TCSS 462/562: (Software Engineering for) Cloud Computing
Fall 2025

School of Engineering and Technology
University of Washington –Tacoma

Assignment 1B – Cloud Research Paper Review Presentation

Version 0.10

Presentation Dates: November 25, December 2, December 4

In Fall 2025, presentations will be given by TCSS 562 student teams, while TCSS 462 students will participate by providing peer feedback.

Objective

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 a 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 a researcher. The presentation provides an opportunity to review and critique a cloud computing research paper, and disseminate 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?*
- Reading/reviewing helps with writing: Reviewing and critiquing research papers is very helpful for gaining insight on how to write and evaluate one's own writing for the final term paper, and for other writing experiences you may encounter in your future career. One differentiating aspect of pursuing a graduate degree in computer science is that graduates often work in leadership roles where a higher emphasis is placed on verbal and written communication skills.

  A list of recommended research papers for Fall 2025 is available here:
  http://faculty.washington.edu/wlloyd/courses/tcss562/papers/

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. Presentations should last from 15 to 20 minutes with 0 to 5 minutes for questions/discussion.

Groups are free to select a paper from the suggested list, or to recommend their own. Good papers will tend to be from IEEE, ACM, or USENIX peer reviewed conferences or related journals and will have been previously cited according to Google scholar.
(see https://scholar.google.com)

If there are any doubts regarding the relevance and quality of the paper proposed, please contact the instructor. If the paper is not approved, the instructor can recommend (or assign) an alternate paper(s).

See slides on ***active reading*** for advice on how to review technical writing and research papers:
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. The key with presenting a research paper is that we are not just reading the paper, but understanding it well enough to create an intelligible presentation that captures its key points.

PRESENTATION FORMAT FOR FALL 2025

Groups are required to deliver in person presentations in Fall 2025. Delivering the presentation in-person is required for MSCSS graduate students. The presentation provides an opportunity to practice higher-level learning tasks described by Bloom's Taxonomy [1]. The design and delivery of the presentation specifically features analysis, evaluation, and creation. This activity is part of the learning goals and objectives defined in the TCSS 562 master syllabus.

Use of transcripts are encouraged: To support LIVE presentations at conferences and workshops, many of our students have used written transcripts to capture the speaker's narrative. With a transcript, ***the pressure is off*** when delivering a LIVE presentation. The script can simply be read for a LIVE presentation. The speaker can then focus on being more relaxed during the delivery. In general students report the effort put into preparing a written transcript pays off significantly in improving the quality and ease of delivering a live presentation.

1 Research Paper Presentation Organization

A recommended structure is provided below for the cloud paper presentation. Additional slides can be included outside of the outline where appropriate. Groups **should** aim for around 15-20 slides in total.

Talks should be decomposed into parts, where each team member focuses on producing slides and presenting the individual parts.

Two-person team

Team member #1:	Title slide, talk outline, paper overview, background, provide summary of new technology, present key research contributions
Team member #2:	Present author's system evaluation and conclusions, critique the paper: identify strengths & weaknesses, identify GAPS in the research (i.e. open/unsolved problems) and opportunities for future work
Everyone:	Questions

Three-person team

Team member #1:	Title slide, talk outline, paper overview, background, provide summary of new technology, present key research contributions
Team member #2:	Present author's system evaluation and conclusions
Team member #3:	Critique the paper: identify strengths & weaknesses, identify GAPS in the research (i.e. open/unsolved problems) and opportunities for future work
Everyone:	Questions

Presentation teams consist of 1 to 3 members.

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 issues with the paper, and suggest possible improvements. PLEASE IDENTIFY AT LEAST SOME WEAKNESSES – for many students this part can be fun. It is surprising how many shortcomings can be easily found in research studies. It is okay to identify, for example: minor weaknesses, typographical errors, organizational problems in the text, problems or inconsistencies with experimental design, the lack of presenting good baselines for comparison, or ambiguous and/or mislabeled graphs & tables.

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 **ONE SLIDE ONLY**	Provides an outline of the key components of the talk
Slides 2-4	Introduction: Paper overview	Introduce the problem the paper is about: What is the problem being solved? Why is it a problem? Why is it a problem that we (or the research community) is interested in solving? Do the authors provide research questions or hypotheses?

