# CS7451: Human-Centered Data Analysis Syllabus

Human-Centered Data Analysis, Section A, 3 credits

Fall 2026

## Instructor Information

**Instructor:** Alex Endert

**Email:** endert@gatech.edu

## General Course Information

### Description

Data analysis is a process consisting of people and technology working together to make sense and gain insight into data. It is a combination of algorithms, techniques, tools, visualizations, and other methods to compute specific outputs from data. Then, it is driven by (or influenced) by human judgement, knowledge-generation workflows, social factors, and others. Thus, it is through a combination of human action and computational processes that insight into data is gained, and decisions can be made.

### Course Learning Outcomes

- Reading, presenting, and discussing literature on human-centered data analysis
- Critiquing and reflecting on readings
- Putting principles of human-centered data analysis into practice (through individual assignments and group projects)
- Presenting dangers, pitfalls, as well as opportunities of human-in-the-loop approaches
- Presenting and communicating analysis results

### Required Course Materials

There are no required textbook for this course. However, there are a collection of resources that you should find helpful for assignments throughout the course. There are also readings that we will cover throughout the course which are all available while on the GT VPN (or on campus).

**Grading Policy:**

This course consists of graded individual homework assignments, group reading presentations, and a group project.

A>90; B>80; C>70; D>60

*Assignments*
- HW1: ACH, 15%
- HW2: Model Steering, 15%
- HW3: Lumos, 15%
- Reading Presentation, 20%
- Group Project, 35%

**Description of Graded Components**

The homeworks are individual. The project and presentations are performed in groups.

## Course Policies

**Attendance and/or Participation**

This will be an active classroom, where you will be expected to participate **and attend.**

**Academic Integrity**

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

**Core IMPACTS**

Not applicable.

**Accommodations for Students with Disabilities**

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

**Student-Faculty Expectations Agreement**

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

## Campus Resources for Students

**Undergraduate Student Academic Success Resources:**

- Academic Support: Academic Success and Advising (a unit in the Office of Undergraduate Education & Student Success) provides free support for your courses. Students can attend scheduled supplemental review (PLUS) sessions, stop by Drop-In Tutoring, or schedule a one-on-one appointment through Knack. To explore what options work best for you, please visit us online at success.gatech.edu/tutoring, email us at tutoring@gatech.edu, or come see us at Clough Undergraduate Learning Commons, Suite 283.

**Graduate Student Academic and Professional Success Resources:**

A list of resources for graduate students is given on the Office of Graduate and Postdoctoral Education website. Specific information for current graduate students includes

- Academic Resources such as the Communications Center, Language Institute, Library, Catalog, Registrar, resources for conducting research, Advocacy and Conflict Resolution resources, and how to manage unexpected situations that may impact your academic performance;
- Student Resources such as Campus Services, Child Care/Family programs, Health & Wellness, Career Services, and the Student Resource Guide; and
- *Professional Development such as the programming from the Career Center and other professional development resources and events"*

**Student Well-Being:**

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being (student-resource-guide (gatech.edu)