WHEN MACHINES DECIDE: THE PROMISE & PERIL OF LIVING IN A DATA-DRIVEN SOCIETY

Honors 3700-002, Fall, 2016-Spring 2017
Thursdays 2:00 pm-5:00 pm
MHC 1205

INSTRUCTORS:

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LIBGUIDE AND RESEARCH

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COURSE DESCRIPTION

We live in an age of information abundance. An age where every aspect of our daily life is monitored, tracked, recorded and stored. An age where society is generating more than 2.5 quintillion bytes of data every day. All this data is being collected and analyzed by governments, businesses, scientists and others who use sophisticated algorithms and data analytics to empower machines to make decisions that impact our lives. Machines are inherently agnostic — neither good nor evil. But, they may be used for both good and bad purposes. New technologies may reshape and restructure society in ways we might not expect and cannot predict. Big Data can improve health and education, enhance economic vitality and make our nation safer and more energy efficient. On the other hand, when machines use algorithms and artificial intelligence to supplement or even supplant human decision-making, fundamental values like privacy and fairness may be at risk. Will Big Data and machine learning usher in a new age of enlightenment and prosperity or undermine our values and result in an erosion of autonomy and self-determination?

In this Praxis Lab, we will explore the various ways in which the data revolution is changing our laws, our society and even the way we think of ourselves as free-willed humans. We will also conceive, design and implement a team project addressing a contemporary issue involving big data, which project will have value and utility beyond the classroom.

COURSE OBJECTIVES AND LEARNING OUTCOMES

Upon the successful completion of this course, you will have:

1. Gained an in-depth understanding of the substantive legal, policy and ethical dimensions of big data, predictive analytics, machine learning and decision-making and related technologies through exposure to a variety of sources of information and diverse perspectives.

2. Established a collaborative, self-directed, group oriented learning experience in a conducive environment.

3. Developed critical and reflective thinking skills that apply the substantive knowledge gained to the world around you and in new settings and to new issues.

4. Conceived, designed and implemented a team project that addresses a contemporary issue in our data driven society which will have educational value and/or social utility beyond the course.

5. Developed organizational, communication, decision-making and other interpersonal skills necessary to identify, set and accomplish a group objective or goal.

6. Improved your scholarly research, speaking and presentation skills.

7. Produced tangible work product that evidences intellectual rigor and practical competence that may useful in pursuing future employment or further education.

TEXTBOOK AND MATERIALS
There is no required textbook for this course. All assigned readings are either online as indicated by hyperlinks in the course schedule posted on the LibGuide or are posted on the course Canvas page. Readings must be done before the relevant class period. Because of the rapidly changing subject matter of the course, the assigned readings may be revised or supplemented throughout the semester.

COURSE LIBRARY GUIDE AND CANVAS PAGE
The primary online interface for the course is a Library Subject Guide (LibGuide) which may be accessed at

http://campusguides.lib.utah.edu/c.php?g=493509&p=3376346&preview=1c8780a908d908bad80cd709044fae64

The LibGuide is a public portal and all student, professor and guest presenter work product will be posted on the LibGuide. Students should access the LibGuide on a daily basis.

The course Canvas page will be used primarily for notifications and administrative purposes, although some substantive use of the platform may be utilized.

Both the Course LibGuide and Canvas platforms automatically collect and store information about each user and the professors reserve the right to aggregate and use this information both during and after this course for instructional, research or other academic purposes. However, such information, if used in a public manner, will be anonymized and not used for commercial purposes.

REQUIRED IN-CLASS & OUTSIDE PARTICIPATION

Learning is easier and more enriching when students and teachers are part of an engaged community. Students should be prepared to discuss the weekly reading/viewing assignments in depth. The success of this course depends on all participants engaging the readings and viewings before each of our weekly class meetings and contributing to the discussions. We expect students to be motivated and hardworking. Students must also ask questions following the presentations by students and guest speakers. Substantial out-of-class time is necessary and expected for satisfactory performance in class.

QUESTION OF THE WEEK

Each Friday we will post a "Question of the Week" on the LibGuide. The question will relate to the coming week's readings and topics. You will answer the question and come to Thursday's class prepared to discuss and justify your answer. This discussion will be facilitated by the course instructors.

STUDENT CLASS DISCUSSION LEADERS

Twice during the Fall semester, two students (working as a team) will be responsible for (1) leading the class discussion on the assigned readings/viewings and (2) identifying and facilitating a discussion about a contemporary data related issue or event that arose or occurred during the prior week. Examples of the latter may include a high profile data breach, the announcement of a new data collecting app, a regulatory development or proposed legislation impacting data collection, use or management, etc.   You will be assigned specific weeks on the first day of class. As a two-person team you will work together to stimulate class discussion by critically summarizing and assessing the readings and describing the identified contemporary data event and any questions raised by the event. You must actively lead the conversation that follows, raising questions worthy of debate and discussion relating to the readings and the data event. Each team presenting also must turn in a four page, double spaced, critical summary of the weekly readings/viewings. The document should evidence a thorough understanding of the assigned readings, critically assess the strengths and weaknesses of the readings, outline the focus of the anticipated class discussion and pose several questions that will be asked of the class to stimulate discussion. The reading summaries are due at the beginning of class on Thursday of the selected week.

RESEARCH PROJECTS AND ORAL PRESENTATIONS

Students must elect one of two short research projects described below:

     1. author a traditional research paper on a topic related to data, data analytics or machine learning/decision-making. The text of the paper should be 8-10 double-spaced pages and also include a title, abstract and reference list. Students will also give a 10 minute oral presentation to the class on the paper.