Slides 5-6*	Background / Related Work	What have others done related to the problem? What was important from what they found? What is missing from their work? ** INCLUDE 1 REFERENCE FROM OUTSIDE THE PAPER
Slides 7-10*	Summary of new technology, approach, or benchmarks	Describe the new methodology, algorithm, approach, tool, technology, or benchmark/evaluation being proposed. This section covers about half of the paper…
Slide 11*	Key contributions **<u>ONE SLIDE ONLY</u>**	Capture on one slide the key research contributions and key findings from the paper. Usually the authors will identify the key contributions in a short section. The idea is to present what they authors say the main contributions are (if they say). If -what does the new approach provide that we didn't ***have*** before? -what does the evaluation provide that we didn't ***know*** before?
Slide 12-14*	Experimental Evaluation	Describe the paper's experimental evaluation/approach. What experiments were conducted? What choices were made in the experimental design? What baseline methods were used for comparison? Summarize the key experimental results. (It is usually necessary to abbreviate and not present ALL results for a 20-min talk) This section covers about half of the paper…
Slides 15	Author's Conclusions	Present the author's key conclusions. The authors usually have a "conclusion" section. Repeat the key conclusion on 1 slide. Capture answers or any responses to prior research questions or hypotheses.
Slide 16*	Critique: Strengths	What are the primary strengths of the new approach/algorithm/method/ benchmark? Is the performance good? Are costs low? Is it scalable? Secure? Fault tolerant? In general, new approaches that don't provide at least a 10% performance improvement are not very significant depending on the problem. An order of magnitude (10x) improvement is preferred.
Slide 17*	Critique: Weaknesses	What are some weaknesses of the new approach? This could be things such as complexity/effort of applying the approach, or it's usability. How well has the proposed solution addressed the original problem? Is the new approach generally applicable? Or is it a domain specific solution to only a small set of use cases? In research, domain agnostic solutions can have broader impacts and importance than one-off solutions for a specific use case.
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? Are there problems with the graphs or the discussion? Is the analysis complete, or are some points left for the reader to try and understand on their own?
Slides 19	Identify GAPS **<u>ONE SLIDE ONLY</u>**	Are there gaps and open problems remaining in the research? Did the authors fail to solve some aspect 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

[15% of course grade]

Cloud research paper presentation grades will be broken into four components:

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

This is the overall quality of the presentation materials. Factors considered include the formatting and design of the slides. Slides should not have long sentences, but phrases that 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.

Corrections can be made AFTER the presentation. Final slides are due by Friday December 5th AOE. Only the final version of the slides is considered when evaluating design quality of the slides.

10% **Early review of slides**

Groups presenting on a Tuesday should submit slides via Canvas by Sunday @ 11:59p to receive constructive feedback and suggestions from the instructor. The instructor will try to provide feedback by late Monday or very early Tuesday. For a Thursday presentation, slides should be submitted by 11:59p on Tuesday. If slides are available sooner, and the group requests early feedback (by email), review will be provided earlier. Draft slides are not graded. 10% credit is awarded for providing a draft of the slides in advance to receive feedback before the talk. The draft slides will be posted on the course website for sharing with the class. Due to the time required to review and provide feedback for slides, slides submitted less than 24 hours prior to the talk will not be reviewed, and the 10% will be forfeited.

35% **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. Both the technical content of the slides and the quality of the research paper critique will be considered. All groups have the opportunity to improve technical content of slides prior to the final submission by Friday December 5th AOE.

30% **Presentation quality, clarity, understandability**

The overall clarity and understandability of the presentation is worth approximately 30%. 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. Use of a transcript for the talk can improve the presentation. Groups can submit the written transcript to CANVAS to demonstrate effort to encourage a higher grade. The instructor will try to deliberately slow down presentations to help improve group grades by interjecting when possible. The use of notes, notecards, or a transcript is suggested to prevent excessive reading from the laptop screen. Slides should consist of short bullets with only phrases, not complete sentences. The slide design should discourage presenters from simply reading slides. Use of notecards, can help with practicing the presentation. **Presentations should last no more than ~25 minutes. Presentations extending beyond 30 minutes will be cut-off due to time limitations.**

For TCSS 462:
In lieu of an in-class presentation, students enrolled in TCSS 462 will submit peer reviews of class presentations (***TCSS 462 peer reviews are 100% of the class presentation grade***). To receive full credit, students should submit a minimum of 4 peer reviews of the presentations. Presentation peer reviews will be completed using a peer-review worksheet provided by the instructor. In addition to the reviews, students will write two questions about content in the presentation. These can be questions to help clarify content from the presentation that was not clear, or any related questions inspired by the presentation. To ensure intellectual depth of questions, **questions should not have simple yes-no answers**.

All presentation peer reviews are due by Friday December 5th AOE.

Students are ***highly*** encouraged to participate in the class presentations by asking 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 may be graded less rigorously in a qualitative manner as needed to encourage groups to volunteer to present first. It is expected that the first presentations on day 1 are less polished than those on the last day, after the class has become familiar with the presentation format and approach. For example, if your group is the first presentation, there is more leeway to make mistakes, and more time to correct slides before the final submission.

5 Presentation feedback

Groups are **required** to submit draft slides for review by 11:59pm on the prior Sunday for a Tuesday presentation, or the prior Tuesday for a Thursday 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 5th AOE.

7 Topic Submission

A ranked list of preferred presentation topics should be submitted via Canvas by Tuesday November 18th at 11:59pm. Groups should also provide a ranked list of preferred presentation dates: **Nov 25, Dec 2, and Dec 4.** Presentation dates and topics will be awarded on a first come-first serve basis. The presentation schedule will be shared via Canvas around Thursday November 20th.

8 Change History

Version	Date	Change
0.1	11/13/2025	Original Version

9 References

[1] Bloom's Taxonomy, Center for Teaching, Vanderbilt University, https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/