# Assignment 1B – Cloud Research Paper Presentation
Version 0.10

Presentation Dates:   November 28, December 3, December 5, 2018

## Objective
Project teams may elect to prepare and present a review and critique of a recent research paper in cloud computing.  The paper may optionally relate to the group's term project.  Choosing a paper relating to the term project is recommended as the work is the complementary.  The cloud research paper presentation serves many excellent purposes:
- Practicing presentation skills on a technical topic: the format of the TCSS 562 research paper presentation is similar to research presentation at a conference or an MS Capstone or Thesis presentation.  One major difference is the presentation is prepared by the team rather than an individual.  The presentation provides an opportunity to first review new relevant literature, and then disseminating the key findings to the class.
- Learning how to review and critique technical papers and literature: Throughout a computer science career it will be necessary to learn and review new technologies.  Often this involves reading and comprehending technical literature.  Reviewing research papers is a great way to practice these skills.  *Did you know that many computer science textbooks began as collections of research papers?*
- Gain exposure to critiquing research papers of varying quality to gain insight on writing and evaluating one's own work for the final term paper.

Groups are to produce a slide presentation which describes and critiques the contributions of a related cloud research paper using the following structure:

1.  General overview of the research paper
    a.  What is the problem being solved?
2.  Summary of the primary contributions
    a.  What did the authors do to address the problem?
3.  Overview of related work (based on the author's overview, plus one extra reference)
    a.  What have others done, and what was missing from their work?
4.  Review of the paper
    a.  What is the technology or evaluation proposed?
    b.  What are the key findings?
    c.  Do the authors assess their approach?  (yes/no)
    d.  How do they evaluate their approach?  What techniques are used?
    e.  What are the conclusions?
5.  Critique of the paper
    a.  What are the primary strengths of their new system, or of the new benchmark/evaluation effort?
    b.  What are some weaknesses of the new system/approach?

        c.  How good is their evaluation?  Is something missing?  Is it believable? Repeatable?

        d.  Are there gaps in the work?  What future work remains?

    6.  Class discussion of the paper

For the cloud research paper presentations, each group will present as a team, one research paper related to the group's term project.  The presentations should last from 20 to 25 minutes with up to 5 minutes for questions/discussion.

The paper could be on aspects of cloud services technology directly, or it could be a paper related to performance analysis and benchmarking related systems.  Good papers tend to be from IEEE or ACM peer reviewed conferences or journals and will have been previously cited according to Google scholar. (see https://scholar.google.com )

If there are any doubts regarding the quality of the paper proposed please consult with the instructor. If the paper is not approved, the instructor will recommend alternate papers.

See my presentation slides on ***active reading*** for advice on how to review technical writing:
http://faculty.washington.edu/wlloyd/slides/ActiveReadingSlides.pdf

Active reading involves reading with-a-pen-in-hand, and interactively looking up unknown material to increase your comprehension of the paper on the internet. Approach the paper from the point-of-view of a reviewer.  Mark and find all typographical errors.  While you're reading circle and star main points, and write any questions that come to mind in the margins.

## 1  Research Paper Presentation Organization

The slide presentation should follow the recommended structure provided below. Groups should create slides for each of the topics.  Additional slides may be included for each topic where appropriate.  Groups **should** have around 15-20 slides total.

It is recommended to decompose the presentation into parts, where each team member focuses on producing slides and presenting each part.

**Three-person team**
Team member #1:    Title Slide, Talk Outline, Paper overview, Background, Summary of new technology, discuss key research contributions
Team member #2:    Review of the author's evaluation and conclusions from the paper
Team member #3:    Critique the paper: Strengths, Weaknesses, Evaluation, GAPS, Future Work
Everyone:    Questions

**Four-person team**
Team member #1: Title Slide, Talk Outline, Paper overview, background
Team member #2: Summary of the research / new technology, discuss key research contributions
Team member #3: Review of the author's evaluation and conclusions from the paper
Team member #4: Critique the paper: Strengths, Weaknesses, Evaluation, GAPS, Future Work

Everyone: Questions

The critique of the paper is arguably the most important part of the research paper presentation.  Even though only one team member presents the critique, ***all team members*** should participate in the development of the cognitive review and critique of the paper.  Groups should be sure to say what they liked and disliked about the paper, identify issue with the paper, and suggest possible improvements.

