Affective Computing CSCI534: An interdisciplinary approach

Spring 2024

Course Objective:
This course provides a comprehensive and interdisciplinary introduction to Affective Computing: i.e., computing that relates to, arises from, or deliberately influences emotions. It overviews the theory of human emotion (how it arises from and influences cognition, the body, and the social environment), techniques for recognizing and synthesizing emotional behavior, and illustrates how these can be applied to application design. The course is suitable for non-computer science students with some familiarity with computational methods. Students will gain a strong background in the theory and practice in human-centered computing as it relates to decision-making, health, entertainment and pedagogy.

Instructor:	Jonathan Gratch
TA:	
Date/Time:	Mon, Wed 2:00-3:50p (DMC 101)
Piazza:	
Grades:	Grades determined by class participation 10%, mid-term project presentation 15%, homework 40%, final project presentation. 15%, final project writeup 20%
	See Late homework policy.

Class participation is expected and part of the grade. Lectures frequently involve participatory demonstrations and exercises. Thus, students are expected to attend class and participate in in-class activities. **Lectures are not recorded.**

The course is project-based. Students are expected to work in teams (of approximately 4-5 students) to develop, execute and present a research project. Students are encouraged to build on existing tools.

Source book: Oxford Handbook of Affective Computing (OHAC): useful but not required.

Other useful books: ACM Handbook on Social Agents (AHSIA); Oxford Handbook on Affective Science
Software: Students will gain knowledge and/or hands-on experience with the following software tools related to affective computing including:

- Emotion Recognition Techniques
- Emotion Synthesis Techniques
- Cognitive and Emotional Modeling
- Algorithms and tools that support the above methods
- Human-subjects experimental design and analysis
- Ethical issues in AI

Current version of syllabus found HERE. Some updates may occur throughout semester. Don't get more than 1 week ahead on readings. The same topics will be presented but changes to reading lists and homework may occur.