**Literature Review Paper and Slides due at the time of the first presentation**

Week 15 Tuesday 4 people; Week 15 Thursday 4 people; Week 16 5 people

**20 points for presentation with PPT (15 minutes)**

**30 points for the paper (must have been proof read by**

**the writing center or equivalent)**

**Both a hard copy and a soft copy (EMAIL) are due to me.**

* This paper should be ONE COLUMN, Times (Roman), 12 pt. Single spaced.
* The Title is Literature Review : <your research topic/goal>
* Follow it with : Broad area: \_\_\_\_\_\_ Sub-area: \_\_\_\_\_\_\_\_\_\_\_\_\_
* Follow it with your name.
* Make sure you cite the papers you have reviewed using [Author Year]
* Must end the paper with References, formatted correctly as in the IEEE template.

**Section 1.Conclusion from Phase I**

Start your paper with the summary of your Phase I review which states how you arrived at the Phase II topic/goal. This will be one or two paragraphs. Citations are still needed in this section.

**Section 2. Phase II Investigation**

Then, for each Phase II paper you read, you should “translate your filled template” to write about:

* + Overall description of their project/system(short)
  + Contributions related to your goals, and/or
  + Weaknesses related to your goals
  + It will be one paragraph.

**Section 3.Summary of Approaches**

At the end of your paper, summarize all the contributions and weaknesses so that you will be able to discover your approach. This will be a paragraph or two. You do not have to have your approach yet.

**Section 4. Rough Proof Plan**

A short paragraph explaining how you intend to prove your approach in the end.

* mathematical analysis of your algorithm vs. Others?
* implement and test a system?
* measure efficiency (how?)

**Examples:**

The following is in a template form, but you should place it

into a paragraph form.

**Cover: Sub-field: Sorting algorithms**

**Goal: Develop a fast sorting algorithm that is space efficient.**

**Section 2:**

Merge Sort is a divide and conquer algorithm that recursively

divides the list into two sub-lists and then combines the sub-lists

into a sorted list.

Contribution: O(nlogn) for all cases because recursion is used

Weakness: But space inefficient

🡺 write as a paragraph

Heap Sport creates a heap structure where parents are always smaller than the children. Heap Sort removes the root and re-heapifies the tree.

Contribution: O(nlogn) because a binary tree is used

Weakness: But need to pre-process to create a heap structure

🡺 write as a paragraph

**Section 3:** Although there are O(nlogn) sorting algorithms, they are space inefficient if recursion is used and/or requires pre-processing if trees are used.

**Section 4:** After developing an algorithm, I will do mathematical analysis of the time complexity and space complexity.

**Cover: Sub-field: Machine Translation from Japanese to English**

**Goal: Translate ungrammatical Japanese Sentences**

**Section 2:**

System X translates Japanese instruction booklets into English.

Contribution: Translates sentences with misspelled words

Weakness: Does not handle syntax errors

🡺 write as a paragraph

System Y translates Japanese essays into English.

Contribution: Interacts with the user to process ungrammatical sentences

Weakness: No automatic error handling

🡺 write as a paragraph

**Section 3:** Although there are MT systems which handle ungrammatical sentences by interacting with the user, there are no systems which can handle ungrammatical sentence without interactions with the user. Nothing seems to have been attempted so far.

**Section 4:** I will develop a MT system and test it on many texts with a variety of grammar errors.

**For the Lit. Review Presentation using PPT:**

* Remind everyone what your research sub-area is
  + and give any background/historical info they need to understand the area.
  + some people might not know the words you are using
* Remind everyone what your research goal is (conclusion from Phase I) and how you arrived at this conclusion.
  + Also, how many papers did you read in Phase I?
* How many Phase II papers did you read on related works?
  + Also, why did you read these papers in particular?
* For some of the Phase II paper you read:
  + summarize the contributions and weaknesses using the template format I used above in examples.
* What is the summary/conclusion of the literature review?
  + - Have you decided on your approach? If so what? (not required)
* What is your rough plan for testing or proving your approach?
  + i.e.
    - * mathematical analysis of your algorithm vs. others
      * implement and test a system
      * measure efficiency (how?)

**Style:**

* Have a table of contents slide at the beginning
* Use few sentences per slide
* Use bulleted lists instead of paragraphs
* Use a clear title for each slide

**The audience will have to ask questions as needed to find out just how well you have done your research and write an evaluation to be submitted at the end of your presentation.**