INF350E/INF385T Personal Informatics
Spring 2017

School of Information
The University of Texas at Austin

Class Meeting Time: Thursdays 9am-12pm, UTA 1.504
Instructor: Dr. Edison Thomaz
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Description

This will be a research-focused, seminar-style class focused on Personal Informatics (PI), a new and exciting area of study centered on streams of data that emerge from individuals. It draws upon theories, methods and techniques from Human-Computer Interaction, Ubicomp, and Information Visualization. In this class, we will go over many PI topics, including:

- Sources of PI data
- Active and passive methods for data collection
- Concepts, models, and theories around PI
- Prototyping and evaluation of apps, UIs and visualizations
- Sharing and privacy issues for personal data
- Self-experimentation and self-reflection
- Behavior change with personal data
- Practical challenges of personal informatics

Requirements

Academic: The ultimate goal of the class is to empower students to build new applications, models, visualizations and interfaces around and for personal informatics. Since we will be collecting, processing and analyzing data, we will be writing computer programs; for that we will be using the Python programming language. I will not be assuming that you are an expert programmer or that you are familiar specifically with Python, but I will assume that you are comfortable programming.

Writing & Speaking: This course involves significant speaking and writing skills. Assignments must be written in English and typeset. While primary assessment will focus on course material, correct spelling and grammar (along with coherence and logic) are expected and will be assessed in grading. Also, everyone is expected to talk in every class. Class discussion each week is intended to reinforce understanding of material. UT offers individual writing consultations to Graduate Students. Take advantage of these services, particularly before handing in project assignments (this of course requires starting early to draft papers early

enough to get feedback from consultations and revise drafts accordingly). Undergraduate students can make similar use of UT's Writing Center. The UT CELTA Center (Certificate in English Language Teaching to Speakers of Other Languages) offers free ESL classes at multiple levels.

Readings: Critique + Discussion Questions

All students in the class will be expected to read the required readings assigned for the week (for most weeks, two readings will be assigned). Additionally, for each assigned paper, each student will be expected to submit a **two-paragraph critique** (i.e., what you liked and disliked about the paper), and **two discussion points** that we will bring up and talk about in class. These points could be elements of the paper that you did not understand or specific questions that emerged while you were reading the paper (e.g., about the methodology, instrumentation, user study, data analysis, motivation).

To write your critique and come up with the two discussion points, here are some examples of questions you could ask yourself while reading and examining papers:

- Is the work well motivated?
- What kind of real-world impact can it have?
- Are the methods and approaches sound?
- How does the research compare to prior work? Is it evolutionary?
- Are the experiments well formulated and conducted?
- What main problems or research questions are raised?
- Are the claims well-supported?
- What different assumptions are being made?
- Does the work generalize to other situations, individuals?
- What research questions are left open?

You should post your critique paragraphs and discussion points to the Canvas discussion forum thread that is associated with the corresponding topic. The deadline for these will always be **Wednesday at 6PM**. You will be graded on the quality of your critique and discussion points.

All reading materials will be provided by the instructor or TA either in paper copy or electronically (i.e., link to PDF). There is no textbook for the course.

Paper Presentations

Twice during the semester, students will be required to present a paper to the class (20 minutes). As the paper "expert", the student presenter will be required to read the paper in detail and prepare a set of slides to show in class. The presentation will kick off a 10 minute discussion. On **January 26th**, we will have an in-class activity where students will have the opportunity to pick their papers and topics.

Assignments

Students will be asked to complete three assignments during the semester:

Assignment #1: Data Analysis (due **Feb 9th**)
Assignment #2: Motion Tracking (due **Mar 23rd**)
Assignment #3: Food Logging (due **April 6th**)
Assignment #4: Self-Experiments (due **April 20th**)

As indicated, the assignments will be due 2 weeks after they have been made available.

Project

There will be one group project during the semester. Projects should be original research or at a minimum, have elements that are original. It is ok to build on previous ideas and studies, but it is not appropriate to simply replicate previous work.

