11.S195 NEET Sophomore Seminar: Data Collection in Cities

Time       Wednesday 9am - 11am
Location   10-485
Instructors   Eric Huntley  ehuntley@mit.edu
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Credits     3 units
Office Hours  Eric: Monday, 9-12am
                     Ceasar: Thursdays 9-10:30am

Course Description

It has never been easier to sense and monitor urban life. Collecting data describing city systems has traditionally required enormous institutional capacity and financial investment. It has therefore generally been undertaken by governments, corporations, and academic institutions. This is no longer the case. Now, anyone can collect data with minimal training thanks to innovations in digital technology that have transformed everything from mobile phones to dog collars into data collection devices. As data collection and analysis technologies have become more widely available, new opportunities have emerged to shape public conversations around shared interests, teach data literacy, and challenge powerful institutions. It has also become obvious in recent years that, deployed thoughtlessly, large-scale data collection can contribute to widening digital divides, algorithmic inequality, and the erosion of democratic accountability. We will therefore be working to hold a responsible position that is simultaneously optimistic, skeptical, and grounded in the values that are at the core of urban planning as a community of practice.

This seminar will lay the groundwork for students to responsibly develop participatory sensing tools for MIT campus clients in the spring workshop. We will look at both the political possibilities of participatory data collection data and the ethical challenges posed to governments, activists, and industry in an increasingly data-saturated political sphere.

What Will We be Learning?

Students will build on their ability to develop and debate the uses and social ramifications of innovative urban technologies. Furthermore, students will develop a greater appreciation for the responsibility that accompanies MIT’s mission to develop and deploy innovative technological solutions to the challenging problems facing our cities and our world.

Are There Textbooks?

No! But we will provide reading lists to students that contain resources for students to pursue as they develop as engineers and urbanists.
Attendance

Attendance is mandatory! Because here’s the thing… this class will be based on student engagement and discussion. So any individual student’s apathy impacts the ability of the class to do its work. So: each unexcused absence will result in a stepwise reduction in your final grade (e.g., A becomes A-). Please note, though, that an absence does not imply that we must provide you with a walkthrough of the happenings of the day!

Email

We reserve the right to take up to 24 hours to respond to your emails during the week. We do not respond to emails on Saturday and do so on Sunday only at our discretion. The labor movement fought long and hard to secure your weekend! It is truly remarkable that we live in a world in which an email can travel to space and divebomb from the exosphere to our pockets in a matter of seconds; this does not imply that our response must be equally instantaneous.

A Note on College and Mental Health

Academic environments are taxing places. For reasons structural, institutional, financial, and interpersonal, they do not always lend themselves to what most reasonable people would think of as human flourishing.

There are two points here:

1. MIT offers a range of counseling and mental health resources for students. We would really encourage you to be proactive about taking advantage of them! Please discuss concerns with Student Support Services (S3) in 5-104 or at 617-253-4861. For urgent or after-hours concerns, please contact MIT Police.
2. Do not hesitate to let us know if you’re struggling. It is not our intention to mine for the details of your private lives! It is only to let you know that we are sensitive to the distinctive difficulties of the environment we inhabit and that help is available.

Academic Integrity

In this course, we will hold you to the high standard of academic integrity expected of all students at the Institute. We do this for two reasons. First, it is essential to the learning process that you are the one doing the work. We have structured the assignments in this course to enable you to gain a mastery of the course material. Failing to do the work yourself will result in a lesser understanding of the content, and therefore a less meaningful education for you.

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1 Statement adapted from the MIT Teaching + Learning Lab.
Second, it is important that there be a level playing field for all students in this course and at the Institute so that the rigor and integrity of the Institute’s educational program is maintained.

Violating the Academic Integrity policy in any way (e.g., plagiarism, unauthorized collaboration, cheating, etc.) will result in official Institute sanction. Possible sanctions include receiving a failing grade on the assignment or exam, being assigned a failing grade in the course, having a formal notation of disciplinary action placed on your MIT record, suspension from the Institute, and expulsion from the Institute for very serious cases.

Please review the Academic Integrity policy and related resources (e.g., working under pressure; how to paraphrase, summarize, and quote; etc.) and contact us if you have any questions about appropriate citation methods, the degree of collaboration that is permitted, or anything else related to the Academic Integrity of this course.

Diversity

MIT values an inclusive environment. We hope to foster a sense of community in this classroom and consider this classroom to be a place where you will be treated with respect. We welcome individuals of all backgrounds, beliefs, ethnicities, national origins, gender identities, sexual orientations, religious and political affiliations – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the class. If this standard is not being upheld, please feel free to speak with us.

Special Accommodations for Students with Disabilities

If you need disability-related accommodations, we encourage you to meet with us early in the semester. If you have not yet been approved for accommodations, please contact Student Disability Services at sds-all@mit.edu.

Schedule

Sept. 4: Welcome

Sept. 11: MIT in/on the City

Sept. 18:: Open Data

Sept. 25:: City Sensing

Oct 2: Privacy + Surveillance

Oct 9: No class.
Oct 16: Have we been here before?: Histories of Urban Computing