Group Final Project

A Group Assignment

For this assignment, you may form groups of three students (one group per student). Groups are to complete the assignment as a unit. All members of a group will receive the same grade.

Project

Your project is an opportunity for you to explore an interesting learning problem of your choice in the context of a data set. This project can be whatever you want, as long as it is focused on one of the topics in the course. There are no restrictions on programming language or machine learning method. Use of existing datasets and software packages is fine.

Deliverables

The project will have the following deliverables:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Proposal</td>
<td>10</td>
</tr>
<tr>
<td>Status Report</td>
<td>10</td>
</tr>
<tr>
<td>Final Presentation</td>
<td>15</td>
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<tr>
<td>TOTAL</td>
<td>35</td>
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- All deliverables are due by the start of class on the date specified in the course calendar.
- All project proposals must be in the form of an ACM conference paper. Templates for ACM conference paper format can be found here: [http://www.acm.org/sigs/pubs/proceed/template.html](http://www.acm.org/sigs/pubs/proceed/template.html)
- The only acceptable file formats are Adobe Acrobat files for the high concept, project proposal and status report. Final presentation slide decks may be submitted as powerpoint (.ppt) or Acrobat (.pdf).

Proposal

You must turn in a brief project proposal (1 to 2 pages in the ACM conference paper format). Include the following information:

- Project title & group membership
- High Concept Project idea. This should be approximately two paragraphs describing what you want to do.
  - What learning problem are you trying to solve or explore?
  - Why does it matter?
- Dataset you will use to test and train your system (if you are doing an implementation)
- Measure you will use to evaluate performance of the system (or proof procedure)
- Software you will need to write.
- Existing software packages you will use.
- Related papers to read. Include 3 relevant research papers.
- Names of team members (Team size is three students)
- The job of each team member
- Milestones: What will you complete by the status report? What will you complete by the final presentation.
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Status Report

There will be two deliverables at this stage:
1) You will give a short verbal report on the progress your group is making. Your grade will depend on your ability to clearly and briefly describe the high-level approach (your task, the approach, how you are measuring success, etc), as well as your ability to answer concrete questions on your progress. This is also a chance to get feedback, so use it as such.
2) You will hand in a one-page report describing how you did or did not meet the milestones you put in your project proposal. You will also lay out a set of clear, concrete milestones to reach by the final project due date.

Research Presentation

The final exam for the class will be a research presentation using a slide deck with Acrobat or PowerPoint slides. Grading will be based on the work, the effectiveness of the presentation, the slides and (where applicable) the demonstration.
There will be certain required elements that I will look for. The presentation must contain the following:

- The project title (prominently displayed)
- The name of each project member (prominently displayed)
- At least one contact email address (prominently displayed)
- The name of the course, university and professor
- The meat of what this talk is “about”
  a. identify the big research area
  b. motivate the specific problem: (what is the thing you’re trying to solve and why anyone should care
  c. describe your solution in very high level terms (what kind of learner did you use, how did you apply it)
  d. describe how you tested and trained it (what your dataset was, how you measured success)
  e. describe some results (how well it did in no more than a paragraph)
- A minimum of one pretty picture or graph that illustrates your work…with a caption and to explain what the viewer is looking at.

Note, what is listed above are minimal requirements. Having all these features guarantees an OK grade, not an A. Doing a good job with these things guarantees a good grade.