Engineering Interactive Systems
EECS 598-009 & EECS 498-013
MW 10:30-12:00

Course Description:
Mobile and Ubiquitous Computing systems allow users new ways to interact with computing devices beyond the traditional terminal, keyboard, and mouse. Often referred to as the third wave of computing, people are no longer using a single computer but instead are continuously interacting with multiple devices that are carried on their person and embedded throughout the environment. This interdisciplinary field focuses on creating novel interaction modalities, new ways of displaying information, and interactive sensing techniques that enable computers to detect, understand, and respond to users. This course focuses on both reviewing the state-of-the-art of interactive computing systems and the underlying technologies that enable them, as well as learning the skills necessary to build research prototypes.

Classroom instruction will focus on a review of current research topics and literature in technical HCI areas, including interactive technologies, augmented reality, haptics, wearables, mobile computing, and more. Homework assignments will take the form of mini-projects designed to build hands-on skills in the use of laser cutters, 3D printers, sensing and signal acquisition, embedded systems, and machine learning for event and activity recognition. The class will culminate in a final project where teams of students will pitch, build, and demo a self-defined project using the skills developed in this course.

Prerequisites:
There are no formal prerequisites for this interdisciplinary class. However, students should be comfortable programming in a desktop environment such as Python, Java, C++. If you have questions please ask the instructor.

Instructor:
Prof. Alanson Sample, EECS / Computer Science & Engineering
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