CS 186 and CSCI E-186 Final Project
Spring 2015

Prof. David C. Parkes

Proposal due date: Tuesday April 14, 5pm (all students)
Submit to iSites on Dropbox

The goals of the final project are to allow you to explore independent interests, learn more about a particular area, and to practice teamwork and presentation skills. Projects should ideally be done in groups of 2 or 3, and may be primarily written or primarily programming. (Extension school projects will generally be single person.)

Post to Piazza if you'd like to find a partner for the final project!

Important dates:

- We will seed a discussion on Piazza. **By Friday 4/10, everyone is expected to submit a brief post on an idea for a project, and comment on at least two other posts.**
- **4/14: Proposal due.** Can be 2-3 paragraphs. Should provide enough detail about your project idea to allow the teaching staff can provide feedback. For example, if your paper will relate to existing work in the academic literature you should provide references.

  You can submit **two suggestions** if you want us to rank which of the two projects we prefer. Also: ask specific questions of us to help us to give you the right advice.
- Wed 4/29: **11.30am-1pm: Short presentations by college students. Everyone expected to attend!** This presentation is an opportunity to share what you've been doing with other students and get some feedback. Note: your project is not supposed to be complete until the following Tuesday.
- Tue 5/5: Final project report due by 5pm. **This is a hard deadline**. Submit to the Dropbox on iSites.

In terms of possible topics, these include:

- Make connections between an eCommerce or social networking platform and topics we have covered in class; e.g., discuss the features of a real electronic market or matching market and relate to the theoretical frameworks we've studied.
- Experiments with crowdsourcing using TurkIt or another mTurk scripting language (we will likely have a bit of money left over from the assignment).

- Go to the lecture notes for a topic you enjoyed in the course, find the papers mentioned in the chapter notes,[1] and provide an exposition of **two papers** (this means writing a class paper in a way that convincingly demonstrates understanding of one or two of the main results in each of your selected papers.)
- Complete an in-depth study of something we've discussed in class; e.g., Bitcoin, advertising exchange design, the PPAD-completeness of FindNash, etc.
- Study in more detail a computational problem that we've discussed, e.g. coding up an algorithm and testing it on a data set or simulated data. This could relate to matching or winner determination in combinatorial auctions, for example.
- Identify a question related to topics discussed in class that you would like to study in more depth, scoping your work (e.g., by proposing a concrete simulation, or a very well-defined, simple theoretical question) so that you will be able to make progress.
- Develop an idea with something entrepreneurial in mind, drawing a connection with topics discussed in class and identifying and studying a precisely stated, technical question. Discuss why the idea could have commercial value.

These are just suggestions. You can do something very different as well. Please ask if you are unsure!

Papers should not be longer than 10-12 pages, and a good paper should say what it needs to say as succinctly as possible.

[1] If the citations are not provided in the chapter notes and you can't find them please post to Piazza to ask.