Final Project proposal

The final exam will be conducted in the form of a final project (**35% of final grade**) to apply what we learn in class to a real-world problem. One of the goals of this project is to add a masterpiece to your CV as an important credential of your data mining skills.

The project topic is up to you, but it is preferably one that relates to your current field of work or a field in which you have a personal interest. Briefly:

- 1-3 persons to form a group (ideally 2)
- Write a proposal with the following sections and submit it to dropbox.cse.sc.edu
    - Title of the project
    - Team members of the project
    - Abstract, Background, Input data, output data, evaluation

      Statement the problem clearly why it is interesting, significant, or publishable

A sample proposal and final project report are available in the dropbox Finalproject folder.

If you prefer to work with me to get some publishable results, I can share some project ideas via email list or you can talk to me. I have several materials informatics and bioinformatics plus pure deep learning problems ready to explore.

Upload your proposal to https://dropbox.cse.sc.edu

Your proposal will be graded and **if approved, you can start working on it**. Otherwise, you need to talk to your instructor or modify it based on feedback.

The basic criterion for the project is that it should not be trivial. Either it should solve an interesting problem or it addresses an important algorithm issue.

You can get some idea of what others do for final project at
http://cs229.stanford.edu/projects.html

Most students do one of three kinds of projects:

1. **Application project**. This is by far the most common: Pick an application that interests you, and explore how best to apply learning algorithms to solve it.
2. **Algorithmic project**. Pick a problem or family of problems, and develop a new learning algorithm, or a novel variant of an existing algorithm, to solve it.
3. **Theoretical project**. Prove some interesting/non-trivial properties of a new or an existing learning algorithm. (This is often quite difficult, and so very few, if any, projects will be purely theoretical.)

Currently, due to the dominance of deep learning in application fields, a good deep learning project may make your CV shine.