Students will be responsible for forming teams composed of 2-4 students. During class on **February 2nd**, you will have an opportunity to describe one or more ideas that you would like to work on and see if you can form a team around it. If you cannot convince others to work on your idea, it will be your responsibility to find and join another team. All teams should be formed by **February 16th**.

Project Proposal

The first project deliverable will be the project proposal, which will be due on **March 2nd**. Please include the following in your proposal, which should be no longer than 2 pages. All the sections outlined below should be included.

- Title
- Group Members and their Roles
- Description: What the group plans to do for the project and your approach
- Motivation: Why the work matters
- Description of previous research in the area (with references)
- Resources you may need (in terms of hardware, software, etc)
- How do you plan to get these resources?
- Timeline
- Grading Criteria: How should we grade your project?
- References

The project plan you include in your proposal is just an initial plan, not a binding contract. It is your best guess initially. It is ok to revise and update it as your work progress and changes occur.

Project Final Presentation

The day of **May 4th** will be dedicated to project presentations. Bring a demo of your project to class to present to the instructor and other students. Plan on a 10 minute presentation. If you cannot physically bring your project to class, bring enough material so that you can show us

what you did. You may optionally bring slides or a poster to use in your demo. Don't just show us your required video; you must be able to talk and explain your project. You can use a short video clip as part of your presentation, but do not just play your full video. Turn in any presentation materials you produce (e.g., slides, video).

Project Final Report

The report should be 4-pages long following the ACM double-column format. You may submit appendices which include design documents or other diagrams such as circuit layouts. These will not count towards your four pages. You may submit a paper longer than 4 pages if you need to. However you will not receive more credit for doing so. And if you submit a long write-up that is redundant it may actually hurt your grade. Refer to the papers we have read in class for pointers on how to present your work in writing.

Links to the Latex and Word templates for this format can be found here:

Word:
http://www.sigchi.org/publications/chipubform/sigchi-paper-format-2016/at_download/file

Latex:
https://github.com/sigchi/Document-Formats

The sections we would like to see in your writeup are:

- Title
- Group Members
- Introduction: What you're doing, why it's important
- Prior work: What's already been done and why your work is different
- Description of the work, implementation details, data analysis, etc.
- Contributions: What are the original elements of the work
- Discussion: What have you learned
- Future Work: What remains to be done for your project and future possibilities
- Conclusions: Take home points
- Division of Work: How the work was divided up amongst the group members
- References

Project Grading

For the project, specific deliverables are asked and should be completed to the best of your team's ability. Teams that complete all the project deliverables satisfactorily should expect a grade of 90%. The remaining 10% of the points are reserved for work that stands out in some way, in areas such as implementation, academic contribution, human-centered design, user study, performance, novelty of approach, etc.

Class Participation

During the semester, there will be many opportunities for students to participate in class activities. A class participation grade will be derived from the level of engagement observed in these types of in-class activities.

Late Deliverables

Late deliverables will be accepted for two weeks after their due date, but at a penalty of 10 points per week -- so failure to turn in an assignment at the due date results in an immediate 10 point penalty. After two weeks, assignments will receive a 0. In the interest of fairness, there will not be any exceptions to this policy.

Laptops and Mobile Devices

Productive use of a laptop or other mobile device during class to take notes, look up information or resources, etc. is allowed. However, if you are engrossed in your device and not clearly giving attention to the speaker and participating, you will be asked to turn off your device.

Exams

There will not be a midterm or final exam for this course.

