Each student is *encouraged* to complete a class project. You are responsible for defining your own project.

**OPTION 1 (6’-10’).** The most encouraged option is to go beyond a topic covered in the course, and try to solve an open problem. If you achieve some interesting result, this may end up with a conference or workshop paper, and a full 10 points will be added to your final grade. Even you end up with nothing positive (which often happens in open research), writing up a report that reviews some existing work, states your attempts, and explains why they do not work well will earn you somewhere between 6 to 9 points. For open research attempts, group of up to three members is allowed, though contribution of each member must be clarified in the final report (*one report per group*). Please be careful in writing your report -- copying sentences (or pieces of sentences) out of other papers without adequate citations is considered as *plagiarism* (an honor code violation).

**OPTION 2 (1’-5’).** Although this is more a theory course, programming often helps us learn algorithms better, and see the details more clearly. You may also choose to implement one or two core algorithms we cover this semester as your project. You can either do it alone or work in groups of two. *Each person need to submit his/her own project report.* It can be some programming exercises mostly involve in coding, so your report will be mainly about explaining your own implementation, and perhaps some analysis (try to treat your report reader as programmers that are willing to use your code). You need to email me your code before the deadline -- copying source code from elsewhere (without permission of the instructor) is an honor code violation, and may lead you fail the whole course. Or, it can be some reading, verification, improving, and testing to other’s code (“other” = your groupmate, not online). This option will result in a 1- to 5-point bonus to your final score.

Project Proposals: If you are planning to choose Option 1, I encourage you discuss with me during office hours and submit a one- or two-page description of your proposed project before Mar 30, 2015.