## 2  Research Paper Review Presentation Format

### Recommended Research Paper Review Presentation Format

| Slide No. | Major Topic | Questions to Answer / Topics |
|---|---|---|
| Title Slide | Identify paper being reviewed | Show title, authors, institution, and name of your group members who have prepared the review |
| Slide 1 | Talk outline | Summarizes the key points of the talk |
| Slides 2-4 | Introduction: Paper overview | Introduce the problem the paper is about:<br>What is the problem being solved?<br>Why is it a problem?<br>Why is it a problem we're interested in solving?<br>Do the authors state any research questions?<br>Hypotheses to investigate? |
| Slides 5-6* | Background / Related Work | What have others done related to the problem?<br>What was important from what they found?<br>What is missing from their work?<br>** INCLUDE 1 REFERENCE FROM OUTSIDE THE PAPER |
| Slides 7-10* | Summary of new technology, approach, or benchmarks | Describe the new technology, or benchmark/evaluation conducted.<br>This section covers about half of the paper… |
| Slide 11* | Key contributions | Describe the key contributions and key findings from the paper.<br>***If a system***, what does the new approach provide which we didn't ***have*** before?<br>***If an evaluation***, what does the evaluation provide which we didn't ***know*** before? |
| Slide 12-14* | Author's Evaluation | How do the authors assess their approach?<br>What techniques did they use?<br>What are their results?  How good are the results?<br>This section covers about half of the paper… |
| Slides 15 | Author's Conclusions | What are the author's key conclusions?  What is their response to prior research questions or hypotheses? |
| Slide 16* | Critique: Strengths | What are the primary strengths of the new approach, or benchmarks? What are the strengths of the evaluation in the paper? Is their performance good?  Are costs low?  Is it scalable?  Secure?  Fault tolerant? |
| Slide 17* | Critique: Weaknesses | What are some weaknesses of the new approach? This could be things such as complexity of applying the approach, or it's usability.  How well has the proposed |

| | | solution addressed the original problem? |
|---|---|---|
| Slide 18* | Critique: Evaluation | How good is the paper's evaluation?  Is something missing? Are the results believable? Is enough information available to repeat/reproduce tests? |
| Slides 19 | Identify GAPS | Are there gaps in the work?  Did the authors fail to solve some component of the problem?  What constraints and limitations exist for the solution?  What future work remains? |
| Slide 20 | Questions | A break for questions. |

*\* - actual number of slides will vary depending on the paper*

## 3  Grading Rubric

**[20% of course grade]**

25%   **Design quality of presentation/slides**

This is the overall quality of the presentation materials.  This reflects the formatting of quality of the slides.  Slides should not have long sentences, but phrases which summarize key points.   Slides should be designed to encourage speakers to naturally present material, as opposed to reading the material.   Slides should include slide numbers to help speakers keep pace during the talk.   Groups must submit slides to the instructor 1-day (24-hour) in advance of the presentation.  The instructor will provide feedback on the presentation and groups can refactor their slides to make improvements before the talk.  For a presentation on Wednesday, draft slides should be submitted by 11:59p on Monday.  Presentation slides are then submitted for final grading after the presentation via Canvas.  Draft version of the slides will not be graded, only final versions.  Corrections can be made AFTER the presentation.  Final slides are due by Friday December 7th.

30%   **Technical content**

The technical content grade will be evaluated by considering the in-class presentation and the content provided on the final slides submitted after the presentation.  All groups have the opportunity to improve technical content of slides for final submission by Friday December 7th.

25%   **Presentation quality, clarity, understandability**

The overall clarity and understandability of the presentation is worth approximately 25%.  Clarity and understandability are improved by speaking slowly, deliberately, looking at the audience, pausing, as well as having well designed slides, and having practiced the presentation prior to class.   The instructor will try to deliberately slow down presentations to help improve group grades by interjecting when possible.  The use of notecards is suggested to prevent excessive reading from the laptop screen.  With notecards, it is easier to practice the presentation and eventually the

notecards are no longer needed.  **Presentations should last no more than 25 minutes without questions.  Presentations extending beyond 25 minutes will be cut-off due to time limitations.**

20%  **Participation in presentations**

During the days teams are not actively making a presentation, each team is responsible for submitting **at least two questions** related to the research paper(s) or technology presentation(s) made in class <u>by the end of the day</u>.  Questions are submitted as a fill-in-the-blank quiz on Canvas after the class.  To receive full credit, good questions must be submitted on Canvas that are relevant and cognizant of the content of the presentation.  "Softball" (i.e. easy, or out-of-context questions) will receive no points.  To receive credit, questions must have multi-word cognitively interesting answers.  Questions with simple YES or NO answers will not receive credit.  Teams are highly encouraged to ask questions at the end of each group's presentations in class.

## 4  Notes about the presentation

Groups who's in-class presentation is scheduled early on will be graded less rigorously in a qualitative manner as needed.  For example, if you are the first presentation, there is leeway to make mistakes and also the opportunity to correct slides in time for their final submission.

## 5  Presentation feedback

Groups are required to submit by 11:59pm on the prior Monday for a Wednesday presentation, or the prior Saturday for a Monday presentation.  The instructor will provide constructive feedback on the slides.  Slides should be prepared using Google Sheets or MS Powerpoint to facilitate adding review comments directly to the slides.  Slides will be shared with the class via posting on the website.

## 6  Submission Deadline

Final project slides should be submitted to Canvas in PDF format by Friday December 7th at 11:59pm.

## 7  Topic Submission

Presentation topics should be submitted via Canvas by Wednesday November 21st at 11:59pm.  Presentations will be prepared by term project groups.

## 8  Change History

| Version | Date | Change |
|---------|------|--------|
| 0.1 | 11/12/2018 | Original Version |