Grading

Here is a breakdown of how the final grade for each student will be computed:

Class Participation	10%
Reading Critiques and Discussion Board Activity	20%
Paper Presentation and Moderation	10%
Assignments:	30%
Assignment #1	7.5%
Assignment #2	7.5%
Assignment #3	7.5%
Assignment #4	7.5%
Project	30%
Proposal	10%
Final Presentation	10%
Final Report	10%

Course Schedule

Week 1	January 19th	Introduction + Quantified-Self
Week 2	January 26th	Research Foundations — *Choose papers to present* — *Assignment #1 (Data Analysis) out*
Week 3	February 2nd	Data Collection: Manual — *Pitch ideas for project*
Week 4	February 9th	Data Collection: Passive Sensing — *Assignment #1 due*
Week 5	February 16th	Information Visualization — *Project team members due*
Week 6	February 23rd	Communication + Productivity
Week 7	March 2nd	Physical Activity + Location — *Project proposal due* — *Assignment #2 (Motion Tracking) out*
Week 8	March 9th	Sleep + Emotions
	March 16th	**Spring Break**
Week 9	March 23rd	Dietary Monitoring — *Assignment #2 due* — *Assignment #3 (Food Logging) out*
Week 10	March 30th	Health Modeling
Week 11	April 6th	Behavior Change — *Assignment #3 due* — *Assignment #4 (Self-Experiments) out*
Week 12	April 13th	Theories and Frameworks
Week 13	April 20th	Privacy — *Assignment #4 due*
Week 14	April 27th	Emerging Topics
Week 15	May 4th	Project Presentations — *Project report due*

Standard UT Austin Course Information & Policies

Academic Honor Code. You are encouraged to discuss assignments with classmates, but anything submitted must reflect your own, original work. If in doubt, ask the instructor. Plagiarism and similar conduct represents a serious violation of UT's Honor Code and standards of conduct:

http://deanofstudents.utexas.edu/sjs/scholdis_plagiarism.php
http://deanofstudents.utexas.edu/sjs/conduct.php

Students who violate University rules on academic dishonesty are subject to severe disciplinary penalties, such as automatically failing the course and potentially being dismissed from the University. **PLEASE** do not take the risk. We are REQUIRED to automatically report any suspected case to central administration for investigation and disciplinary hearings. Honor code violations ultimately harm yourself as well as other students, and the integrity of the University.

Academic honesty is strictly enforced. For more information, see the Student Judicial Services site: http://deanofstudents.utexas.edu/sjs.

Notice about students with disabilities. The University of Texas at Austin provides appropriate accommodations for qualified students with disabilities. To determine if you qualify, please contact the Dean of Students at 512-471-6529 or UT Services for Students with Disabilities. If they certify your needs, we will work with you to make appropriate arrangements. UT SSD Website: http://www.utexas.edu/diversity/ddce/ssd

Emergency Preparedness. Any students requiring assistance in evacuation must inform the instructor in writing of their needs during the first week of classes. This must then be provided to the Fire Prevention Services office by fax (512-232-2759), with "Attn. Mr. Roosevelt Easley" in the subject line.

Coping with stress and personal hardships. The Counseling and Mental Health Center offers a variety of services for students, including both individual counselling and groups and classes, to provide support and assistance for anyone coping with difficult issues in their personal lives. As mentioned above, life brings unexpected surprises to all of us. If you are facing any personal difficulties in coping with challenges facing you, definitely consider the various services offered and do not be shy to take advantage of them if they might help. These services exist to be used.

Notice about missed work due to religious holy days. A student who misses an examination, work assignment, or other project due to the observance of a religious holy day will be given an opportunity to complete the work missed within a reasonable time after the absence, provided that he or she has properly notified the instructor. It is the policy of the University of Texas at Austin that the student must notify the instructor at least fourteen days prior to the classes scheduled on dates he or she will be absent to observe a religious holy day. For religious holy days that fall within the first two weeks of the semester, the notice should be given on the first day of the semester. The student will not be penalized for these excused absences, but the instructor may appropriately respond if the student fails to complete satisfactorily the missed assignment or examination within a reasonable time after the excused absence.

Electronic mail Notification Policy. In this course e-mail (and Canvas) will be used as a means of communication with students. You will be responsible for checking your e-mail regularly for class work and announcements. If you are an employee of the University, your e-mail address in Canvas is your employee address.

The University has an official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. See https://utdirect.utexas.edu/apps/utd/all_my_addresses to find and change your email address on record.