CSE 5693 Machine Learning: Term Paper/Project
Due 6:30pm, Apr 1, 2009; Submit Server: course=ml , project=plan
Due 6:30pm, Apr 29, 2009; Submit Server: course=ml , project=paper

The term paper is based on a mini-research project. The goal is trying to improve one of the learning algorithms you have studied. You may also devise new algorithms. Empirically you will compare your proposed improvement with:

- the original algorithm in the book and
- a proposed improvement in a research paper (journal or conference)

Resources for research papers: `http://www.cs.fit.edu/~pkc/classes/ml/resources.html`

A. Plan (10 points) [Due Apr 1, Wed]

At least one page, ACM format templates: http://www.acm.org/sigs/publications/proceedings-templates

1. Introduction: motivation and problem statement
2. Related work: compare/contrast existing approaches and discuss limitations
3. Approach: your initial idea
4. Evaluation: data (at least two sets) and criteria

   References: list of at least three related research papers

B. Paper (80 points) and presentation (10 points) [Due Apr 29, Mon]

Paper: at least 5 pages, ACM format templates: http://www.acm.org/sigs/publications/proceedings-templates

Presentation: 20 minutes

1. Introduction (with Problem Statement)
2. Related Work (at least three research papers; compare/contrast existing algorithms and discuss limitations)
3. Approach (your strategy: why it can overcome limitations of current techniques and exactly how it works)
4. Empirical Evaluation
   - 4.1. Evaluation criteria
   - 4.2. Experimental data and procedures (description of the data, procedures include: preprocessing, parameters used)
   - 4.3. Results and analysis (results in graphs/tables and analyzing the results) [compare with the original algorithm in the book and a proposed improvement in one of the three research papers]
5. Conclusion (Summary of findings, limitations and possible improvements)

   References (cited in the text)

Your paper will be evaluated mainly on the sophistication/innovation of your algorithm, the performance of your algorithm against the original algorithm and another one in a research paper, and your analysis of the results.