CS 7460 Collaborative Computing: Overview

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Week 1 | January 6, 2015

Part I: Course Structure and Information

Learning Objectives

- Learn about collaboration happening online

- Contextualize collaboration in different contexts
  - Workplace
  - Recommender and reputation systems
  - Volunteering
  - Wikipedia
  - Open source software
  - Crowdsourcing
  - Disaster response
  - Social movements, political change
  - Collaborative health

Learning Objectives

- Examine different theoretical frameworks driving collaboration online:
  - Trust
  - Communities of practice
  - Distributed cognition
  - Social capital
  - Leadership
  - Social movement theory

Topics to be covered

Week 2 (Jan 15)   The Social and the Technical
Week 3 (Jan 20)   Distance Matters
Week 3 (Jan 22)   Understanding Online Communities
Week 4 (Jan 27)   Open Source Software
Week 4 (Jan 29)   Wikipedia
Week 5 (Feb 3)   Recommender Systems
Week 5 (Feb 5)   Reputation Systems
Week 6 (Feb 10)   Question Answering Systems
Week 7 (Feb 17)   Geographic Information Systems
Week 7 (Feb 19)   Socio-Technical Capital
Week 8 (Feb 24)   Distributed Cognition
Week 8 (Feb 26)   Project Proposal Presentations
Week 9 (Mar 3)   Trust in Collaborative Systems
Week 9 (Mar 5)   Identity Construction and Social Participation
Week 10 (Mar 10)   Collaboration and Creativity
Week 10 (Mar 12)   Volunteering
Week 12 (Mar 24)   Communities of Practice
Week 13 (Mar 31)   Crowdsourcing and Collaboration
Week 13 (Apr 2)   Collaborative Health
Week 14 (Apr 7)   Online Peer Learning/MOOCs
Week 14 (Apr 9)   Political Change
Week 15 (Apr 14)   Social Movements
Week 15 (Apr 16)   Disaster Response

Grading

- Reflections on Class Readings (on Piazza) - 20%
- Lead Class Discussion (1 class) - 5%

- Assignment I: "Analysis of an Online Collaborative System" - 10%
- Assignment II: "Does Distance Still Matter?" - 10%
- Assignment III: "Online Collaboration: The Good, The Bad, and The Ugly" - 10%

- Term Project Proposal - 5%
- Term Project Midterm Deliverable - 5%
- Term Project Final Report/Code - 25%

- Class Participation - 10%

Required Skills

- Reading/writing: significant weightage on weekly class readings, the three assignments, final project

- Technical: any object-oriented/scripting language like Python, Perl, C#; some frontend development skills/web programming skills (ajax, javascript, php) if you choose your term project to build a social tool

No required text

- Reading materials are organized by topic.
- Typically published articles or papers.
- Will be available on class website.
- Most papers will be electronic resource – either downloadable directly online, or through the GT library

Reading Reflections

- Write short blurbs on Piazza (under "readings") about the readings assigned for a particular class
  - Blurbs need to be about 300-400 words in length

- Content:
  - What was interesting about the paper(s)?
  - What are its strengths and weaknesses?
  - Is it relevant for your work in some way?
  - You may write about one reading, or compare and contrast more than one or something you read somewhere else.
  - If you were to do the research, how would you improve it?

- Due by 11:59pm the night before class
  - Late submissions will **not** be accepted

Reading Reflections

- Will start from next Thursday's lecture (1/15)
- Grading:
  - Each reflection will be graded on a check/plus/minus scale.
  - Most reflections will receive a check – that means well done, good reflection.
  - A plus means "you impressed me."
  - A minus means the contribution was not up to the expected standard in some way.
  - You may earn up to a maximum of 100 points over the course of the semester, on this scale:

    Minus: 0 to 4 points

    Check: 5 points

    Plus: 6 points

Piazza

- Sign up with your GT information at this link [IMPORTANT]:

  piazza.com/gatech/spring2015/cs7460

- Class link:

  piazza.com/gatech/spring2015/cs7460/home

- Piazza will be used for reading reflections and classwide announcements and discussion

Lead Class Discussion

- You will be required to lead discussion in one class throughout the semester

- Will start from next Thursday's lecture (1/15)

- Pairs of **two** students

- Propose some interesting points of discussion to the class through a basic slide deck.
  - This can be motivated from your readings for that class, and the reflection you submit on Piazza
  - Instructor will also help gear the discussion throughout the class

- Signup sheet online:
  http://goo.gl/KvvOkr

Assignment I

- Due: January 28, 2015 11:59pm

- *Topic:* Write a report on the "Analysis of a collaborative system"

- What to hand in?
  - 4-5 page report, single spaced, 12 pt font, inclusive of figures, tables, and numbered references
  - Submission on T-Square

- Work: Individual.