     2. identify a local business, agency or organization and research and investigate how it collects, uses, analyzes, stores, safeguards and manages data in connection with the operation of the entity. An interview of one or more appropriate persons within the organization is strongly encouraged. The results of the research and investigation should be summarized in an 8-10 double-spaced page paper. Students will also give a 10 minute oral presentation to the class.

The papers will be posted on the course LibGuide and the presentations will be videotaped and also posted. Students are encouraged to use graphics, slides, audio, videotape and other communications technologies in their presentations (see presentation tips under the tab "Student Presentations" in the LibGuide) and include hyperlinks to available resources in their papers (see paper tips under tab "Student Papers").

TEAM PROJECT PROPOSALS

Working in teams of two, students will identify a big data related question or issue they want to answer or address in the Team Project during spring semester. In 8-10 double-spaced pages, the students should introduce the question or issue, address the background to the subject, make a persuasive case why the proposed Team Project is important to a larger community outside the class, describe and outline the components steps of the Project, and set out a timeline for the completion of the Project during the Spring semester.

COURSE STRUCTURE AND FORMAT

In general, the time spent in each class this semester will be devoted to one or more of the following:

     1. a discussion of the "Question of the Week"
     2. a discussion of the assigned readings/viewings and contemporary data event.
     3. critiquing and responding to student presentations;
     4. a discussion surrounding a substantive lecture or guest presentation by the course professors or an outside expert; and
     5. identifying and selecting the Spring semester Team Project(s)
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STUDENT REQUIREMENTS (FALL SEMESTER)

1. Complete the student survey posted on Canvas.
2. Post a photograph and brief "Personal Portrait" on the course Library Guide.
3. Complete all required readings/viewings **BEFORE** each weekly class and actively contribute to class discussions. Your grade for participation in class discussions will be based on both quality and quantity. You should stimulate class discussion by critically assessing the readings and/or lecture/presentation, summarizing key points and asking thoughtful questions. **A brief 10 minute quiz on the week's readings will be taken at the beginning of each class.**
4. Come to class prepared to discuss the "Question of the Week."
5. Act as a discussion leader and submit the accompanying discussion facilitation document.
6. Conduct one of the two identified individual research projects, author a paper and present the project/paper to the class.
7. Prepare and post on the LibGuide an 8-10 page proposal for the Spring semester Team Project and present the proposal to the class.

KEY DATES FOR FALL SEMESTER

August 25, 2016	Student survey completed; assignment of student class discussion leader teams.
September 1, 2016	Personal sketches posted on Library Guide;
September 8, 2016	Selection of individual research topics
November 17, 2016	Oral presentations on individual research topics
December 1, 2016	Student oral presentations on proposed Team Projects
December 8, 2016	Final selection and preliminary planning on Team Projects

GRADING

The relative weights are assigned to the following graded components for this semester

      (10%) Quizzes

      (30%) Participation (student requirements 1-5)

      (30%) Individual Research Topic, Paper & Presentation

      (30%) Team Project proposal

OFFICE HOURS

Professors Dryer and Suresh have regular office hours at the times set out below. Other meeting times may be scheduled by appointment via email or phone.

      Professor Dryer: r.dryer@honors.utah.edu Tues. 9:00–10:00 am and Thurs. 9:00-10:00

      Professor Venkat suresh@cs.utah.edu Mon. 9:00-11:00 am

Librarians Craigle and Ziegenfuss are available on an as needed basis by email or telephone at

      valeri.craigle@law.utah.edu   (801) 585-5475

      donna.ziegenfuss@utah.edu (801) 585-0542

COURSE POLICIES

·   Regular and thoughtful participation is expected and required in this course as part of the grade; accordingly, attendance is necessary in order to meet that requirement. If you will miss a class to participate in an official university sanctioned activity, or are otherwise absent for health or family reasons, please contact me in advance of your absence.

·   Students are expected to have read and reflected on class readings/assignments in advance of class in order to ensure the relevance and thoughtfulness of their contributions, on which their success in the class depends, in part. In order to ensure further the quality of class discussions, please be in class on time and remain in class for the entire period.

·   The use of cell phones, iPods, MP3 players, and other electronic media are not permitted in the classroom except in conjunction with instructional activities; computers may only be used for note taking or other class related purposes.

·   The American with Disabilities Act (ADA) requires that reasonable accommodations be provided for students with physical, sensory, cognitive, systemic, learning, or psychiatric disabilities. Students requiring such accommodation should speak with me at the beginning of the semester in order to make appropriate arrangements for this course. The Center for Disabled Student Services (Olpin Union, 581-5020) will also need to be informed. See the following link for more information: http://disability.utah.edu/.

·   The registrar cautions students that withdrawing from a course and other registration matters are the student's responsibility. See the following link for more information: http://www.sa.utah.edu/regist/handbook/withdrawal.htm.

·   In accordance with university policy (as articulated in the Student Code), academic misconduct-including cheating, fabrication of information and plagiarism-is not acceptable. A student found engaging in this behavior will receive a failing grade. If at any time you are unsure whether your actions constitute academic misconduct, please see me in order to clarify the matter. See the following link for more information: http://www.regulations.utah.edu/academics/6-400.html.

·   Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677 (COPS).

.   Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your Campus Information Systems (CIS) account). While CIS refers to this as merely a *preference*, we will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, etc. Please advise us of any name or pronoun changes (and update CIS) so we can help create a learning environment in which you, your name, and your pronoun will be respected.