AI: AI tools may be used only as permitted for a specific activity. Students remain responsible for accuracy, originality, citation, and protection of confidential or sensitive data.
Attendance: Since this is Online class, no regular attendance is required, however active participation is expected; documented absences follow university policy.
Accessibility: Students requiring accommodation should follow the university's official accessibility process.
Schedule Changes: The instructor may make reasonable adjustments to readings, activities, and due dates with notice through the LMS.

COURSE EVALUATION
Student Evaluation Administration Dates
Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey, they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website at http://spot.unt.edu/ or email spot@unt.edu.

COURSE POLICIES
Assignment Policy
Students should submit the assignments and term project reports at class site in canvas.unt.edu.
Late Work and Missed Work
Students are expected to submit assignments and projects on time. **The due dates are Mondays 11:59pm of the week specified in Table 2.** If an extenuating circumstance such as a medically diagnosed illness or family emergency arises, which prevents you from submitting your assignments, you should contact the instructor and the TA as soon as possible before the due date. Late work without the permission of the instructor will receive a grade with a 10% penalty (or 10 points out of 100) per day after the due date. A student who is having trouble with assignments is strongly encouraged to contact the instructor and the TA as early as possible for personal advising. Grade Dispute
Your grade is determined by your performance on the learning assessments and is assigned individually (not curved). All assessment scores will be posted on the course page. If you would like to review any of your grades, or have questions about how something was scored, please email me to schedule a time for us to meet online. Any grade disputes must be submitted in writing and within one week of receiving the grade.

Instructor Responsibilities and Feedback
- Helping students grow and learn
- Providing clear instructions for projects and assessments
- Answering questions about assignments
- Identifying additional resources as necessary
- Providing grading rubrics
- Reviewing and updating course content
- he instructor and TA will respond to students' emails and questions posted to the discussion boards within two days except for the weekends
- Assignments, grades and feedback will be returned to the students within one week after the submission deadline.

Course Incomplete Grade
The UNT Graduate Catalog (http://catalog.unt.edu/index.php?catoid=16) describes and explains grading policies. A grade of Incomplete (I) will be given only for a justifiable reason and only if the student is passing the course. The student is responsible for meeting with the instructor to request an incomplete and discuss requirements for completing the course. If an incomplete is not removed within the time frame agreed to by instructor and student, the instructor may assign a grade of F.

Withdrawal
The UNT Graduate Catalog (http://catalog.unt.edu/index.php?catoid=16) describes and explains withdrawal policies and deadlines. The UNT semester course schedule lists specific deadlines regarding withdrawal. A grade of Withdraw (W) or Withdraw-Failing (WF) will be given depending on a student's attendance record and grade earned. Please note that a student who simply stops attending class and does not file a withdrawal form may receive an F.

Attendance Policy
Attendance is not required for each class meeting. Prior to the meeting, please prepare your questions to discuss. Please be muted when you join the meeting first, then unmute yourself when you need to ask questions or talk.

Students' Responsibility for Their Learning
The students are required to follow course schedule and finish the class work, assignments, and term projects. Students are expected to study at least 15 hours per week to achieve satisfactory class performance.

UNT POLICIES
Academic Integrity Policy
Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Policy
UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodation at any time; however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

Emergency Notification & Procedures
UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

Retention of Student Records
Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Blackboard online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public

Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior
Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at deanofstudents.unt.edu/conduct.

Access to Information - Eagle Connect
Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail: eagleconnect.unt.edu/**.**

Sexual Assault Prevention
UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination based on sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Use of Student Work
A student owns the copyright for all work (e.g., software, photographs, reports, presentations, and email postings) he or she creates within a class, and the University is not entitled to use any student work without the student's permission unless all the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all the above criteria, then the University office or department using the work must obtain the student's written permission.

Reference Readings

- Moor, J. H. (1985). What is computer ethics? Metaphilosophy, 16(4), 266–275.
- Association for Computing Machinery. (2018). ACM Code of Ethics and Professional Conduct.
- Dittrich, D., Kenneally, E., et al. (2012). The Menlo Report: Ethical Principles Guiding Information and Communication Technology Research.
- Solove, D. J. (2007). "I've Got Nothing to Hide" and Other Misunderstandings of Privacy. San Diego Law Review, 44, 745–772.
- Nissenbaum, H. (2004). Privacy as contextual integrity. Washington Law Review, 79(1), 119–158.
- Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. Nature Machine Intelligence, 1, 389–399.

- National Institute of Standards and Technology. (2023). Artificial Intelligence Risk Management Framework (AI RMF 1.0).
- National Institute of Standards and Technology. (2024). Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile.
- Fiala, A., & MacKinnon, B. (2024). Ethics: Theory and Contemporary Issues (10th ed.). Cengage Learning.