- Grading criteria:
  - Completeness
  - Writing
  - Insight into the users
  - Insight in the collaborative process
  - Insight into tension and support

Assignment I

- Describe patterns of collaboration on the site.
    - Who contributes?
    - How many people appear to be active in a given period of time on the site?
    - How many people contribute to each article/project/other collaborative unit?
    - How do those people work together?
    - Are participants together able to accomplish something that would be difficult for anyone to do alone? If so, in what sense and why?

- Does the site have different kinds of participants? Do people play different roles?

- Are there "leaders" for each project?

- Is there any apparent friction among people? Is there any obvious cause for the observed tension? Conversely, do you observe people supporting one another? Are there particular contexts in which support for others is most evident?

Assignment II

- Due: February 25, 2015 11:59pm
- *Topic:* Write a report on "Does Distance Still Matter?"
- What to hand in?
  - 4-5 page report, single spaced, 12 pt font, inclusive of figures, tables, and numbered references
  - Submission on T-Square
- Work: Individual.
- Grading criteria:
  - Completeness
  - Writing
  - Quality of research
  - Insight into how things have changed

Assignment II

- Lot of earlier collaborative computing research advocated the importance of geographic co-location for effective collaboration

- The report will be a critique on the validity of those findings in today's settings

- What has changed since then?

- What do we now know that we did not know then?

- What were they right about, and what new developments are surprising?

- Are the key issues the same, or has something changed?

Assignment III

- Due: March 25, 2015 11:59pm

- *Topic:* Write a report on "Online Collaboration: The Good, The Bad, and The Ugly"

- What to hand in?
    - 4-5 page report, single spaced, 12 pt font, inclusive of figures, tables, and numbered references
    - Submission on T-Square

- Work: Individual.

- Grading criteria:
    - Completeness
    - Writing
    - Insights into positive outcomes of collaborative processes
    - Insights into negative outcomes of collaborative processes

Assignment III

- Does collaboration always lead of positive outcomes?

- Write case studies about two positive cases of collaborative activity online.

- Write case studies about tow negative cases of collaborative activity online.

- You can use real world events for motivation, with appropriate references to them, through news articles etc.

- You can also use your own observations on a site to set up those case studies.

Term Project

- Term Project Proposal - 5%
  - Due: February 11, 2015, 11:59pm
  - 1 page summary
  - Should contain: Project description; Collaboration plan and timeline

- Term Project Midterm Deliverable - 5%
  - Due: March 11, 2015, 11:59pm
  - Prototype + design / annotated bibliography and outline and brief description (5 pages); short class presentation

- Term Project Final Report/Code - 25%
  - Due: April 27, 2015, 11:59pm

- Goals:
  - Group project: 3-4 people; total about 10 groups in the class
  - You are free to pick your group
  - Midterm presentations will be total ~8 minutes
  - Final presentation will be total ~15 minutes

Term Project (Paper)

- In your final paper, you will thoroughly review work that has been done in one area of collaborative computing. Some suggested topics include:
    - Collaborative computing for disaster relief
    - Collaborative computing and political/social change
    - Persuasive health
    - Open-source software development
    - Citizen science
    - Games with a Purpose
- 10 pages, single spaced, 12 pt. font. + presentation

Late Policy

- Reading responses are due at 11:59pm on the day before the relevant class meeting.

- Assignments are also due by 11:59pm the night before the date listed for that assignment.

- Assignments and term project deliverables submitted more than 15 minutes after the due time will be assessed a 10% penalty.

- Each additional 24 hours of lateness will result in an additional 10% being taken off the grade for that work.

- After 5 days, the work will not be accepted and a grade of 0 will be entered.

English as Second Language

- If English is not your first language, you may request to not be graded on your writing for a particular individual assignment.

  - This means you won't be penalized for bad writing, but you also won't get credit for good writing. To take advantage of this option, you must mark "ESL" (English as a Second Language) on the first page of your assignment/paper.

- This option is not available for the term project as it is a group assignment.

Academic Integrity

- This class abides by the Georgia Tech Honor Code.

- All assigned work is expected to be individual, except where explicitly indicated otherwise.

- You are encouraged to discuss the assignments with your classmates; however, what you hand in should be your own work.

  - Okay to use open-source software (no need to reinvent the wheel), however do acknowledge!

  - Copying/reusing materials from your classmates and friends are not allowed; strict action will be taken if similarities are discovered

  - Copying (textual) content for your assignments and project from other published work (without citing them) is also not allowed, and is considered plagiarism

Help and Resources

- Office hours: 11am – 12 noon Fridays, or by appointment
- Location: TSRB 231

- Teaching Assistant: Paul Lazarus
- Office hours: TBA
- Location: TBA
- Email: <u>plazarus3@gatech.edu</u>

- Class website (including readings):http://www.munmund.net/CS7460.html

Part II: Introductions
    name + program
    tech + design + stats background
    what you want to learn from the class

Part III: Questions?